

Final Report and Feasibility Study Greene, Iowa



Prepared By:

RITLAND+KUIPER
LANDSCAPE ARCHITECTS

Program Partners:

Iowa Department of Transportation
Trees Forever
Iowa State University



Participants

Town Steering Committee

Emily Ascher
Jami Backer
Andrea Ramker
Miranda Joebgen
Alex Mathers
Sarah Goodrich

James O'Brien
Sue Ebensberger
Phil Pitzenberger
Pat Derdzinski
Alexis Stirling
Angel Malfaro

Megan Swick
Ben Backer
Carol Schroeder
Lauren Hawker
Jayne Knapp

Trees Forever

770 7th Avenue
Marion, IA 52302
319-373-0650
www.treesforever.org

Meredith Borchardt
641-430-3854
mborchardt@treesforever.org

Iowa State University

Landscape Architecture Extension
2321 North Loop Drive, Suite 121
Ames, IA 50010
515-294-3721
www.communityvisioning.org

Julia Badenhope, Program Director and Professor of Landscape Architecture
Sandra Oberbroeckling, Project Manager and Extension Program
Specialist

RITLAND+KUIPER Landscape Architects

501 Sycamore Street, Mezzanine A
Waterloo, IA, 50703
319.233.8090
www.ritlandkuiper.com

Craig Ritland, FASLA
craig@ritlandkuiper.com
Samantha Price, PLA
samantha@ritlandkuiper.com

Peter Reyland
Landscape Architecture Intern
Iowa State University

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About RITLAND+KUIPER Landscape Architects

Craig Ritland founded the firm Craig Ritland Landscape Architect (CRLA) in 1970 in Waterloo, Iowa. Since developing the master plan for George Wyth Memorial State Park in the early 1970s, this office has participated in many of the important public improvements that have added to the quantity and quality of open space in Iowa. With over 50 years of experience, Craig Ritland is still the lead principal of the firm bringing invaluable insight and expertise to each project.

In 2013, CRLA became RITLAND+KUIPER Landscape Architects, a full-service landscape architectural firm with CLARB and State Registered Landscape Architects. The firm consists of three full-time Landscape Architects with 78 years of combined experience.

Throughout our history, RKL A has provided park and recreation master planning and detailed design and construction services for a diverse array of City, County, and State recreation areas.

We enjoy utilizing a highly interactive process with our clients, often through the facilitation of public input. One example of this is our annual work over the past 20 years with the Iowa Living Roadways Community Visioning Program with Iowa State University and Trees Forever. We have guided the public input in over 35 different communities and have helped them develop plans that, in many cases, have lead to successful community enhancements.



RITLAND+KUIPER
LANDSCAPE ARCHITECTS

Program Overview

Greene is one of 10 communities selected to participate in the 2017 Iowa's Living Roadways (ILR) 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).

The ILR Community Visioning Program assists community members with planning local transportation systems that are safe, accessible, and ecologically sensitive. Planning also takes into account local use patterns and needs of residents, and supports these goals by gathering research based information that guides transportation goal setting and design.

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

Greene's process is guided by a local steering committee, who mobilized other residents to take part in a series of meetings that are facilitated by field coordinators from Trees Forever. Iowa State University organized design teams of professional landscape architects, design interns, and ISU faculty and staff. The program is sponsored by the Iowa Department of Transportation.

Community Goals

The Greene visioning committee identified a number of goals and priority areas during the visioning process, which are included below:

Perrin Park: Create ADA-compliant walking paths to areas within the park, improve the park entrance, and create more boat parking

Safety: Improve existing sidewalks, enhance pedestrian crosswalks, and update lighting within specific areas of the community
Recreation: Enhance "Old Highway 14" walking trail, and create a trail along the river, additional park amenities, and designated green space on FEMA buy-out property

Tourism: Create a map showing visitors area destinations and routes, enhance river access, and propose additional camping opportunities utilizing FEMA buy-out properties

Signage: Improve the appearance of existing entrance signs, update way-finding signage, and create a theme for the community.

Capturing Greene's 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. These boards include the Program Overview, Bioregional Assessment, Transportation Assets and Barriers Assessment, Transportation Behavior and Needs Assessment, Transportation Inventory and Analysis, Concept Overview, and Community Design Boards.

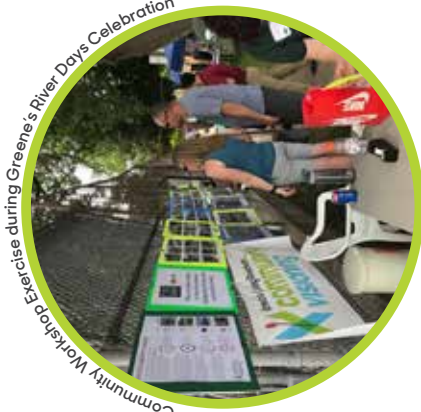
SUMMER 2017 **1**



Hydroelectric Dam on the Shell Rock River



Annotated Map from the Transportation Analysis Meeting



Community Workshop Exercise during Greene's River Days Celebration



Created Image Showing Enhanced Riverbank with Canoe/Kayak Launch

Program Overview

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Greene Program Overview

RITLAND+KUIPER Landscape Architects
 Landscape Architects: Craig Rittland, FASLA & Samantha Price, PLA
 Landscape Architecture Intern: Peter Reyland
 Iowa State University | Trees Forever | Iowa Department of Transportation



Bioregional Assessment

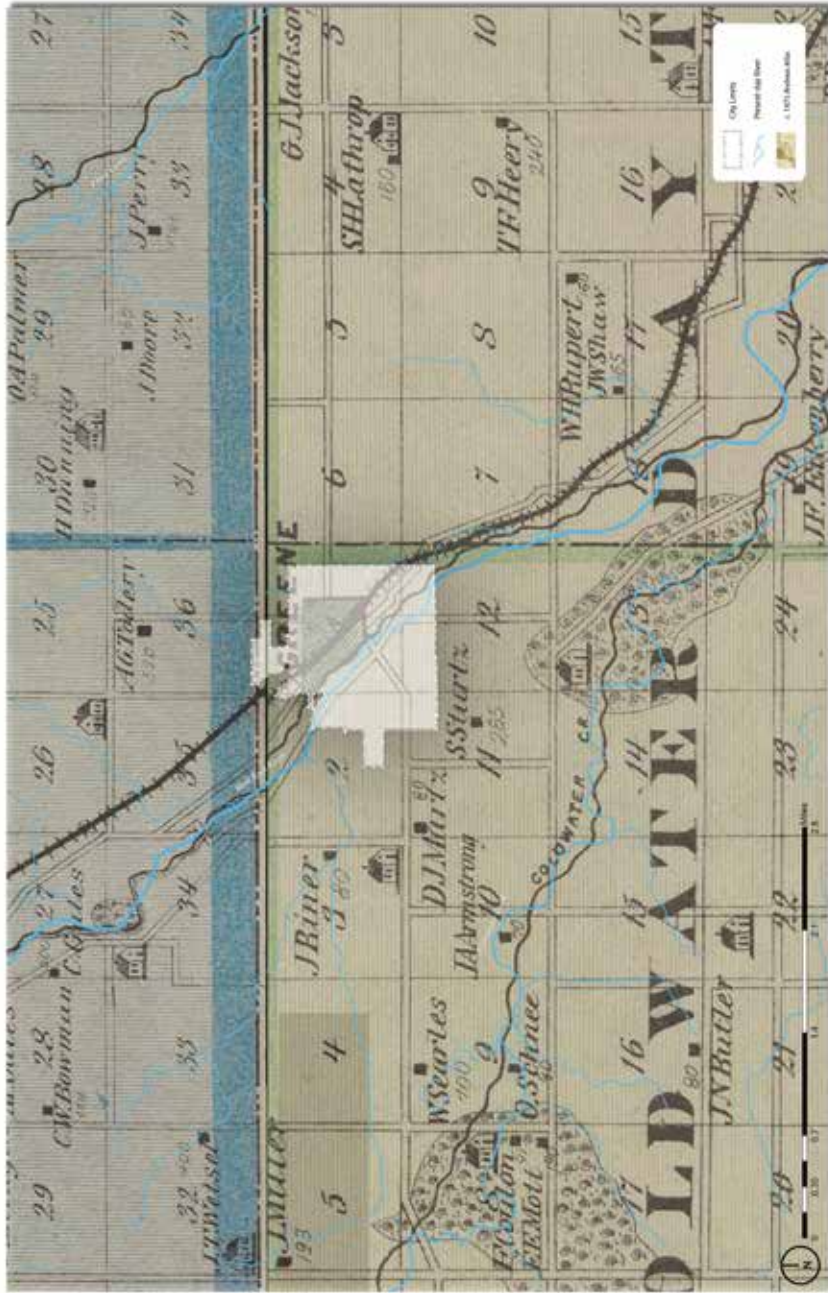
Settlement Patterns

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.

Greene 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?



SPRING 2017 2A

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Greene
 Settlement Patterns



Bioregional Context
 Julia Bodenhopf, Matthew Gordy, Colby Fangman, Riley Dunn
 Iowa State University | Texas A&M University | 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 plant communities mapped by the GLO surveyors varied in classification and the terminology from the original maps has been preserved.

The vegetation types are defined²:

1. Field: Cultivated lands of early pioneers.
2. Grove: Isolated dense young stand of trees.
3. Marsh: Perennial wetlands, basins of irregular shape.
4. Prairie: Dominated by prairie grasses with individual or few scattered trees.
5. Thicket: Impenetrable blocks of young trees, often thorny.
6. Timber: Contiguous blocks of trees extending to the horizon in at least one direction.
7. Slough: Like marsh but more linear in shape.

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.

SPRING 2017 2b

Historical Vegetation

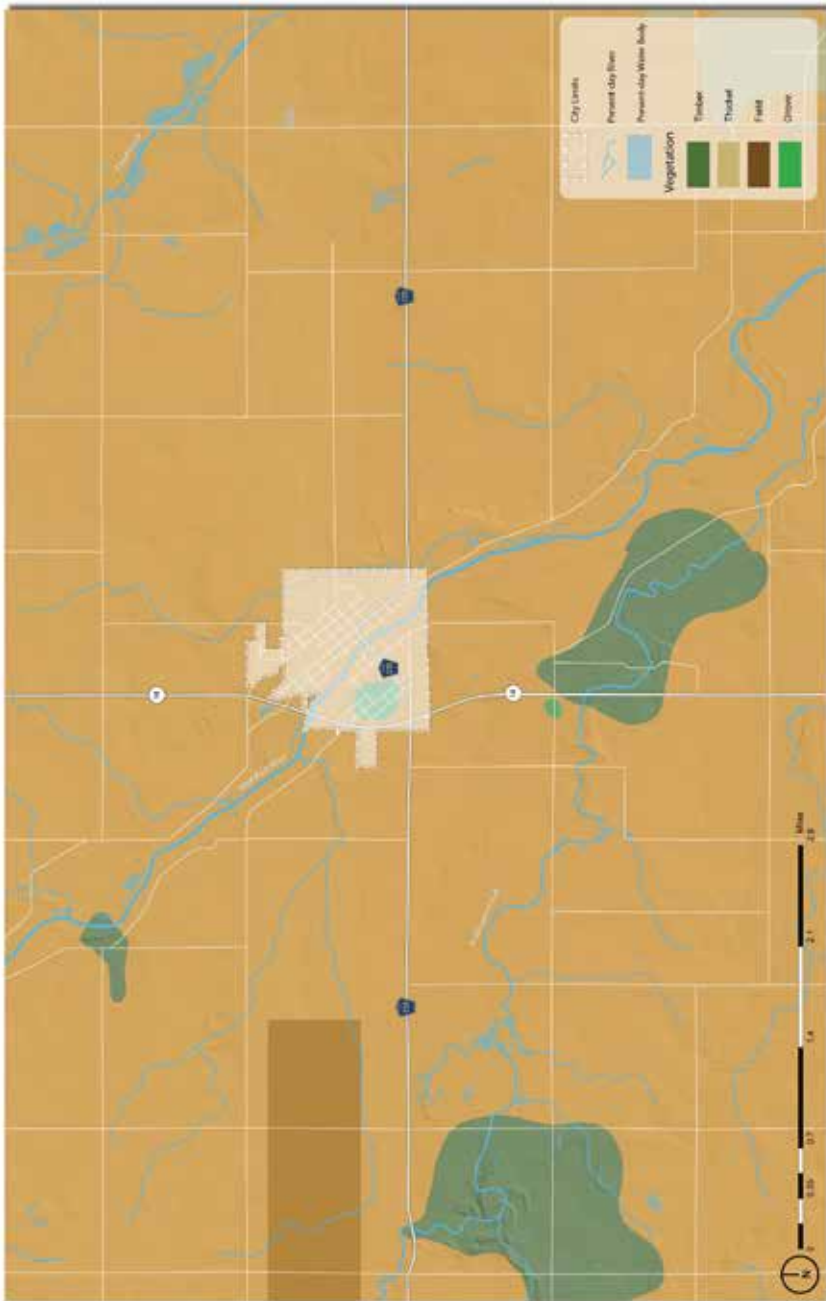
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The plant communities mapped by the GLO surveyors varied in classification and the terminology from the original maps has been preserved.

The vegetation types are defined:

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2. **Grass:** Isolated dense young stand of trees.
3. **Marsh:** Perennial wetlands, basins of irregular shapes.
4. **Prairie:** Dominated by prairie grasses with individual or few scattered trees.
5. **Tract:** Impermeable blocks of young trees, often thorny.
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7. **Slough:** Like marsh but more linear in shape.

¹ U.S. Forest Service, "Vegetation of Iowa County, Iowa," *Vegetation of the Upper Midwest*, U.S. Forest Service, 1998. The map is available at www.forestservice.gov.
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Historical Vegetation

Bioregional Context

Julia Bodenhopf, Matthew Gordy, Colby Fangman, Riley Dunn
 Iowa State University | Trees Forever | Iowa Department of Transportation



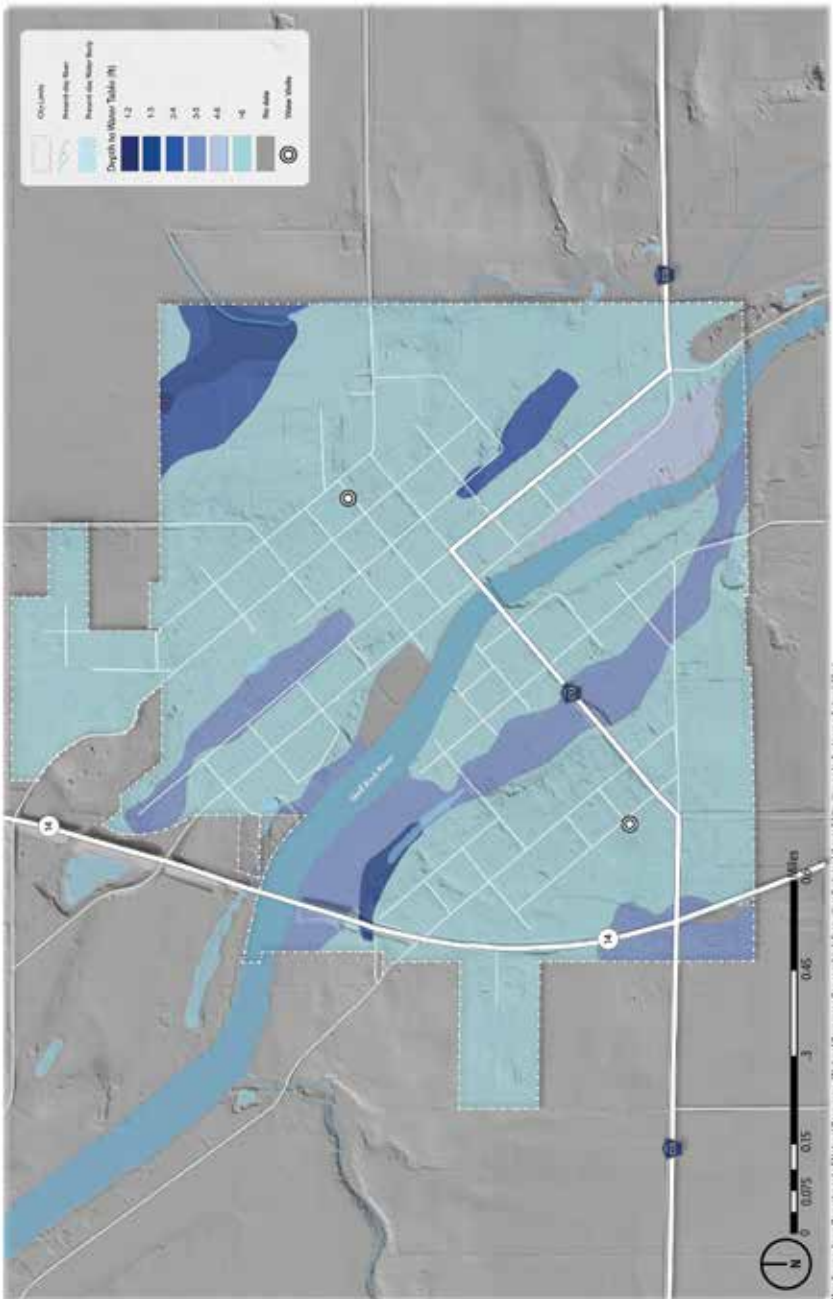
Depth to Water Table

The water table is defined as the level below which the ground is saturated with water. The water table generally mimics surface topography, but there are differences depending on localized conditions such as the permeability and porosity of soils and depth to bedrock. 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. Impermeable layers such as concrete also affect the depth to water table by preventing precipitation from infiltrating into the soil which could result in a lowered water table.

SPRING 2017 2c

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Depth to Water Table

Bioregional Context
 Julia Bodenhopf, Matthew Gordy, Colby Fangman, Riley Dunn
 Iowa State University | Texas A&M University | Iowa Department of Transportation



Elevation and Flood Risk

The map to the left 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.

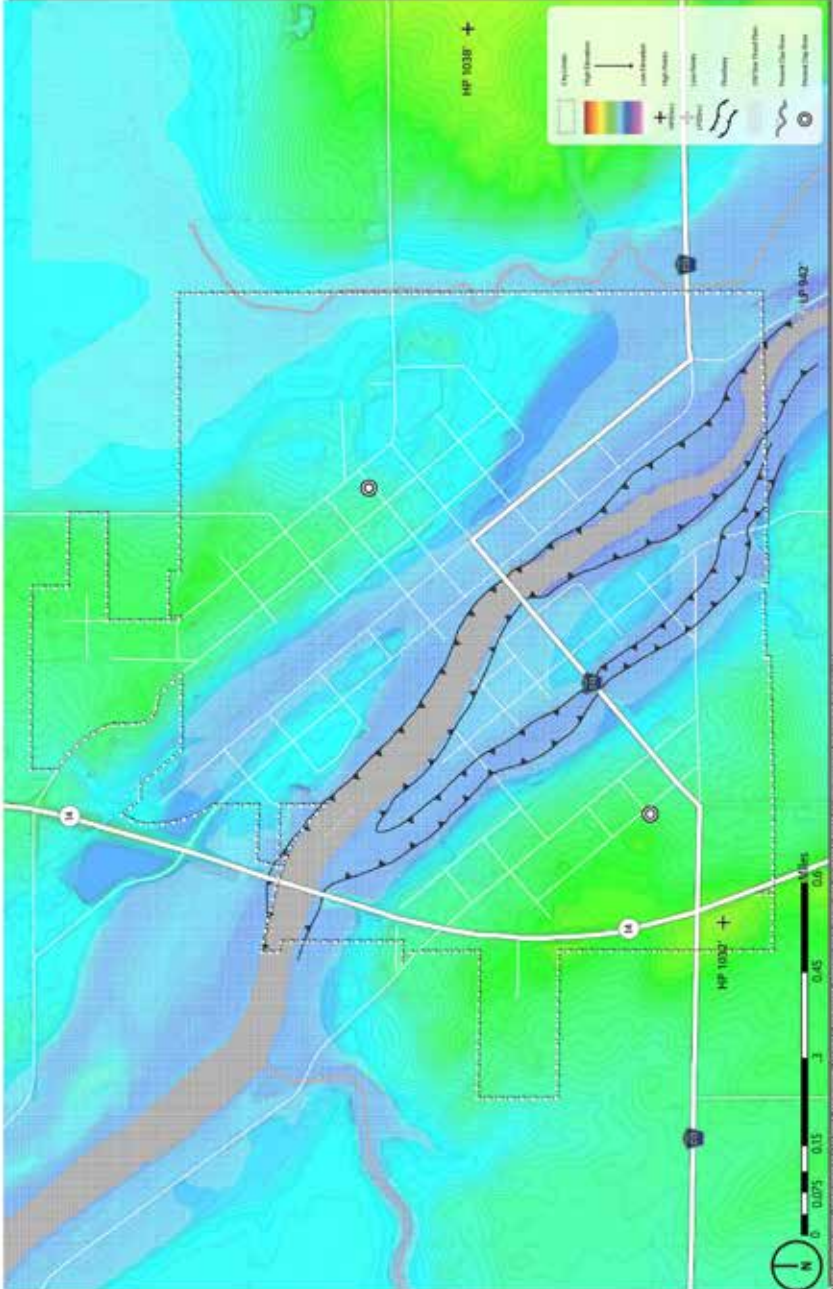
Note the relationship of your community to the surrounding elevation; is it located in a valley or on high ground, or is it split between the two? Flood risk is correlated to low-lying land, this map also shows your community's flood risk as defined by the Federal Emergency Management Agency (FEMA) Flood 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

SPRING 2017 2d

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Greene

Elevation and Flood Hazard

Bioregional Context
Julia Bodenhopf, Matthew Gordy, Colby Fangman, Riley Dunn
Iowa State University | Texas A&M University | Iowa Department of Transportation



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 has a dozen smaller watersheds, and the Iowa River watershed is a sub-basin of the Mississippi River watershed.

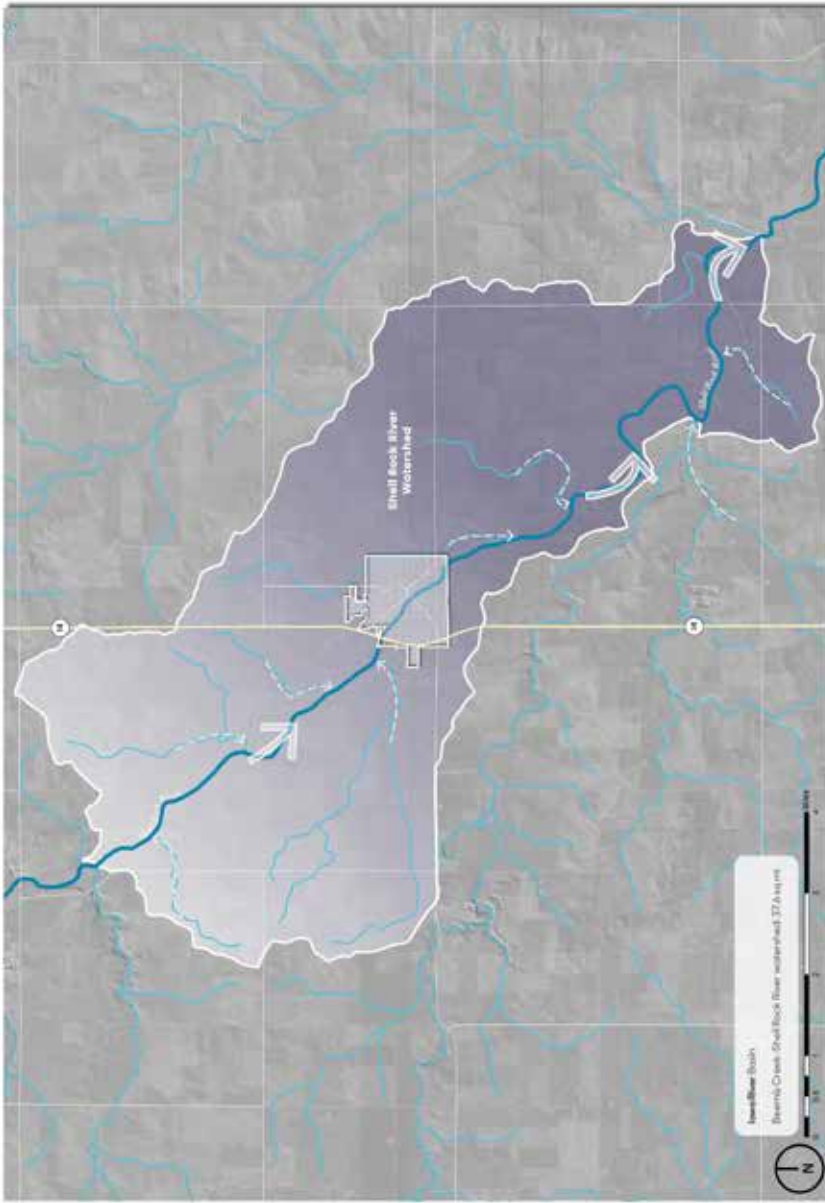
Where a community is located in relation to its surrounding watershed(s) determines its capacity to manage regional watershed issues such as flooding. For example, a community located near the end of a watershed (close to the outlet point) will have little capacity to reduce the amount of water draining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

SPRING 2017 2e

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Greene
Regional Watershed

Bioregional Context

Julia Bodenhopf, Matthew Gordy, Colby Fangman, Sam Thompson
Iowa State University | Texas A&M University | Iowa Department of Transportation

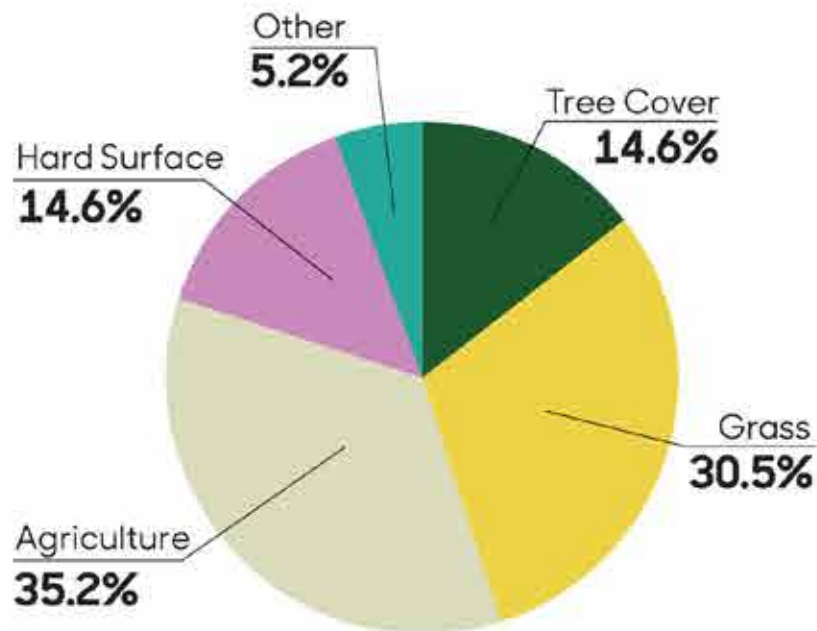


Present Day Land Cover

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.

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 parts of town are covered with the most impervious surfaces and what patterns do you observe about these locations?

Percent Land Cover Type



SPRING 2017 21

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Present Day Land Cover

Bioregional Context

Julia Bodenhopf, Matthew Gordy, Colby Fangman, Riley Dunn
Iowa State University | Trees Forever | Iowa Department of Transportation

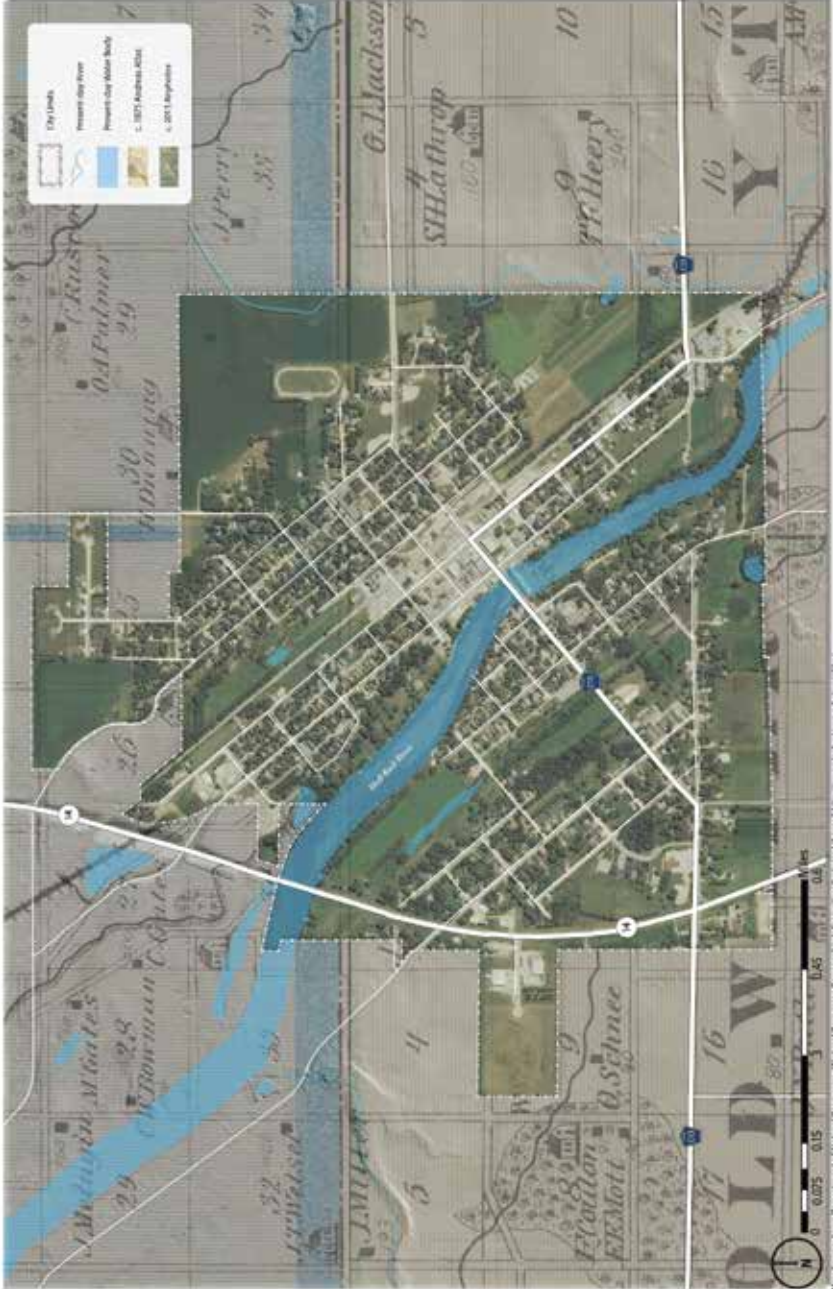


Present Day Vegetation

Overlaying a present-day aerial image on the historic, 1875 Andreas Atlas shows how management of the land over several decades has changed the locations of trees and other native vegetation in the landscape.

SPRING 2017 2G

Present Day Vegetation
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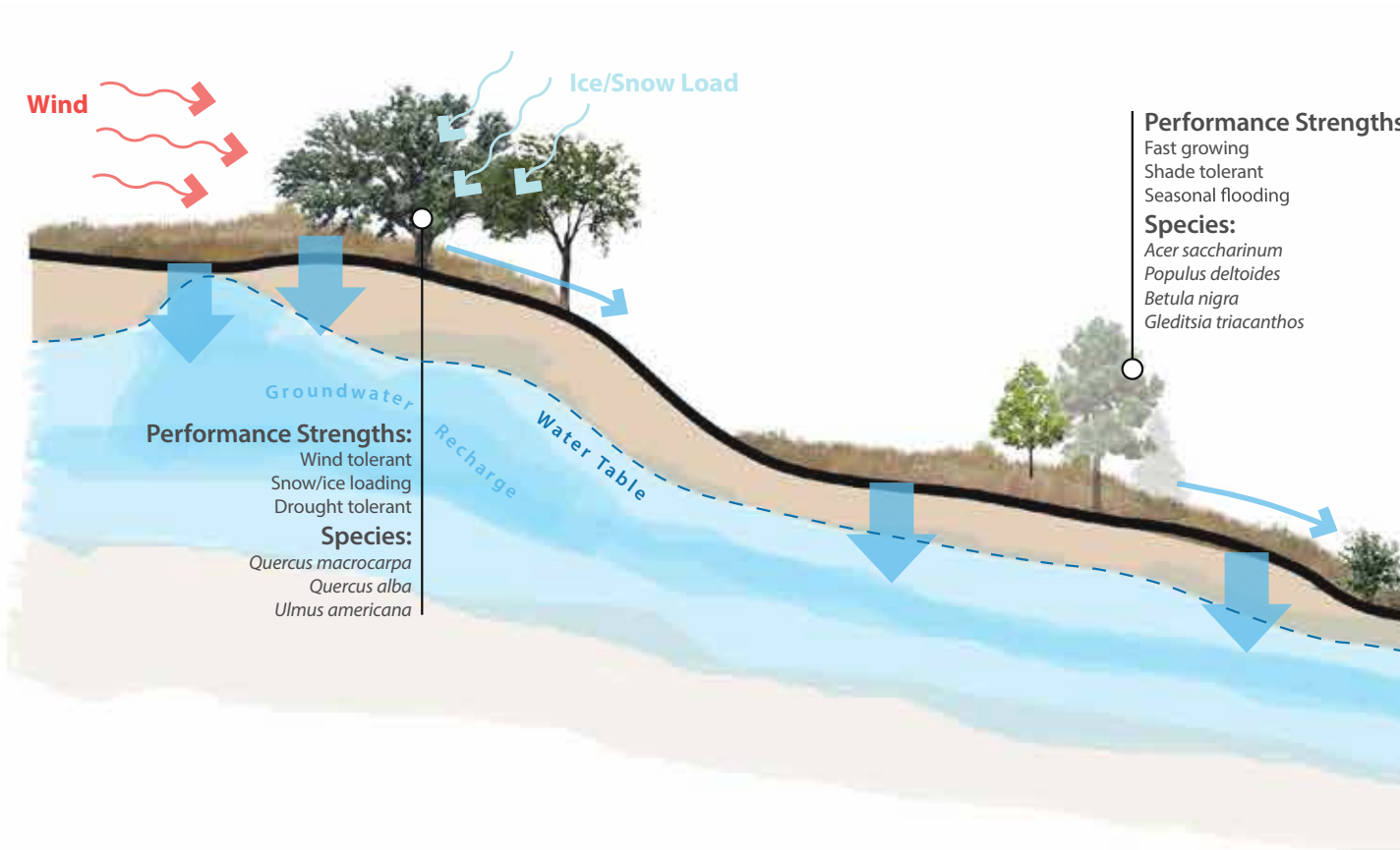
Greene

Present Day Vegetation

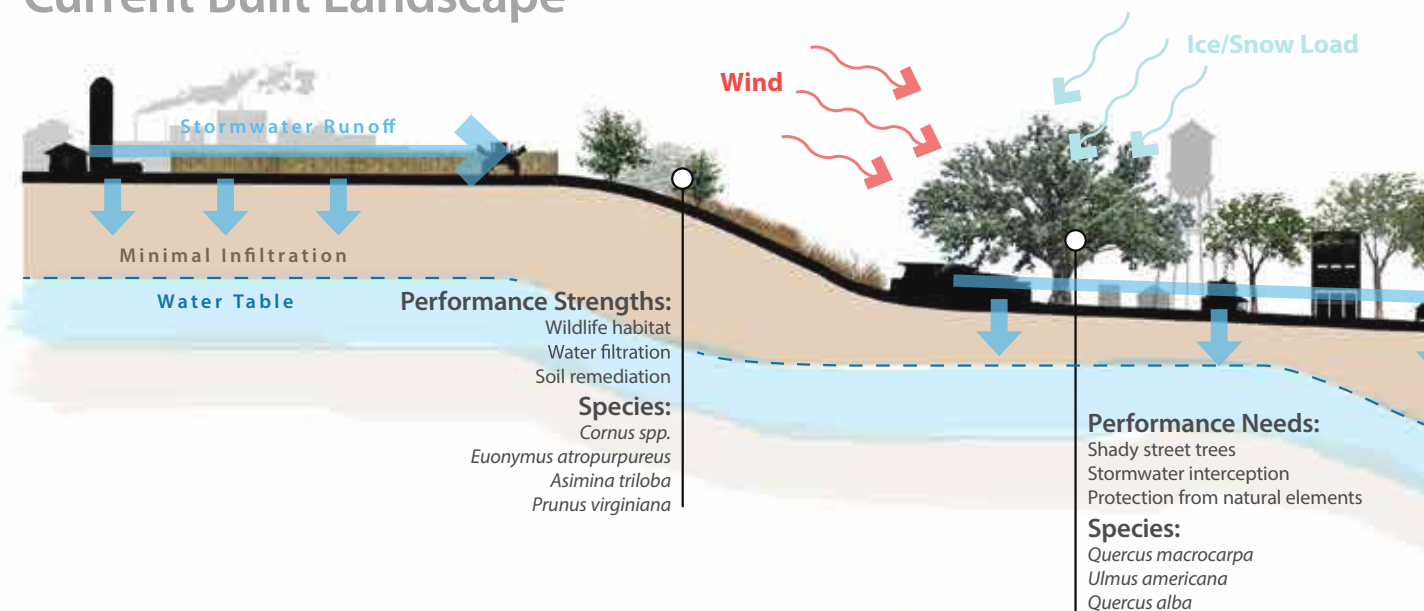


Bioregional Context
Julia Bodenhopf, Matthew Gordy, Colby Fangman, Riley Dunn
Iowa State University | Trees Forever | Iowa Department of Transportation

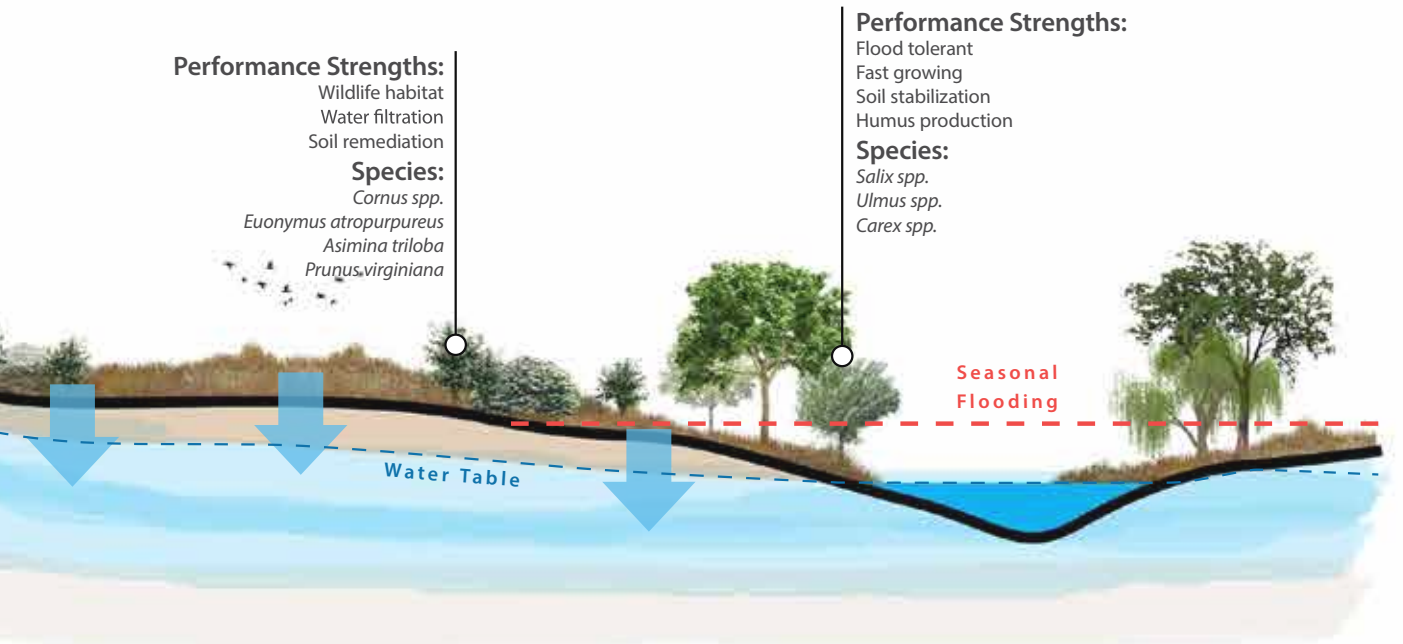
Using Native Plants



Current Built Landscape



Pre-Settlement Landscape



Performance Strengths:

- Wildlife habitat
- Water filtration
- Soil remediation

Species:

- Cornus spp.*
- Euonymus atropurpureus*
- Asimina triloba*
- Prunus virginiana*

Performance Strengths:

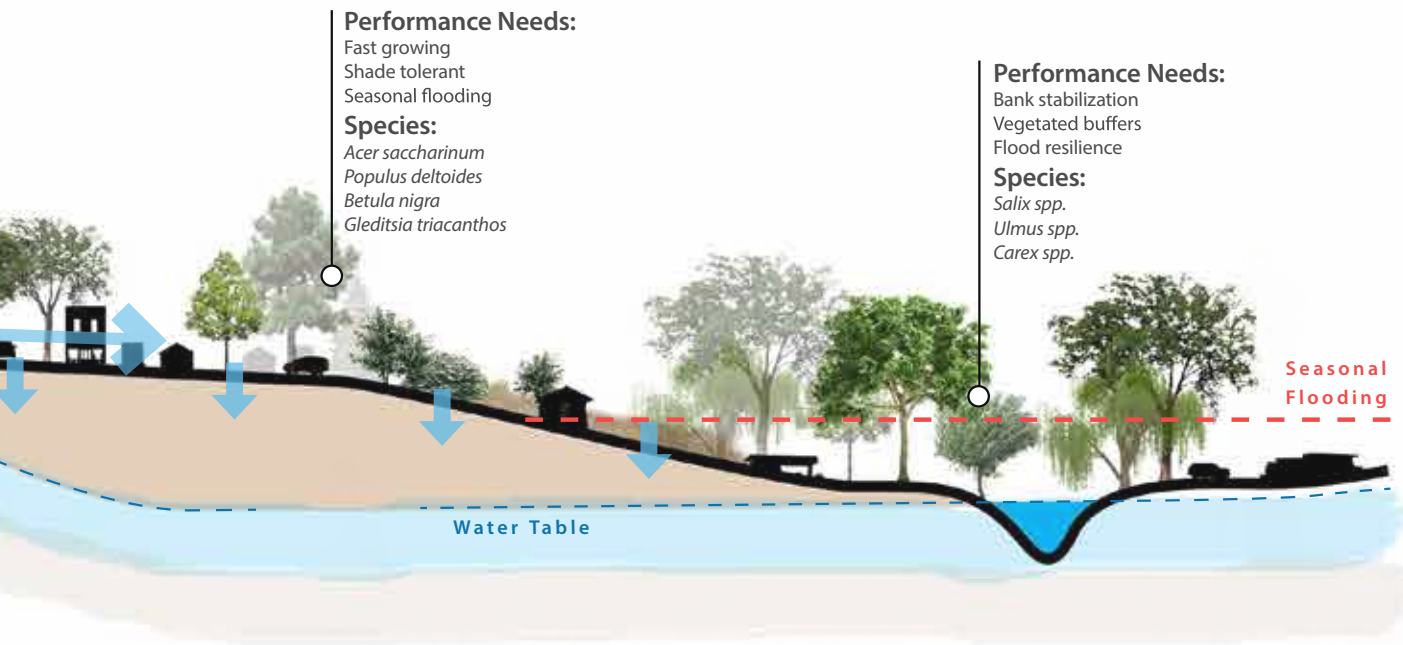
- Flood tolerant
- Fast growing
- Soil stabilization
- Humus production

Species:

- Salix spp.*
- Ulmus spp.*
- Carex spp.*

Seasonal Flooding

Water Table



Performance Needs:

- Fast growing
- Shade tolerant
- Seasonal flooding

Species:

- Acer saccharinum*
- Populus deltoides*
- Betula nigra*
- Gleditsia triacanthos*

Performance Needs:

- Bank stabilization
- Vegetated buffers
- Flood resilience

Species:

- Salix spp.*
- Ulmus spp.*
- Carex spp.*

Seasonal Flooding

Water Table

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 Greene, 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 Greene's transportation system works, we use focused, small-group conversations, mapping, and photos of the best and worst places taken by residents to understand local transportation.

Different Users = Different Needs

To capture insights about transportation from a variety of perspectives, we invited Greene residents with different transportation needs to participate in focus groups. A total of 37 residents attended Greene's workshop. Participants were separated into five user groups and the Greene steering committee.



Actives

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

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

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

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

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

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 2017 3a

What Factors Affect Transportation in COMMUNITY?

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-  **(6 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.
-  **(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.
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Transportation Assets and Barriers
 Julia Bodenhopf, Sandra Oberbroeckling, Matthew Gandy, Miao Fangzhou
 Iowa State University | Ames, Iowa | Iowa Department of Transportation



Barrier: Railroad Crossing



Barrier: No sidewalk on North First Street



Barrier: Roadway in Plover Park



Asset: Old Highway



Asset: Plover Park



Asset: Sledding Hill

Greene
 Overview

What People Said



Actives

"If you walk in the evenings or early mornings, the lighting isn't the best."

"We walk [west on 1st Street]...to get to [740th Street]...there [are] no shoulders for you to get off. I've jumped down in the ditch before because I think [drivers] aren't going to see me."

"It's kind of nice to walk all the way to the highway."

"The sidewalks on Main Street, they're bad."

"Some people walk at the school [in winter]."



Older Adults

"I've seen older people get out of their car, [they] can't park in the first spot, so they park in the second. They have to walk clear behind two cars to get to the ramp to [reach] the sidewalk, because they're using a walker."

"Our parks are wonderful when they're not flooded."

"...a lot of people do have appointments outside of Greene and need transportation."

"We have—we call it the old highway that used to be the highway in town that's walked quite a bit."

"Fortunately the community has put in the [curb ramps] and I don't know if there are any left to do in town."



Mobility Impaired


"I can get a lot [farther] than I used to be able to than when I first came here, so they're working on [accessible sidewalks] and I've appreciated that."

"I like [Greene] because it's just a small microcosm that I can handle. I have one of those scooters, a three-wheeled scooter, and I can get downtown when the weather permits, and I can get just about everywhere I want to go on that thing, and it saves me a lot of energy because it's a little harder to walk."

"There are still a few sidewalks that go to nowhere, and then there are some that are still in pretty bad shape."

"Our river...brings a lot of people to town. I think it helps support the town a lot."

"There [are] big gaps [in the railroad tracks]. We have a problem with the wheelchair, so we just don't go out that way."



Parents


"In the summer we live on the old highway; we're out there all the time, and there's a lot of people out there every day."

"It would be safer for the younger people, for parents with young kids, to be able to have a sidewalk to walk on or bike [on]."

"I would like probably better walking areas throughout town."

"...from the school to the...sports complex, there's not one light that whole strip."

"We have a good downtown compared to most small towns."



Youth

"There's a really nice trail around [Perrin Park] that people walk around."

"For track we run to the old highway and back to the school, and that's 1.8 miles or something."

"...a lot of times during the summer kids will go from the library and then the pool...[and] they'll cross [Traer Street]. There's a lot of travel because it's the main road."

"By the water tower, that's a really good spot for sledding. A lot of people sled there."

"[I like] going tubing on [the river] in the summer and boating and stuff like that."



Steering Committee

"I think it would be nice to have some kind of a decent sidewalk that connected the swimming pool [and] the park."

"...cars coming south on 14...have to come around a bend...and when you're sitting at the intersection [of Highway 14 and South Street] you can't see unless you lean forward... to make sure there's no traffic coming. There's a blind spot.."

"It's very rare on the old highway that you don't meet someone if you're out walking."

"The bridge is always a challenge for [being] slippery."

"The real problem I see with people walking...if we walk on the sidewalk we [have] to follow each other where on the street you walk side by side."

Emerging Themes

Discovering themes and consistencies among user groups helps the steering committee to identify solutions to address the needs of all. The chart on the opposite page displays each user group's collective thoughts on particular issues in comparison with the other user groups in the community.

Actives walk, drive, and bike regularly, either as part of a daily commute or as recreational/sports training. This group would like better connections within Greene as well as with other communities and trails in the area.

Mobility-impaired individuals often rely on motorized scooters and wheelchairs to get around. Therefore, smooth, wide surfaces that are accessible are important. They appreciate the curb cuts installed around town by the city.

Older adults primarily drive and walk to destinations. This group is concerned about the lack of transportation for those who don't drive to destinations outside Greene, such as the hospital.

Youth mainly walk and bike to get around the community. Some ride the bus to school. This group enjoys fishing and tubing on the river, and would like more recreation opportunities in town.

Parents drive, walk, and bike. They are concerned about their children's safety as they travel throughout town. They are concerned about poor lighting, a lack of sidewalks in some areas, and speeding traffic.

Steering committee members walk, drive, bike, and ride mopeds. This group is interested in capitalizing on existing resources such as the old highway and the river and making connections between popular local destinations.

User Types	Destinations and Activities			Desirable Qualities and Features			Undesirable Qualities and Features					Most Desired Improvements and Activities				
	Wedlock Plaza	North Park	Old Highway 14	Scenic Drive	Universal Accessibility	Outdoor Recreation Venues	Local Supportive Businesses	Local Lighting	Urban Sub-Streets	Residential	Historic Streets	Arterials Along Old Highway 14	Traffic System	Better Lighting	New Amenities	
Active	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	
Mobility Impaired	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	
Other Adults	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	
Youth	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	
Parents	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	
Senior and Community	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	

Active
 The group is primarily active, with many members being parents of young children. They are interested in destinations and activities that are safe and accessible for all ages. They appreciate the curb cuts available around town by the city.

Mobility Impaired
 Mobility-impaired individuals often rely on public transportation to get around. They value curb cuts and sidewalks that are accessible and safe. They appreciate the curb cuts available around town by the city.

Other Adults
 Older adults primarily drive and walk to destinations. They are interested in destinations that are safe and accessible for all ages. They appreciate the curb cuts available around town by the city.

Youth
 Youth mainly walk and bike to get to school. They are interested in destinations and activities that are safe and accessible for all ages. They appreciate the curb cuts available around town by the city.

Parents
 Parents drive, walk, and bike. They are interested in destinations and activities that are safe and accessible for all ages. They appreciate the curb cuts available around town by the city.

Senior and Community
 Senior citizens mainly walk. They are interested in destinations and activities that are safe and accessible for all ages. They appreciate the curb cuts available around town by the city.

Active
 I like the way the city is improving the sidewalks and lighting. It makes walking and biking safer and more enjoyable. I would like to see more green spaces and parks in the area.

Mobility Impaired
 I appreciate the curb cuts and sidewalks that are accessible. It makes getting around easier and safer. I would like to see more public transportation options.

Other Adults
 I like the way the city is improving the sidewalks and lighting. It makes walking and biking safer and more enjoyable. I would like to see more green spaces and parks in the area.

Youth
 I like the way the city is improving the sidewalks and lighting. It makes walking and biking safer and more enjoyable. I would like to see more green spaces and parks in the area.

Parents
 I like the way the city is improving the sidewalks and lighting. It makes walking and biking safer and more enjoyable. I would like to see more green spaces and parks in the area.

Senior and Community
 I like the way the city is improving the sidewalks and lighting. It makes walking and biking safer and more enjoyable. I would like to see more green spaces and parks in the area.

Analysis of Barriers

The analysis of barriers synthesizes the feedback we received from the five transportation user groups. Although not shown on an individual map, input from the steering committee is incorporated into the maps of all five user groups.

A significant seasonal barrier is the Shell Rock River, which has flooded numerous times in recent years. Other barriers that Greene focus-group participants identified are related to access, whether it is ADA accessibility to parks and businesses, a lack of parking, or the disconnected sidewalk system. Fast traffic in several areas of town is also perceived as a barrier.



Actives

Access is important to active recreationists, who noted the limited parking overall and the lack of handicapped parking at the school. They also pointed out that it is difficult to access old Highway 14. Poor lighting near the school is another concern.



Mobility Impaired

Poor and disconnected sidewalks create problems for mobility impaired individuals who navigate the community in wheelchairs or on motorized scooters. Crossing the railroad tracks is a challenge for this user group.



Older Adults

Older adults are concerned about access to old Highway 14, as well as to the doctor's office at the intersection of Traer and 2nd Street. Although they enjoy the trees on Traer Street, when the berries fall on the sidewalk it's hard to walk on.



Youth

Disconnected sidewalks are an issue among youth, who tend to walk and bike to most places. Speeding traffic in town is also a concern. Participants in this group do not feel safe crossing Traer Street at the library and the aquatic center.



Parents

Parents are most concerned with perceived safety issues, such as speeding traffic on South, High, North 1st, Grove, and North 3rd Streets. They also pointed out the poor lighting along North 5th Street by the high school and at the high-school track.

Analysis of Assets

The analysis of assets synthesizes the feedback we received from the five transportation user groups. Although not shown on an individual map, input from the steering committee is incorporated into the maps of all five user groups.

The Shell Rock River is an asset to all user types for a variety of reasons, ranging from recreation opportunities it provides, such as fishing, boating, and ice skating, to the scenic views it offers. Old Highway 14 is an asset because it provides a safe place for people to walk, bike, and run. Residents value the many businesses and amenities available in their small community.



Actives

Active recreationists value old Highway 14 as a venue for walking and biking. They also enjoy the trail in Perrin Park and the snow mobile trails. In the winter months, the high-school gym is available for recreation activities.



Mobility
Impaired

Mobility-impaired individuals appreciate the curb ramps that the city has installed throughout town, as well as the new scooter crossing in front of the community center, where they go to walk during the winter months.



Older Adults

Older adults enjoy outdoor assets such as Perrin Park, the aquatic center, Wunsch Memorial Park, and old Highway 14. This group also values the curb ramps throughout town.



Youth

Greene's abundant outdoor recreation opportunities are important to youth. They engage in activities such as sledding at the water tower and by the railroad tracks, fishing, and swimming at the aquatic center. Older youth run track practice on the old highway.







Parents

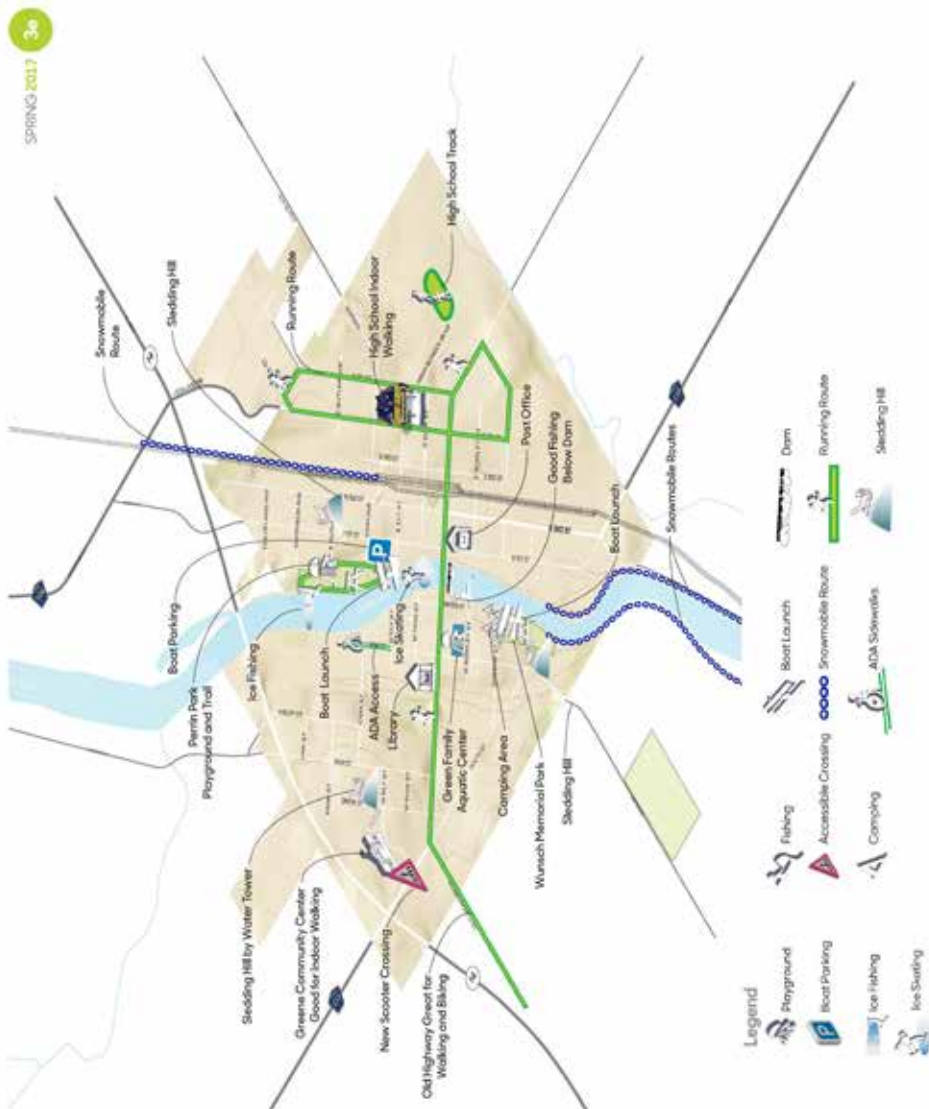
Parents appreciate old Highway 14, the aquatic center, Perrin Park, Wunsch Memorial Park, and the river because these venues provide many activities for them and their children. They fish, ice skate, and boat on the river and camp at Wunsch Memorial Park.

Greene's Assets: Common Factors

The analysis of assets synthesizes the feedback we received from the five transportation user groups. Although not shown on an individual map, input from the steering committee is incorporated into the maps of all five user groups.

The Shell Rock River is an asset to all user types for a variety of reasons, ranging from recreation opportunities it provides, such as fishing, boating, and ice skating, to the scenic views it offers. Old Highway 14 is an asset because it provides a safe place for people to walk, bike, and run. Residents value the many businesses and amenities available in their small community.

 <p>Active</p> <p>Active individuals value old Highway 14 as a venue for walking and biking. They also enjoy the trail in Perrin Park and the snowmobile trails. In the winter months, the high-school gym is available for recreation activities.</p>	 <p>Mobility Impaired</p> <p>Mobility-impaired individuals appreciate the curb ramps that the city has installed throughout town, as well as the new scooter crossing in front of the community center, where they go to walk during the winter months.</p>	 <p>Older Adults</p> <p>Older adults enjoy outdoor assets such as Perrin Park, the aquatic center, Wunch Memorial Park, and old Highway 14. This group also values the curb ramps throughout town.</p>	 <p>Youth</p> <p>Greene's abundant outdoor recreation opportunities are important to youth. They engage in activities such as sledding at the water tower and by the railroad tracks, fishing, and swimming at the aquatic center. Older youth can build practice on the old highway.</p>	 <p>Parents</p> <p>Parents appreciate old Highway 14, the aquatic center, Perrin Park, Wunch Memorial Park, and the river because these venues provide many activities for them and their children. They fish, ice skate, and boat on the river and canoe at Wunch Memorial Park.</p>
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Greene Assets



Transportation Assets and Barriers
 Julia Bodenhopf, Sandra Oberbroeckling, Matthew Gandy, Sam Thompson
 Iowa State University | Texas A&M | East Department of Transportation

Desired Improvements

The analysis of desired improvements synthesizes the feedback we received from the five transportation user groups. Although not shown on an individual map, input from the steering committee is incorporated into the maps of all five user groups.

A number of desired improvements for Greene are related to the Shell Rock River, such as improving accessibility to the river, adding a trail along the river, and marketing river recreation opportunities. Enhancing old Highway 14 by adding trees and benches is another desired improvement. Developing trails and trail connections is another area of interest to Greene residents.



Actives

Access to more recreation opportunities is important to active recreationists and is reflected in their desired improvements. This group would like old Highway 14 to be developed and extended into a trail network. The actives also want access to the high-school track, as well as community center in the evening.



Mobility Impaired

Mobility-impaired individuals would like better access to Perrin Park and old Highway 14. They would also like downtown to be more ADA accessible. Better sidewalks and lighting are desired improvements as well.



Older Adults

Similar to the mobility-impaired group, older adults want more areas to be ADA accessible, specifically at old Highway 14 and the parking lot at the doctor's office. Capitalizing on the Shell Rock River by making it more accessible and marketing it is also of interest to this group.



Youth

Youth want a trail in Perrin Park along the river. They also desire more amenities in town, such as an ice cream shop, a dog park, and another gas station.



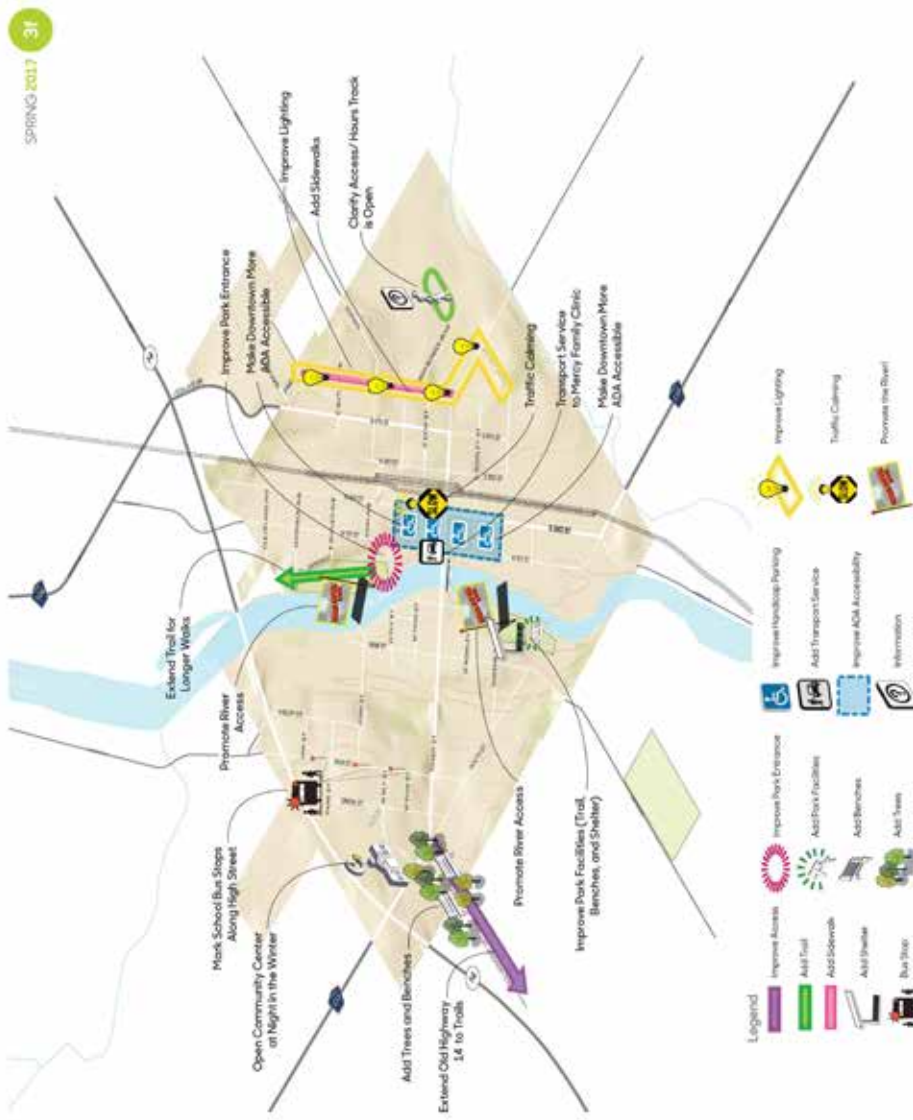
Parents

Parents' desired improvements are focused on safety. For example, they would like the bus stops to be marked, traffic on Traer Street to be reduced, and sidewalks added to North 5th Street, particularly near the high school. They would also like improvements to old Highway 14 and the river.

Desired Improvements: Common Factors
 The analysis of desired improvements by neighborhood received from the five transportation user groups. Although not shown on an individual map, input from the steering committee is incorporated into the maps of all five user groups.

A number of desired improvements for Greene are related to the Shell Rock River, such as improving accessibility to the river, adding a trail along the river, and making river recreation opportunities. Enhancing old Highway 14 by adding trees and benches is another desired improvement. Developing trails and trail connections is another area of interest to Greene residents.

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SPRING 2017 31

Greene
 Desired Improvements



Transportation Assets and Barriers
 Julia Bodenhopf, Sandra Oberbroeckling, Matthew Gandy, Miao Fangzhou
 Iowa State University | Texas A&M | Iowa Department of Transportation

Transportation Inventory and Analysis

Knowledge of the transportation systems in and around a community is critical for sustainable transportation enhancement planning. Transportation systems include paved and unpaved roadways, pedestrian and bike trails, waterways, and railroad lines or railbeds from abandoned railroad lines, and airports. The Greene visioning design team met with DOT personnel and local officials to identify existing, past, and future transportation systems in the area and to discuss possible transportation related restraints and opportunities that could potentially affect project areas.

A major transportation issue in Greene is the intersection of County Road C13 (South Street) and Iowa Highway 14, due to poor sight lines, high speeds, and confusing traffic signs. The addition of a new Dollar General and Casey's General Store on Iowa Highway 14 near the intersection and traffic from the nearby new Emergency Medical Services building on West Ely Street will only further complicate the issues, especially for anticipated pedestrian access. Iowa Highway 14 with the local co-op on the north side of town is a busy thoroughfare for farm traffic. In addition, Iowa Highway 14 and South Street/Traer Street is the main route for high school students driving to and from North Butler High School, which includes students from Allison and Greene. A left turning lane on Highway 14 is being planned for entry into the Dollar General Store. A study will be completed once the Casey's General Store is completed to see whether additional safety measures need to be implemented at or near this intersection.

The "Old Highway Trail" the abandoned Highway 14 section, is one of two off-road trails within Greene. The community would like to see longer trails and possibly a connection to the Rolling Prairie Trail (reference: Desired Improvements, board 3f). The community would like improvements on the "Old Highway Trail" such as trees and benches. Codie Leseman from INRCOG explained that a push towards creating share-the-road routes is happening due to the expense of off-road paved trails. A recent study by INRCOG indicates which roads around Greene are most suitable as share-the-road options. No off-road trail connections are planned.

Perrin Park has a walking loop around the perimeter on an existing dike. The dike creates a bowl effect that retains water after a flood. The city must pump the park each time it floods. Currently, there are no ADA-accessible walking paths to the playground within the park (reference: Barriers, 3d).

Another popular walking route is the "two-mile loop" located along 4th Street, Pine Street, 5th Street, and Courtland Avenue. This route has sidewalks but a 4-foot-wide sidewalk will not comfortably accommodate a couple walking together; therefore, most recreational walking is done on the streets. The north side of 4th Street is narrow, causing concerns for pedestrians.

1st Street will be reconstructed in 2019 and is a desired pedestrian route to and from the golf course that requires crossing Iowa Highway 14, as does Highland Drive to Floyd Line Street, another desired walking route for residents.

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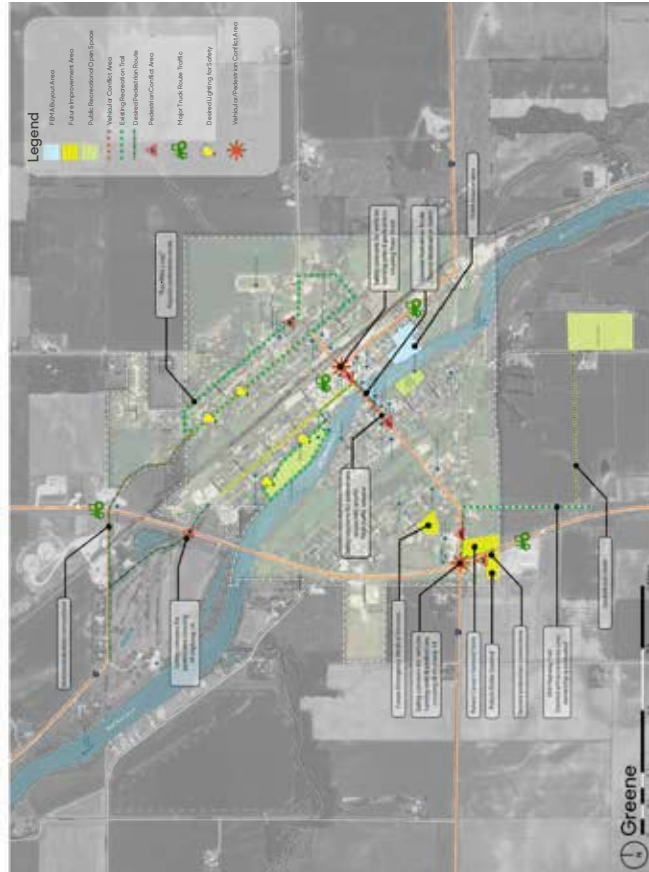
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1st Street will be reconstructed in 2019 and is a desired pedestrian route to and from the golf course that requires crossing Iowa Highway 14, as does Highland Drive to Floyd Line Street, another desired walking route for residents.



Intersection of 1st Street and Highway 14 is difficult for pedestrians to cross (reference: Barriers, board 3d)



'Two-mile loop' walking route needs better lighting (reference: Barriers, board 3d)



A dike with a walking trail on top in Perrin Park keeps water in the park during major/flooding events (reference: Assets, board 3e)



'Old Highway 14' walking trail is viewed as an asset by the community (reference: Assets, board 3e)



Intersection of County Road C13 and Iowa Highway 14



Transportation Inventory

RITLAND+KUIPER Landscape Architects
 Landscape Architects: Craig Ritland, FASLA & Samantha Price, PLA
 Landscape Architecture Intern: Peter Reiland
 Iowa State University | Trees Forever | Iowa Department of Transportation



Community Concept Plan

The steering committee reviewed the analysis of the transportation system and residents' needs and desires to develop the following ideas for improvements:

Safety

Sidewalks will be repaired, new sidewalks added, and improved lighting and safety features implemented. Highly visible crosswalks and additional signage will be designated at key areas within the community.

Recreation

Popular walking/biking routes will be connected to create longer routes and exercise opportunities. Enhancements to the Old Highway 14 Trail will allow for more users to enjoy this popular community feature. Expanding the ADA accessibility in Perrin Park will allow more mobility for impaired users to access several park features. A new ADA accessible playground is being proposed on a FEMA buyout lot, as well as a river walk that ties into the existing sidewalk system.

Tourism

Way-finding signage will direct visitors to boat ramps and river access locations. At these locations will be community map panels directing visitors to other popular destinations. Implementing a water trail designation along with the associated enhancements on Butler County's portion of the Shell Rock River will further develop Greene's niche as being a recreational destination as will adding the anchor image to proposed and existing signage.



Concept Overview

The steering committee reviewed the analysis of the transportation system and residents' needs and desires to develop the following ideas for improvements:

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Sidewalks will be repaired, new sidewalks added, and improved lighting and safety features implemented. Highly visible crosswalks and additional signage will be designated at key areas within the community.

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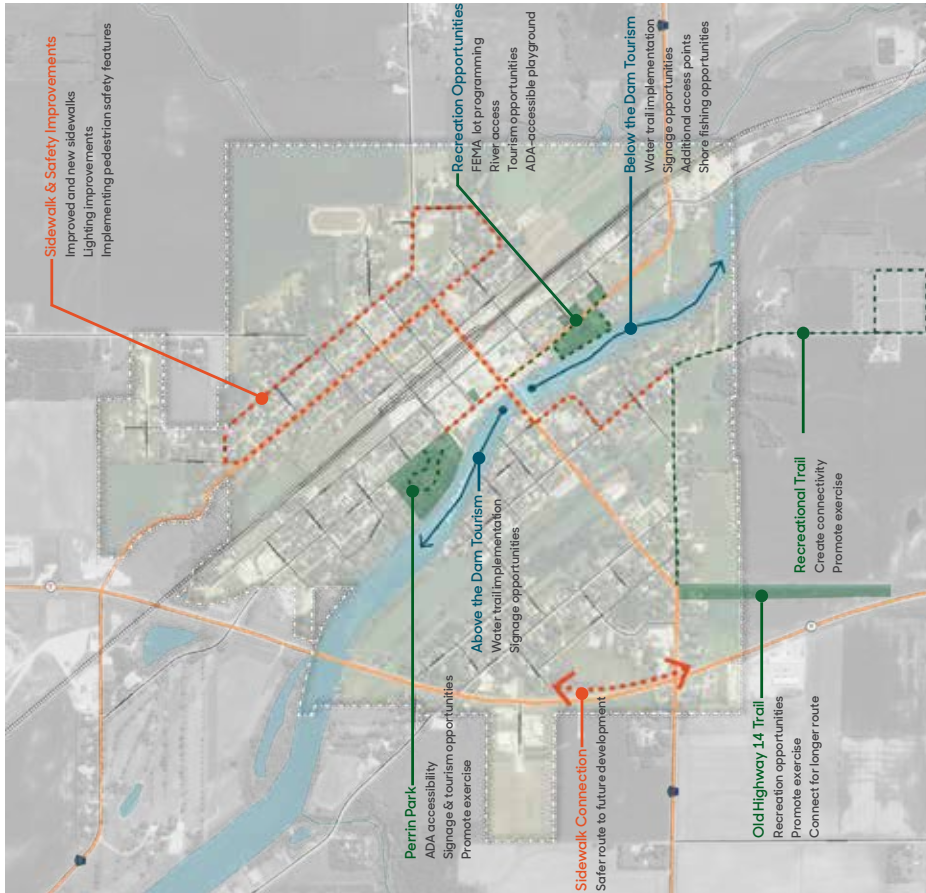
Pedestrian safety features include highly visible crosswalks and updated sidewalks (Reference: Perrin Park Improvements, Board 6)



Recreational opportunities along the Shell Rock River include new access points for fishing and paddle sports (Reference: FEMA Lot Opportunities, Board 7)



The river theme is developed by using an anchor logo on new and existing signage such as the entrance sign (located on Highway 14 (Reference: Enhancing Tourism, Board 9))



Greene

Concept Overview

RITLAND+KUIPER Landscape Architects
 Landscape Architects: Craig Ritland, FASLA & Samantha Price, PLA
 Landscape Architecture Intern: Peter Reylund
 Iowa State University | Trees Forever | Iowa Department of Transportation



Perrin Park Improvements

Perrin Park is the main gathering place for community events such as River Days, Greene's annual celebration, and is considered an asset to the community (re: Assets, Board 3e). Proposed improvements for the park include:

An accessible trail (re: Barriers, Board 3d) into and around the park's featured green space including access to the play equipment. The trail would also include benches near the playground area (Re: Desired Improvements, Board 3f).

A culvert through the dike with a back-up flap valve gate to allow the dike to keep minor flood waters out but allowing trapped flood waters to drain back into the river. Currently, the city pumps the flood waters out of the park after major flood events. Reviewing the Elevation and Flood Hazard analysis (board 2d) shows the low elevation of Perrin Park and its flood risk.

A new parking lot across the street from the existing vehicular entrance with spaces for both vehicles with and without boat trailers. This area will provide a prominent space for a new park sign and an enhanced park entrance area. An updated sidewalk along S 1st Street to Traer Street is also proposed (Re: Emerging Themes, Board 3c).

A horseshoe court nearby on a FEMA buyout property that previously held Greene's City Hall.

Horseshoe Court - Opinion of Probable Cost

The following cost opinion is based on estimated material quantities and contracted installation prices. Project costs can decrease with donated materials, reduced cost materials, and volunteer labor.

Abbreviations used in the following costs opinions include:

ea = each sf=square feet

Horseshoe Court Park	QTY	Unit	Unit Cost	Subtotal
Horseshoe Courts	4	EA	\$300.00	\$10,000.00
Benches	4	EA	\$1,500.00	\$10,000.00
Tree Plantings	3	EA	\$250.00	\$750.00
Lawn/Seed Mix & Prep	13600	SF	\$0.15	\$2,040.00
			SUBTOTAL	\$22,790.00
			Contingency (20%)	\$4,558.00
			Mobilization (15%)	\$3,418.50
			Engineering (15%)	\$3,418.50
			TOTAL	\$34,185.00

Perrin Park Flood Plan

Perrin Park retains water during major flooding events due to an existing dike. The dike prevents the park from flooding during minor flooding events. During major events, however, the dike and surrounding streets act as the edge of a bowl holding the water in the park.



Image shows the 100-year floodplain and existing dike which surrounds Perrin Park



After flood waters recede, Perrin Park continues to be inundated with water due to the existing dike, which prevents the water from flowing back out.



Installing a culvert with a back-up flap valve gate (pictured to the right) and grading the land to drain towards the culvert will enable the water to flow back out of Perrin Park and into the Shell Rock River

Legend

1. ADA-compliant walking trail with benches
2. Culvert through dike with a back-up flap valve gate
3. Vehicle and boat trailer parking area
4. Perrin Park entrance sign and tree plantings
5. Highly visible crosswalks
6. Updated sidewalk
7. Horseshoe courts and tree plantings

Perrin Park Improvements

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Proposed improvements for the park include:

- An accessible trail (re: Barriers, Board 3d) into and around the park's featured green space including access to the play equipment. The trail would also include benches near the playground area (re: Desired Improvements, Board 3f).
- A pipe through the dike with a back-up flap valve gate to allow the dike to keep minor flood waters out but allowing trapped flood waters to drain back into the river. Currently, the city pumps the flood waters out of the park after major flood events. Reviewing the Elevation and Flood Hazard analysis (board 2d) shows the low elevation of Perrin Park and its flood risk.
- A new parking lot across the street from the existing vehicular entrance with spaces for both vehicles with and without boat trailers. This area will provide a prominent space for a new park sign and an enhanced park entrance area. An updated sidewalk along S 1st Street to Traer Street is also proposed (Re: Emerging Themes, Board 3e).
- A horseshoe court nearby on a FEMA buyout property that previously held Greene's City Hall.



Horseshoe Pit



Perrin Park Entrance Sign



Back-up Flap Valve Gate

Greene
Perrin Park Improvements

RITLAND+KUIPER Landscape Architects
Landscape Architects: Craig Ritland, FASLA & Samantha Price, PLA
Landscape Architecture Intern: Peter Reyland
Iowa State University | Trees Forever | Iowa Department of Transportation



Perrin Park Flood Plan



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Pictured above: Back-up Valve Gate



Pictured above: Example of a culvert inlet which would allow water to flow through existing Perrin Park trail dike in flood events

Perrin Park Improvements - Opinion of Probable Cost

The following cost opinion is based on estimated material quantities and contracted installation prices. Project costs can decrease with donated materials, reduced cost materials, and volunteer labor.

Abbreviations used in the following costs opinions include:

ea = each sf=square feet cy=cubic yard ls=lump sum

Perrin Park Improvements	QTY	Unit	Unit Cost	Subtotal
Signage				
Entrance Sign	1	EA	\$7,500.00	\$10,000.00
Pole-mounted Directional Signage	2	EA	\$500.00	\$1,000.00
Perrin Park Walking Trail				
Excavation (10")	210	CY	\$15.00	\$3,148.02
4" PCC w/ 6" Gravel	6800	SF	\$6.00	\$40,800.00
Lawn/Seed Mix & Prep	13600	SF	\$0.15	\$2,040.00
Benches	3	EA	\$1,500.00	\$4,500.00
Culvert with Back-up Flap Valve Gate				
Excavation	1	LS	\$1,500.00	\$1,500.00
Culvert with Back-up Flap Valve Gate	1	LS	\$5,000.00	\$5,000.00
Paved Parking Area				
Excavation (11")	509	CY	\$15.00	\$7,638.58
5" PCC w/ 6" Gravel	16500	SF	\$8.00	\$132,000.00
Pavement Striping	1	LS	\$500.00	\$500.00
Highly Visible Crosswalks	2	EA	\$500.00	\$1,000.00
Tree Plantings	6	EA	\$250.00	\$1,500.00
			SUBTOTAL	\$210,626.61
			Contingency (20%)	\$42,125.32
			Mobilization (15%)	\$31,593.99
			Engineering (15%)	\$31,593.99
			TOTAL	\$315,939.91

Design Expertise Recommended

Projects may require help beyond the capability of the Greene Visioning Steering Committee or available city staff. For this improvement project, the steering committee should expect to engage the services of a Civil Engineer, Landscape Architect and Sign Company .

FEMA Lot Opportunities

Floods in 2008 and 2016 caused serious property damage in Greene and prompted a series of federal residential buyouts near the Shell Rock River, primarily downstream from the dam on the east side.

Riverside property is highly valued for recreational uses in Greene and these properties, now owned by the city, create a unique opportunity. The following list of buyout property uses were voiced by the community: riverside trails, water/fishing access, basketball court, camping, skateboard park (likely not a permitted use in the floodplain), community event/gathering space, public gardens, plantings, and a ADA-accessible playground.

The series of adjacent properties along the river presents the opportunity for developing a riverside trail in conjunction with access to the shoreline for fishing, kayaking and tubing. To support these day-use activities the plan calls for a picnic shelter and ADA-compliant playground. A riverside campground is possible at the other end of the property with a large community green space in between. Shade trees and other plantings will be welcome where appropriate.

Across the street the other properties are available for a basketball court, dog park, and public gardens as shown.

Sidewalk Improvements – Opinion of Probable Cost

The following cost opinion is based on estimated material quantities and contracted installation prices. Project costs can decrease with donated materials, reduced cost materials, and volunteer labor. All quantities are estimated and a site survey should be conducted prior to implementation to verify quantities shown in the cost opinions.

Abbreviations used in the following costs opinions include:

cy=cubic yard sf=square feet ea=each

Sidewalk Improvements	QTY	Unit	Unit Cost	Subtotal
Freedom Rock Park to Aquatic Center				
Excavation (10")	33	CY	\$20.00	\$659.55
4" PCC w/ 6" Gravel	1008	SF	\$6.00	\$6,048.00
Lawn/Seed Mix & Prep	2520	SF	\$0.15	\$378.00
Highly Visible Crosswalks	2	EA	\$500.00	\$1,000.00
			SUBTOTAL	\$8,085.55
			Contingency (20%)	\$1,617.11
			Mobilization (15%)	\$1,212.83
			Engineering & Design (15%)	\$1,212.83
			TOTAL	\$12,128.33



(Before) Above image shows an existing area within one of the FEMA buyout lots located along the Shell Rock River. Maintenance of the area is currently the responsibility of FEMA. Understory brush should be cleared but care should be taken to save overstory trees along the bank.



(After) Above image shows the conceptual design for treatment of the riverbank. Large stones armor the riverbank alongside a proposed canoe/kayak launch. A trail along the river connects to the canoe/kayak launch area.

Legend

1. Parking Area
2. Shelter House
3. ADA-Accessible Playground
4. Canoe/Kayak Launch
5. River Recreational Trail
6. Updated Sidewalk
7. Canoe/Kayak Launch
8. Campground
9. Tree Plantings
10. Highly Visible Crosswalks
11. Small- & Large- Breed Dog Park
12. Basketball Court
13. Community Garden Space
14. Updated Sidewalk with Highly Visible Crosswalks

FEMA Lot Opportunities

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Across the street the other properties are available for a basketball court, dog park, and public gardens as shown.



FEMA Lot Opportunities

RITLAND+KUIPER Landscape Architects
 Landscape Architects: Craig Ritland, FASLA & Samantha Price, PLA
 Landscape Architecture Intern: Peter Reyland
 Iowa State University | Trees Forever | Iowa Department of Transportation



FEMA Lot Opportunities - Opinion of Probable Cost

The following cost opinion is based on estimated material quantities and contracted installation prices. Project costs can decrease with donated materials, reduced cost materials, and volunteer labor. All quantities are estimated and a site survey should be conducted prior to implementation to verify quantities shown in the cost opinions.

Abbreviations used in the following costs opinions include:

lf=linear feet ea = each cy=cubic yard sf=square feet ls=lump sum

FEMA Lot Improvements	QTY	Unit	Unit Cost	Subtotal
Dog Park				
6' Chain Link Fence	600	LF	\$14.00	\$8,400.00
Double Gates	2	EA	\$1,000.00	\$2,000.00
Concrete Pads	160	SF	\$7.00	\$1,120.00
Basketball Court				
Excavation (8")	77	CY	\$30.00	\$2,302.34
PCC, 4" Court w/ 4" Gravel Subbase	3,108	SF	\$4.50	\$13,986.00
Basketball Goal	2	EA	\$1,500.00	\$3,000.00
Community Garden				
Community Garden Sign	1	LS	\$250.00	\$250.00
Campground				
Camping Site (Electricity and water, 750 SF gravel pad, picnic table, and fire ring)	8	EA	\$10,000.00	\$80,000.00
Tree Plantings	8	EA	\$250.00	\$2,000.00
Community Park				
Shelter House	1	LS	\$75,000.00	\$75,000.00
ADA Accessible Playground	1	LS	\$125,000.00	\$125,000.00
Excavation (10")	32	CY	\$30.00	\$947.52
PCC, 4" Sidewalk w/ 6" Gravel Subbase	960	SF	\$6.00	\$5,760.00
Tree Plantings	10	EA	\$250.00	\$2,500.00
Concrete Parking Area				
Excavation (10")	105	CY	\$30.00	\$3,158.40
PCC, 4" Sidewalk w/ 6" Gravel Subbase	3,200	SF	\$6.00	\$19,200.00
Canoe/Kayak Launch				
Canoe/Kayak Launch	2	EA	\$20,000.00	\$40,000.00
Limestone Blocks	600	Tons	\$95.00	\$57,000.00
Tree Plantings				
Additional tree plantings in buyout areas	62	EA	\$250.00	\$15,500.00
			SUBTOTAL	\$441,624.26
			Contingency (20%)	\$88,324.85
			Mobilization (15%)	\$66,243.64
			Engineering (15%)	\$66,243.64
			TOTAL	\$662,436.39

Design Expertise Recommended

Projects may require help beyond the capability of the Greene Visioning Steering Committee or available city staff. For this improvement project, the steering committee should expect to engage the services of a Civil Engineer and Landscape Architect .



Legend

- | | |
|------------------------------|---|
| 1. Parking Area | 9. Tree Plantings |
| 2. Shelter House | 10. Highly Visible Crosswalks |
| 3. ADA Accessible Playground | 11. Small and Large Breed Dog Park |
| 4. Canoe/Kayak Launch | 12. Basketball Court |
| 5. River Recreational Trail | 13. Community Garden Space |
| 6. Updated Sidewalk | 14. Updated Sidewalk with Highly Visible Crosswalks |
| 7. Canoe/Kayak Launch | |
| 8. Campground | |

Connectivity Improvements

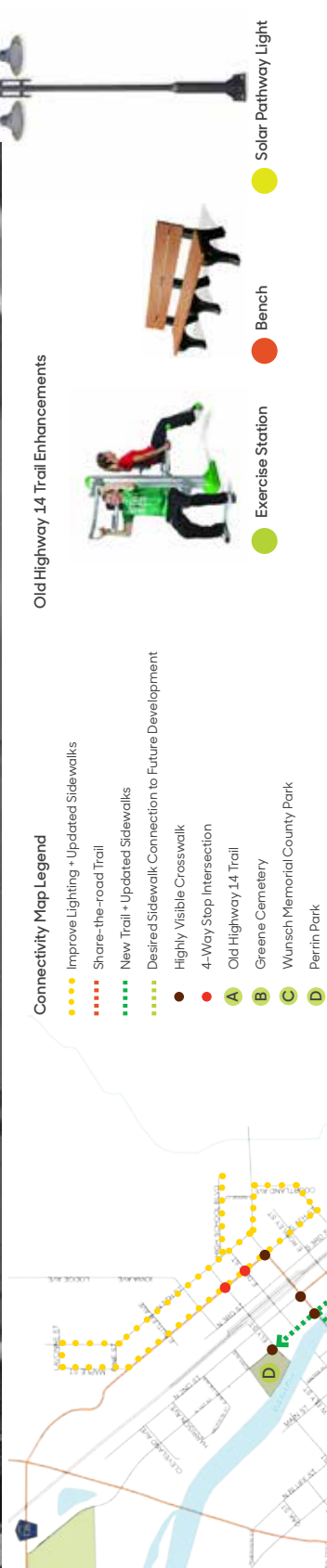
The Old Highway 14 Trail is already a treasured site within the community but improvements to the trail are desired (re: Desired Improvements, board 3f). Solar lighting, benches, and exercise stations would enhance the trail and create more recreational opportunities. Native prairie plantings along the trail would be educational and easily funded through grants. An additional recreational trail opportunity would take advantage of the beautiful cemetery atmosphere and the lengthy system of drives with little traffic. This destination would be accessed by Main Street and could connect to Wunsch Memorial County Park, all on paved surfaces. Establishing South Street, parts of Main Street, and Lodge Street as share-the-road to the cemetery would connect this route with the Old Highway 14 Trail. Greene focus groups and the steering committee identified a trail extension as a desired outcome of the visioning program (re: Desired Improvements, board 3f).

Walkways improvements between Perrin Park, the convenience store on Traer Street, and the Greene Aquatic Center would ensure children have a safe route to take to these popular destinations. The crossing at Traer Street to the library is considered unsafe (re: Barriers, board 3d). A highly visible crosswalk at this location is suggested, as well as better lighting.

Additional sidewalks throughout the community would fill in gaps, creating a more comprehensive sidewalk system. The "two-mile loop" walking route near the high school would benefit from sidewalks on 5th Street; lack of sidewalks here is viewed as a barrier (re: Barriers, board 3d) by the community. Additional lighting and lighting maintenance, such as cutting away tree branches from light fixtures is also needed along this route.

While the design team has shown these routes on the map, more detailed knowledge of existing lights and tree locations, electrical supply, and specific sidewalk conditions would be necessary for more detail planning and formulating cost opinions.

The potential river walk trail in the FEMA buyout properties ties into the sidewalk on South 1st Street and creates a loop.



Connectivity Map Legend

- Improve Lighting + Updated Sidewalks
- Share-the-road Trail
- New Trail + Updated Sidewalks
- Desired Sidewalk Connection to Future Development
- Highly Visible Crosswalk
- 4-Way Stop Intersection
- Old Highway 14 Trail
- Greene Cemetery
- Wunsch Memorial County Park
- Perrin Park

Connectivity Improvements

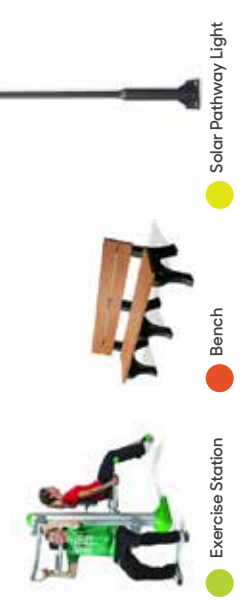
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The potential river walk trail in the FEMA buyout properties ties into the sidewalk on South 1st Street and creates a loop.

Old Highway 14 Trail Enhancements



- Exercise Station
- Bench
- Solar Pathway Light



Connectivity Improvements

RITLAND+KUIPER Landscape Architects
 Landscape Architects: Craig Ritland, FASLA & Samantha Price, PLA
 Landscape Architecture Intern: Peter Reiland
 Iowa State University | Trees Forever | Iowa Department of Transportation



Old Highway 14 Trail - Opinion of Probable Cost

The following cost opinion is based on estimated material quantities and contracted installation prices. Project costs can decrease with donated materials, reduced cost materials, and volunteer labor. All quantities are estimated and a site survey should be conducted prior to implementation to verify quantities shown in the cost opinions.

Abbreviations used in the following costs opinions include:

ea = each ac=acre cy=cubic yard sf=square foot

Old Highway 14 Trail	QTY	Unit	Unit Cost	Subtotal
Site Amenities				
Exercise Stations	5	EA	\$2,800.00	\$14,000.00
Benches	4	EA	\$1,500.00	\$6,000.00
Solar Pathway Lights	5	EA	\$3,500.00	\$17,500.00
Plantings				
Native Prairie Seeding	1	AC	\$3,600.00	\$3,600.00
			SUBTOTAL	\$41,100.00
			Contingency (20%)	\$8,220.00
			Mobilization (15%)	\$6,165.00
			Engineering (15%)	\$6,165.00
			TOTAL	\$61,650.00

Design Expertise Recommended

Projects may require help beyond the capability of the Greene Visioning Steering Committee or available city staff. For this improvement project, the steering committee should expect to engage the services of a Landscape Architect and Civil Engineer.

Lighting Recommendations

Several areas within Greene were noted as needing better lighting. These areas include: the aquatic center, on 4th Street, on 5th Street, and on High School Boulevard. Pruning trees that area covering existing lights should be implemented. Additional lighting needs would need to be studied further.

Connectivity Improvements - Opinion of Probable Cost

Connectivity Improvements	QTY	Unit	Unit Cost	Subtotal
5' Sidewalk from Park Street to W South Street				
Excavation (10")	23	CY	\$30.00	\$677.75
4" PCC w/ 6" Gravel	7320	SF	\$6.00	\$43,920.00
Lawn/Seed Mix & Prep	14640	SF	\$0.15	\$2,196.00
Highly Visible Crosswalks	1	EA	\$500.00	\$500.00
4' Sidewalk Perrin Park to Aquatic Center				
Demolition & Removal	2224	SF	\$1.00	\$2,224.00
4" PCC w/ 6" Gravel	2224	SF	\$6.00	\$13,344.00
Lawn/Seed Mix & Prep	5560	SF	\$0.15	\$834.00
Highly Visible Crosswalks	3	EA	\$500.00	\$1,500.00
10' Trail on S 1st Street (from E Rowley Street to Nassau Street)				
Excavation (10")	278	CY	\$30.00	\$8,351.52
4" PCC w/ 6" Gravel	9020	SF	\$6.00	\$54,120.00
Lawn/Seed Mix & Prep	9020	SF	\$0.15	\$1,353.00
10' Trail along River in Buyout Lot				
Excavation (10")	273	CY	\$30.00	\$8,194.12
4" PCC w/ 6" Gravel	8850	SF	\$6.00	\$53,100.00
Lawn/Seed Mix & Prep	8850	SF	\$0.15	\$1,327.50
4' Sidewalk on 4th Street				
Excavation (10")	62	CY	\$30.00	\$1,851.78
4" PCC w/ 6" Gravel	2000	SF	\$6.00	\$12,000.00
Lawn/Seed Mix & Prep	5560	SF	\$0.15	\$834.00
Highly Visible Crosswalks	1	EA	\$500.00	\$500.00
4' Sidewalk on Maple Street				
Excavation (10")	117	CY	\$30.00	\$3,518.38
4" PCC w/ 6" Gravel	3800	SF	\$6.00	\$22,800.00
Lawn/Seed Mix & Prep	5560	SF	\$0.15	\$834.00
4' Sidewalk on LaVonne Street				
Excavation (10")	43	CY	\$30.00	\$1,296.24
4" PCC w/ 6" Gravel	1400	SF	\$6.00	\$8,400.00
Lawn/Seed Mix & Prep	5560	SF	\$0.15	\$834.00
4' Sidewalk on Willow Drive				
Excavation (10")	95	CY	\$30.00	\$2,851.74
4" PCC w/ 6" Gravel	3080	SF	\$6.00	\$18,480.00
Lawn/Seed Mix & Prep	5560	SF	\$0.15	\$834.00
			SUBTOTAL	\$266,676.02
			Contingency (20%)	\$53,335.20
			Mobilization (15%)	\$40,001.40
			Engineering (15%)	\$40,001.40
			TOTAL	\$400,014.03

Promoting Tourism

Way-finding signage will direct visitors to boat ramps and river access locations. At these locations will be community map panels directing visitors to other popular destinations.

Implementing a water trail designation along with the associated enhancements on Butler County's portion of the Shell Rock River will further develop Greene's niche as being a recreational destination. An official water trail designation will make access and knowledge of the river easier to obtain. Benefits associated with the status include new water access points and support features such as signage and river maps.

Carrying on the river theme throughout the community is the addition of an anchor to new and existing signage.

Recommending locations for the way-finding panels are near the boat ramps in town. Perrin Park and the FEMA buyout lot future park would both be ideal locations for the panels. Additional way-finding signage would be helpful locating visitor amenities such as Perrin Park, North Butler High School, and the boat launches. These are just suggestions and more thoughtful analysis of locations should be considered.



Enlargement of Entrance Sign Enhancements

Promoting Tourism

Way-finding signage will direct visitors to boat ramps and river access locations. At these locations, will be community map panels directing visitors to other popular destinations.

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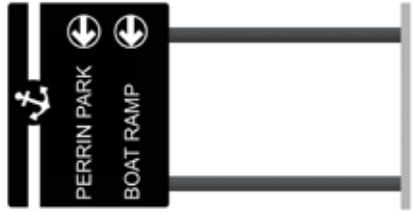
Carrying on the river theme throughout the community is the addition of an anchor to new and existing signage.



Example of a water trail map from the Iowa River Greenbelt Water Trail in Hamilton County. A similar map could be created for Butler County's portion of the Shell Rock River.



Proposed Community Map Panel



Proposed Way-finding Signage



Image taken from Greene's City website (reference: www.greeneia.org/recreation.php)



Greene's existing entrance sign on Highway 14



Greene's updated entrance sign on Highway 14 is low maintenance and promotes the theme using the anchor with the existing signage



Promoting Tourism

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 Landscape Architects: Craig Rittland, FASLA & Samantha Price, PLA
 Landscape Architecture Intern: Peter Reyland
 Iowa State University | Trees Forever | Iowa Department of Transportation



Promoting Tourism - Opinion of Probable Cost

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Abbreviations used in the following costs opinions include:

ls= lump sum sf = square foot lf = linear foot ea = each

Promoting Tourism*	QTY	Unit	Unit Cost	Subtotal
Signage				
Community Map Panel	4	EA	\$5,000.00	\$20,000.00
Way-finding Signage	4	EA	\$3,000.00	\$12,000.00
Entrance Sign Landscape (2)				
Anchor Feature at Entrance Signs	2	EA	\$500.00	\$1,000.00
Removal of Existing Vegetation	1	LS	\$1,000.00	\$1,000.00
Annuals (Yearly Expense)	1	LS	\$300.00	\$300.00
Wood Mulch	100	SF	\$1.00	\$100.00
Spade Edge	80	LF	\$1.00	\$80.00
Lawn/Seed Mix and Prep	2,000	SF	\$0.45	\$900.00
			SUBTOTAL	\$35,380.00
			Contingency (20%)	\$7,076.00
			Mobilization (15%)	\$5,307.00
			Engineering & Design (15%)	\$5,307.00
			TOTAL	\$53,070.00

* Water trail designation is done through the Iowa Department of Natural Resources. More information on the process is available at:

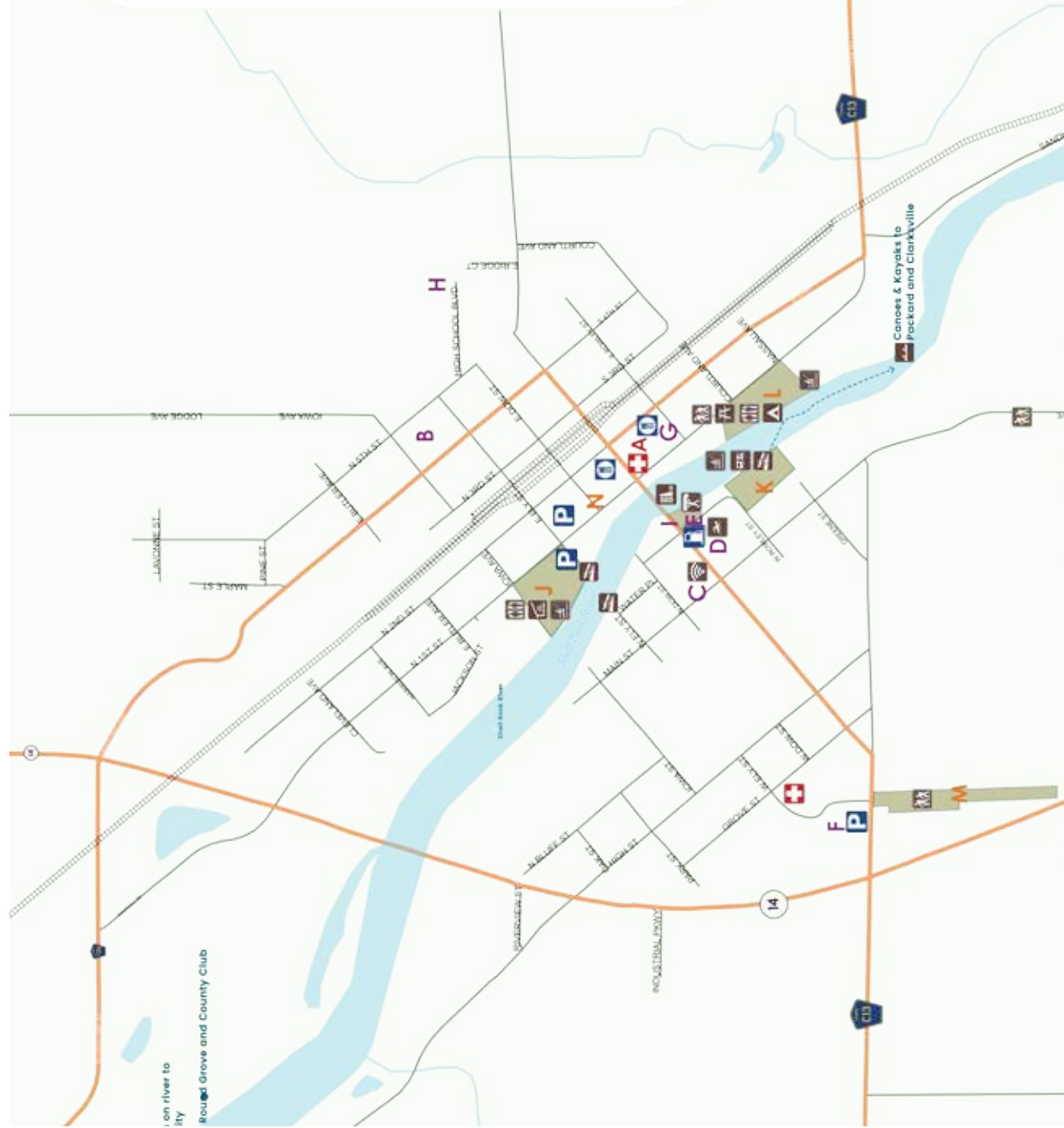
<http://www.iowadnr.gov/Things-to-Do/Canoeing-Kayaking/Water-Trail-Development>

The community should consider pairing up with local communities along the river in Butler and Floyd county to complete the water trail designation together. Benefits of state water trail designation include enhancement funding via the Iowa DNR, marketing assistance from the DNR water trails program, water trail crew assistance, and consistency with neighboring water trails.

Design Expertise Recommended

Projects may require help beyond the capability of the Greene Visioning Steering Committee or available city staff. For this improvement project, the steering committee should expect to engage the services of a signage company and graphic designer.

- EMERGENCIES**
 For emergency assistance, please call 9 1 1.
 Mercy Family Clinic
- DESTINATIONS**
 North Butler High School
 Greene Public Library
 Greene Aquatic Center
 Bridgeway Convenience Store
 Greene Community Center
 U.S. Post Office
 North Butler Sports Complex
 Freedom Rock Park
- PARKS & TRAILS**
 Perrin Park
 Wunsch Memorial Park
 FEMA Lot Park
 Old Highway 14 Trail
 Horseshoe Courts Park



on river to
 City
 Round Grove and County Club

Canoes & Kayaks to
 Packard and Clarkville

Implementation Strategies

The Visioning Program is just the beginning of the planning process for implementation of projects that will contribute to an enhanced quality of life in Greene. Although there is much value in data gathering, analysis, conclusions and recommendations, the greatest value is providing the residents of Greene with the opportunity to look at their community from different perspectives and to motivate future positive change. It is the design team's intent to provide the community with a framework for significant future development and enhancement of community resources.

It is recommended that projects be approached individually, keeping in mind some may occur at the same time or may require phasing to be completed. Short term projects are those that can be more easily accomplished or address safety issues. Long range projects will need to be implemented based on available funds and in some cases agreements with private landowners.

Based on the strategy that early success builds momentum, we recommend the first projects be those that can be more easily accomplished and be highly visible.

Where to Start: The design team is recommending two projects, highly visible crosswalk markings at key intersections and vehicular way-finding signage for visitors to popular destinations such as Perrin Park and community boat ramps. Other improvements to existing entrance signage on State Highway 14 would be highly visible and aid in momentum building.

Connectivity Improvements: An associated long-range project to the highly visible crosswalk markings is to initiate a sidewalk program to complete important disconnects and repairs where critical. This could be phased as funding can be budgeted. Key areas would be routes to the North Butler High School, connections to the Old Highway 14 walking trail and downtown.

Promoting Tourism: The Shell Rock River is a high priority within the community, concurrent with these improvements, the City should begin the process of working with the appropriate agencies to begin the process to designate the Shell Rock River as a state water trail. This has the potential to bring additional resources and tourism to Greene.

Perrin Park: Perrin Park is a popular destination and gathering place within the community and the planned improvements should be given a high priority. The accessible walking trail and drainage structure should be implemented first. If the City can obtain the property diagonally across from Perrin Park, the next projects would be the expanded parking and new park sign for Perrin Park.

Horseshoe Court: The old city hall lot could be converted to a horseshoe court early in the implementation process. This would be another contender as a momentum building project for the visioning committee to gain community recognition and support.

Buyout Lots: Another highly popular project is the brush clearing and recreational trail along the river in the FEMA buyout properties. This is designed to tie into the existing sidewalk system and would be eligible for REAP grant funding. REAP funds require no match making it a very popular program. This could bring momentum to develop the other associated park improvements on a phased approach. The shelter, campground and other improvements to the park would also be eligible for REAP funding. The population of Greene would make it eligible for \$75,000 each year if the applications were successful.

Old Highway 14 Trail: Enhancements to the Old Highway 14 Trail and the recommended trail connections to it and the cemetery trail should be considered as a long-range project as funding can be secured. These improvements would also be eligible for REAP funding.



Image showing proposed changes in a FEMA buyout lot implementing brush clearing, stabilized bank treatment using limestone blocks, and a proposed canoe/kayak launch.

Available Resources

There are many creative ways that communities can raise the resources necessary to fund and implement projects. The following list is a compilation of various sources and opportunities for funding the projects conceptualized during the visioning process. This list is not all-inclusive; it is meant to serve as a tool to assist in brainstorming ideas.

Funding Opportunities

- Grants
- Partnerships (private and public)
- Trusts and endowments
- Fund-raising and donations
- Memorials
- Volunteer labor
- Low-interest loans
- Implementation of project in phases

Funding Sources

- Iowa Department of Transportation
- Iowa Department of Natural Resources
- Iowa Department of Education
- Iowa Department of Economic Development
- Utility companies
- Trees Forever

Grant Programs

- Alliant Energy and Trees Forever Branching Out Program
- Federal Surface Transportation Program (STP)
- Iowa Clean Air Attainment Program (ICAAP)
- Iowa DOT/DNR Fund Iowa
- Iowa DOT Iowa's Living Roadways Projects Program
- Iowa DOT Living Roadways Trust Fund Program
- Iowa DOT Pedestrian Curb Ramp Construction Program
- Iowa DOT Statewide Transportation Enhancement Funding
- Iowa DNR Recreation Infrastructure Program
- Land and Water Conservation Fund
- National Recreational Trails Program
- Pheasants Forever
- Revitalization Assistance for Community Improvement (RACI) Grant Program
- State Recreational Trails Program
- Transportation Alternatives Program (TAP)

Appendix A

Refer to the full Community Project Funding Guide at: http://www.treesforever.org/Community_Project_Funding_Guide

Included in this appendix is the list of programs available, more information is located at the link above.

COMMUNITY PROJECT FUNDING GUIDE



A guide compiled by Trees Forever to assist Iowa communities seeking funding sources for community improvement projects.

Online at: http://www.treesforever.org/Community_Project_Funding_Guide

October 2016

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- ◆ Iowa Native Plant Society Small Grants Program (p. 20-21)
- ◆ Land and Water Conservation Fund (p. 29-30)
- ◆ REAP – City Parks and Open Spaces (p. 45-46)
- ◆ REAP – DNR Open Spaces Protection: Acquisition and Development (p. 47-48)
- ◆ Water Recreation Access Cost-Share Program (p. 65-66)

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- ◆ Alliant Energy Branching Out (p. 1-2)
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- ◆ Iowa Living Roadway Trust Fund (p. 18-19)

- ◆ Iowa Native Plant Society Small Grants Program (p. 20-21)
- ◆ Iowa's Living Roadways Projects Program (p. 24-25)
- ◆ Iowa's Statewide Transportation Alternatives Program (p.26-28)
- ◆ Land and Water Conservation Fund (p. 29-30)
- ◆ Nature Works Everywhere Grant (p.34-35)
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- ◆ Trees For Kids/Trees For Teens (p. 62-63)
- ◆ Trees Please! (p. 64)
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APPENDIX I: Iowa Department of Transportation District Planners, and MPOs and RPAs

APPENDIX II: Iowa Department of Transportation District Engineers

Appendix B

Refer to the full IDOT funding guide at: http://www.iowadot.gov/pol_leg_services/Funding-Guide.pdf

Included in this appendix is the list of programs available, more information is located at the link above.

Guide to Transportation Funding Programs of interest to local governments and others

In this document you will find information regarding state and federal programs that provide transportation project funding of interest to local governments and other entities. This information is intended to serve as a guide for preliminary funding searches. For more detail, we encourage you to contact the Iowa Department of Transportation (DOT) office listed for each program. (In some cases, the DOT district office or a Regional Planning Affiliation/Metropolitan Planning Organization is the recommended contact – maps and information for your area can be found beginning on page 66.)

As always, to help you find as many potential funding sources as possible, we have included some programs under more than one heading.

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