

Final Report and Feasibility Study Bedford, Iowa



Program Partners:
Iowa Department of Transportation
Trees Forever
Iowa State University



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About Genus Landscape Architects

Located in the East Village of Des Moines, Iowa, **gēnus** is an award-winning professional consulting firm specializing in landscape architecture, planning, project management, and visual design services for clients throughout the Midwest. Our team has provided planning leadership and design excellence for communities across the Midwest and East Coast.

Established in 2005, **gēnus** is focused on enhancing the quality of people's lives and the condition of the built environment through the discipline of landscape architecture. The foundation of our practice lies in the pursuit of creating artful landscapes that function: places which inspire lasting memories while meeting the needs of clients, user groups, and harmonizing with the larger ecological systems in which they exist. A commitment to innovative design, stakeholder involvement, and client satisfaction is demonstrated throughout our portfolio.



Program Overview

Bedford 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, and 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:

1. Program initiation
2. Needs assessment and goal setting
3. Development of a concept plan
4. Implementation and sustained action

Bedford 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 Goals

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

- Improve pedestrian connections and the existing trail
- Make downtown more accessible, lower curb heights, and develop a cohesive palette of site furnishings
- Improve way-finding and community branding/identity through signage

Priority Areas:

- Pedestrian connections: Northside Apartments to Hy-Vee, Highway 148 east to Bibbins Park, school to the track, connect to cemetery, downtown to ball fields
- Downtown improvements: along Court Ave and Main Street
- Way-finding signage: along the highway corridors, downtown, and at park entries.

Capturing the Vision

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

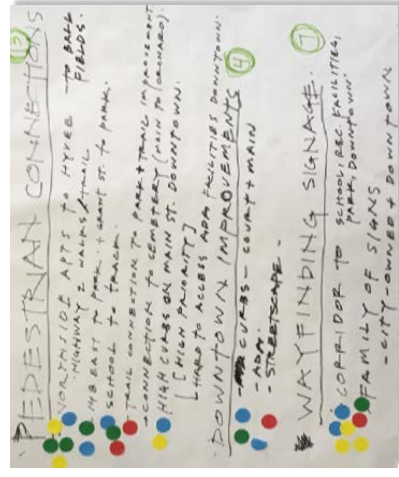
1. Program Overview
2. Bioregional Assessment
3. Transportation Assets and Barriers Assessment
4. Transportation Inventory
5. Concept Plan
6. Signage + Identity
7. Pedestrian Connections
8. Downtown Improvements

Community Visioning

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- Assisting local communities in using external funds as leverage for transportation corridor enhancement



Results of performance objectives meeting



Performance objectives meeting

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Preliminary design review meeting with committee

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Bedford

Program Overview

Design Team

LA: Dylan Jones, PLA, ASLA
 Intern: Paola Monlor Torres

Iowa State University | Trees Forever | Iowa Department of Transportation



Steering committee on site tour during design workshop

Bioregional Assessment

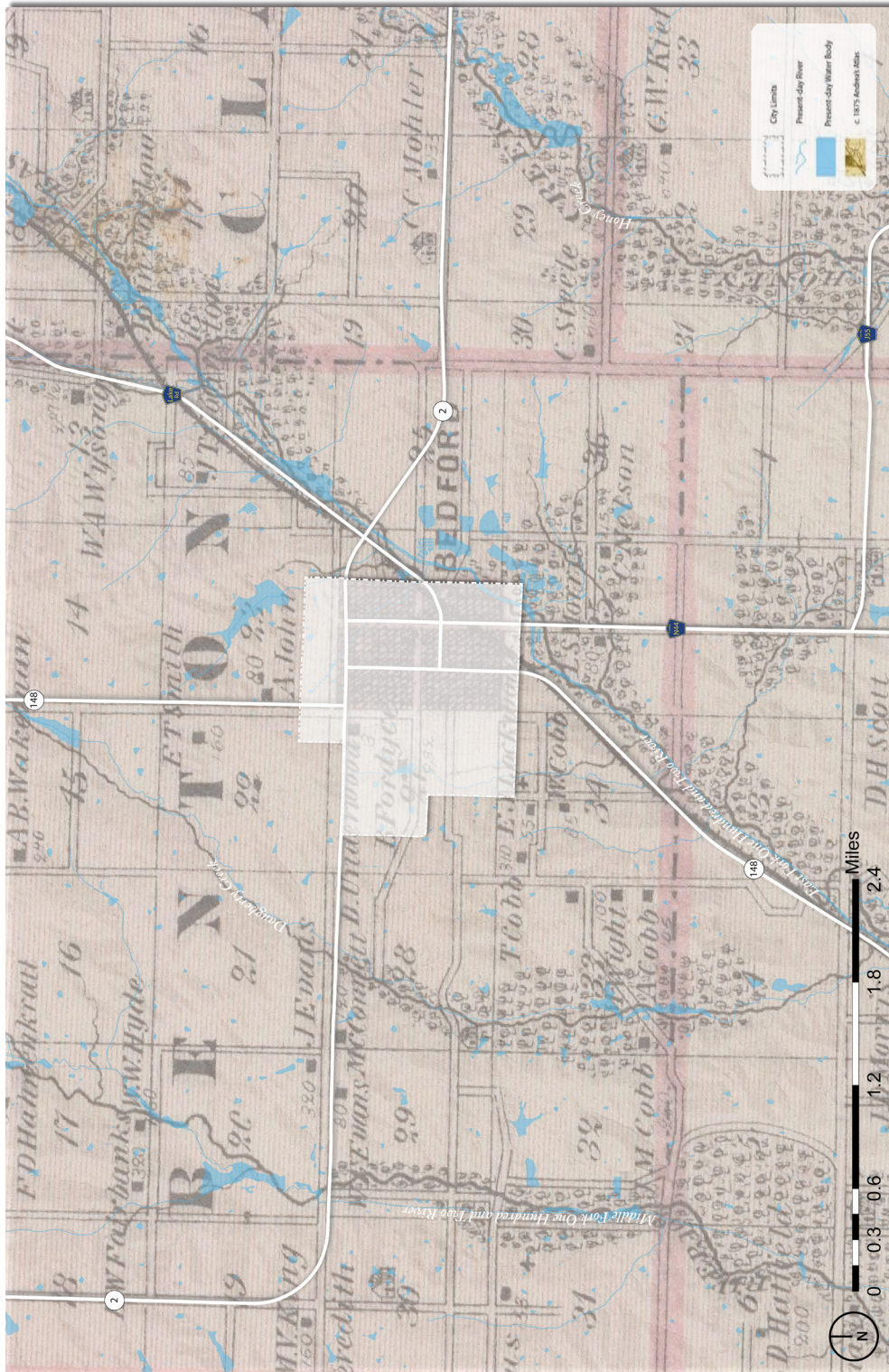
Historical Settlement Patterns

This board uses a map 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.) A high-quality scan of the Atlas is arranged to correspond closely with the present-day map, revealing major landscape changes as well as features that have persisted, such as railroad rights-of-way and in some cases remnant vegetation patches.

Bedford 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.iagb.uiowa.edu/ingislib/>.

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Historical Settlement Patterns

Bioregional Context

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

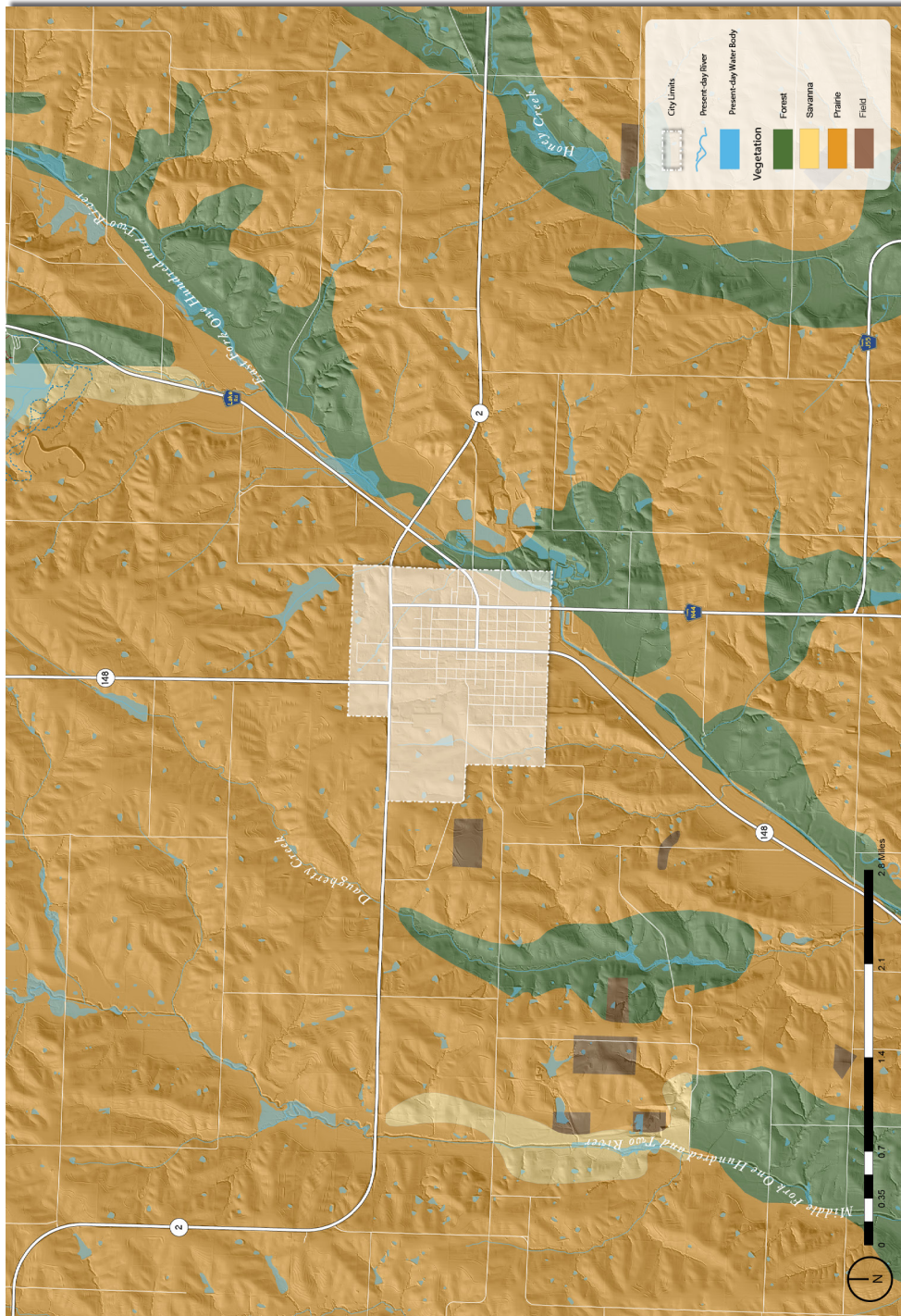
The plant community names mapped by the GLO surveyors varied. The original terminology they used has been preserved in the original data, but we have renamed them on this map to reflect names used to describe contemporary vegetation communities.

Not all communities will have all vegetation types, because various conditions that affect vegetation, such as geology, wind exposure, seasonally high water or groundwater, and frequency of fire, differ from place to place.

Early land surveyors mapped the following vegetation types, some of which may not be presented in the vicinity of your community:

1. Forest: Tree dominated, with a mostly closed canopy. Ground vegetation shade tolerant. Developed under infrequent fire.
2. Savanna: Scattered trees, with an open canopy and prairie below. Fire dominated.
3. Prairie: Perennial non woody plants; fire dominated.
4. Field: Cultivated lands of early pioneers or Native Americans.

¹J.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.



(Map Source: Iowa Department of Natural Resources, "Natural Resources Geographic Information Systems Library," <http://www.dnr.iowa.gov/nrgis/box/>)

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Historical Vegetation

Bioregional Context
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Iowa State University | Trees Forever | Iowa Department of Transportation

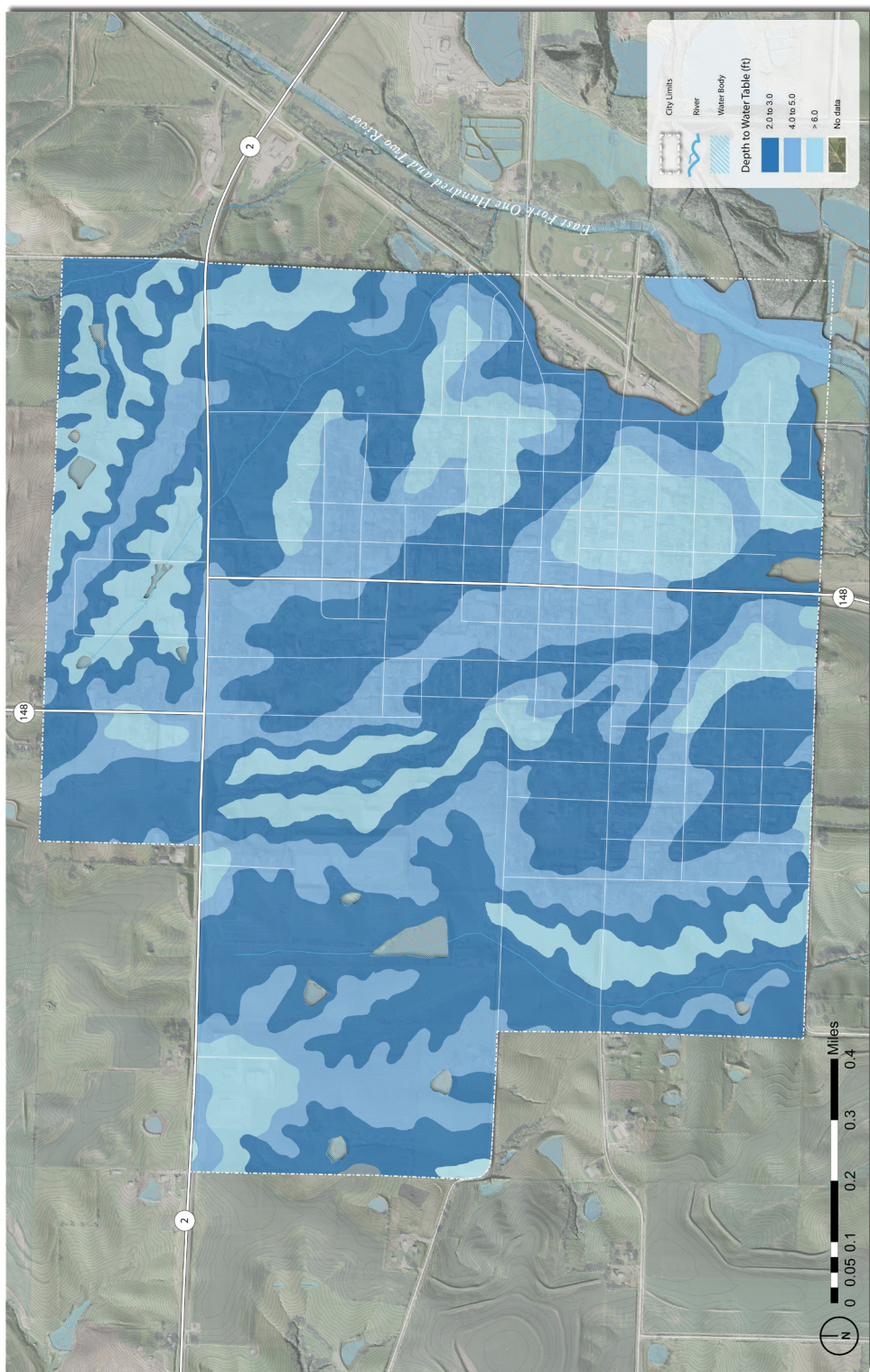


Depth to Water Table

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 snowmelt, 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 the groundwater near the surface. Freezing and thawing 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 zero feet, water can well up out of the ground. This causes localized flooding, even if there is no surface water draining to the area.



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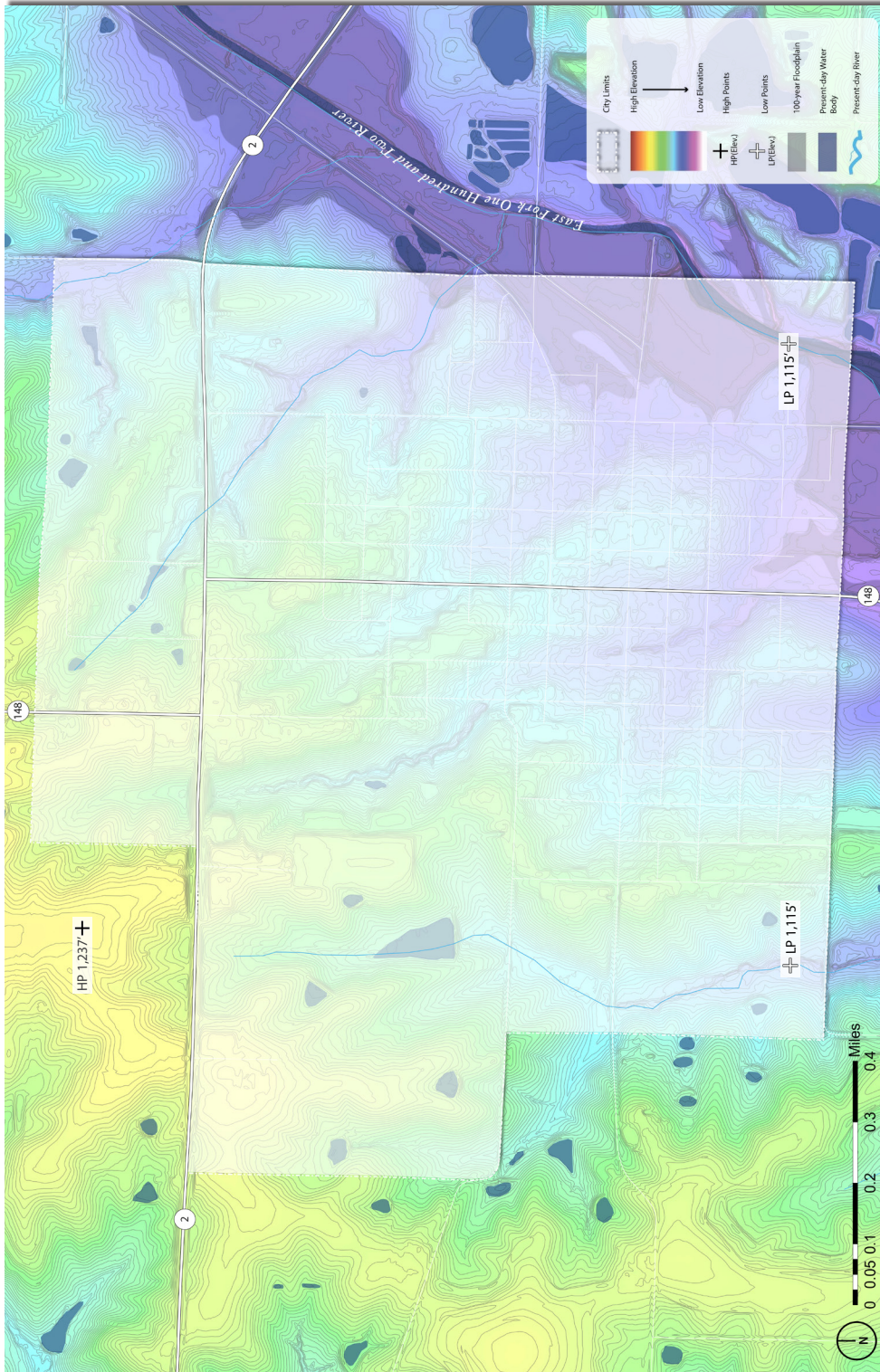
Elevation and Flow

The map to the right 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; 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.



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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 determine 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.

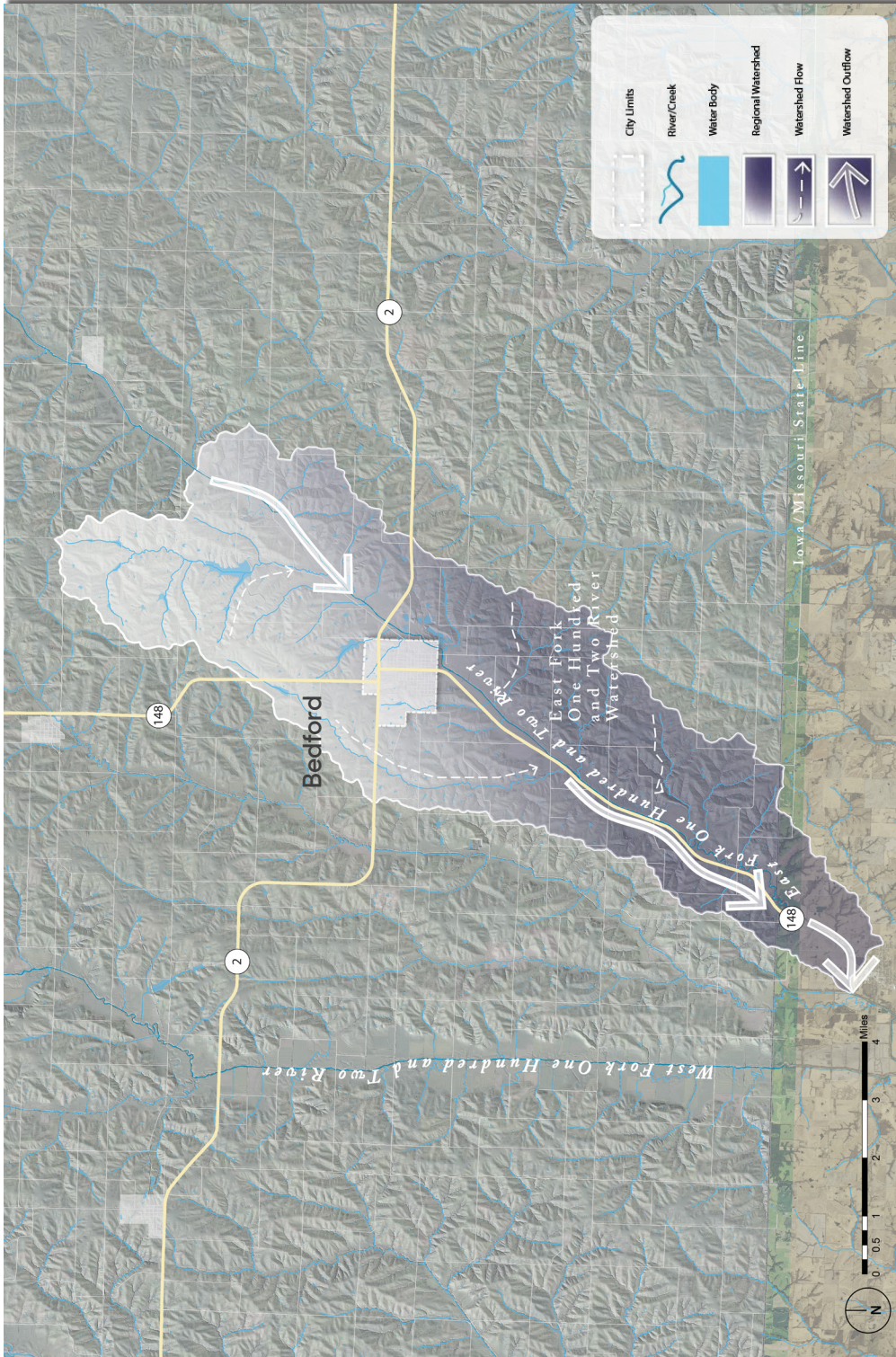
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Map Source: Iowa Department of Natural Resources; Natural Resources Geographic Information Systems Library; <http://iunwu.igsb.uiowa.edu/mgis/lib/>.

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Regional Watershed

Bioregional Context

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Present-day Land Cover

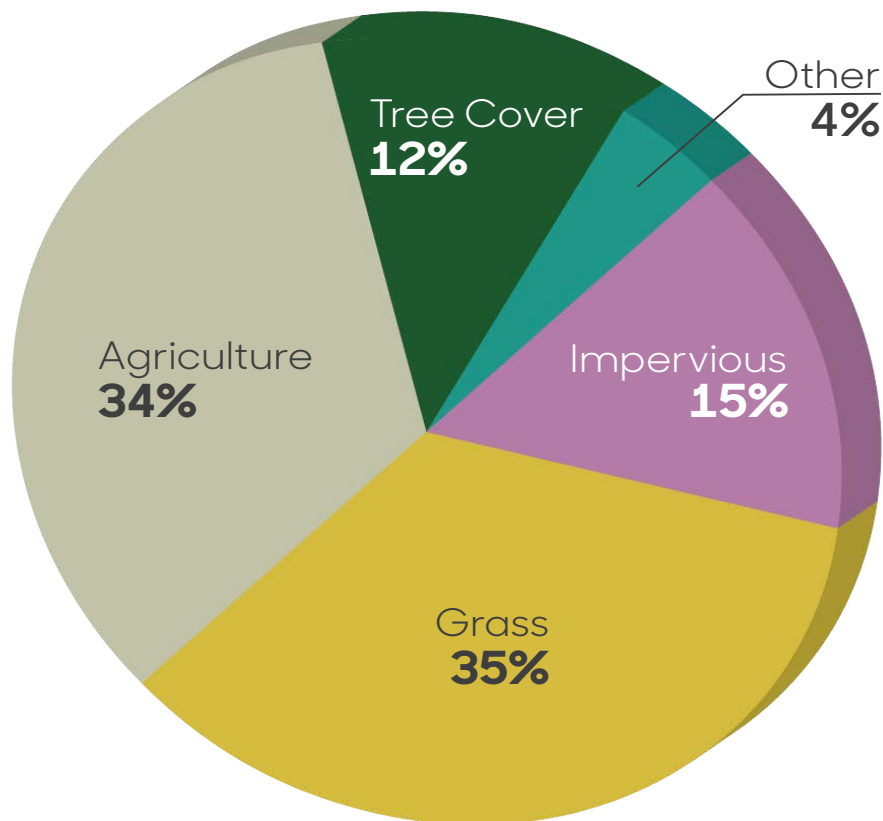
The land-cover map depicts both natural and man-made land-cover types with aerial imagery. The Iowa DNR created 15 unique classes for this dataset to differentiate land covers. Refer to the legend for a breakdown of land-cover types within your community boundaries.

What do you observe about the dominant land-cover types in your community?
Where is the tree canopy most concentrated?

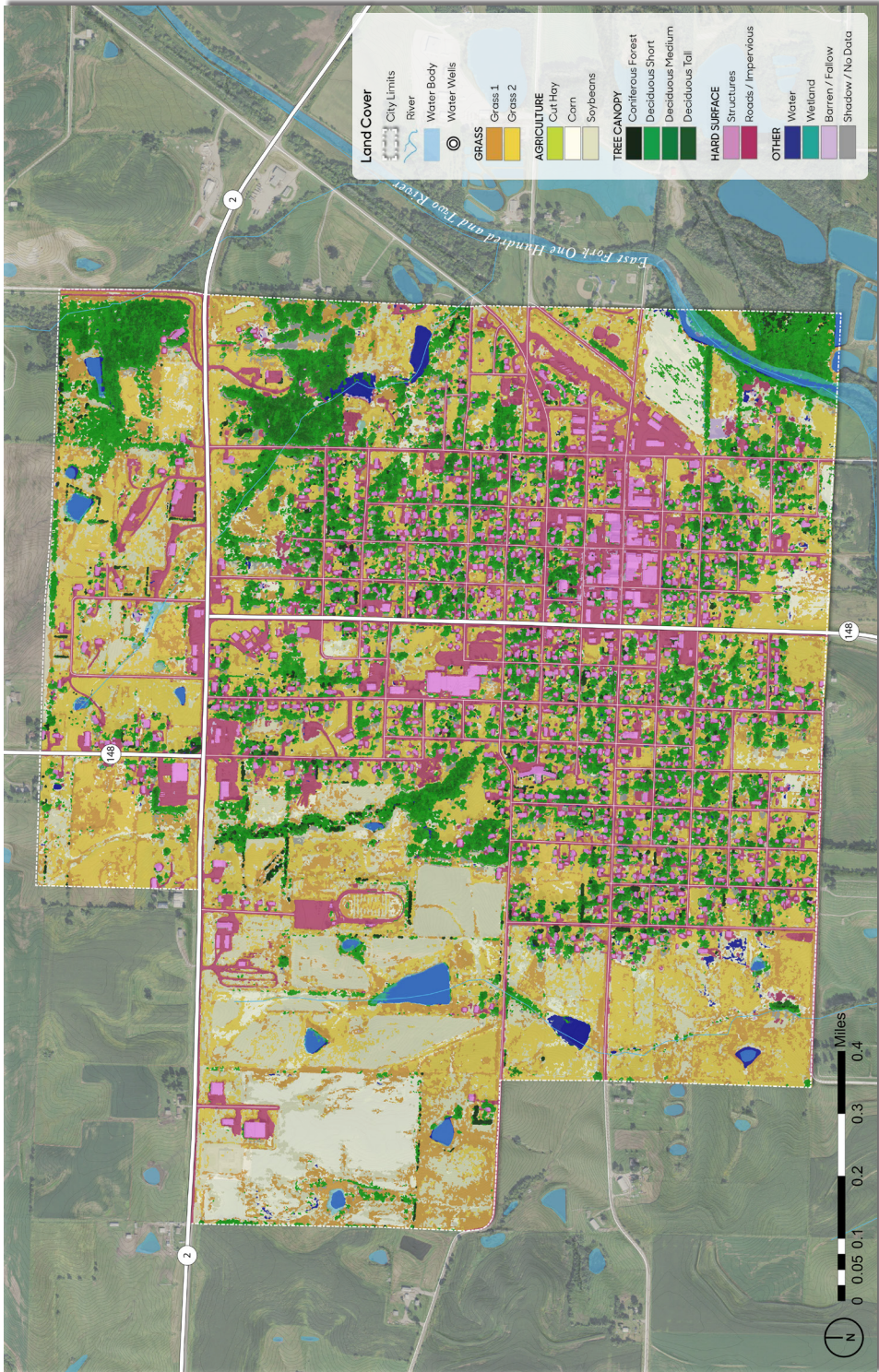
Look at how much of your community consists of impervious surfaces (e.g., parking lots, roads, buildings) compared to other surfaces (e.g., water, grass, and agriculture). What does this mean for surface-water movement?

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



Percent Land Cover Type



Map Sources: Iowa Department of Natural Resources; "Natural Resources: Geographic Information Systems Library." <http://www.gisbu.iowa.edu/mgislib/>

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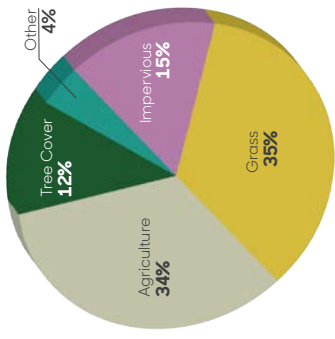
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Percent Land Cover Type

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Present-day Land Cover

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Present-day Vegetation

This map shows the present-day vegetation in an aerial image, indicating 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 government land office surveyors mapped the historic vegetation. People alter vegetation to produce crops and provide shelter, and for other amenities.

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



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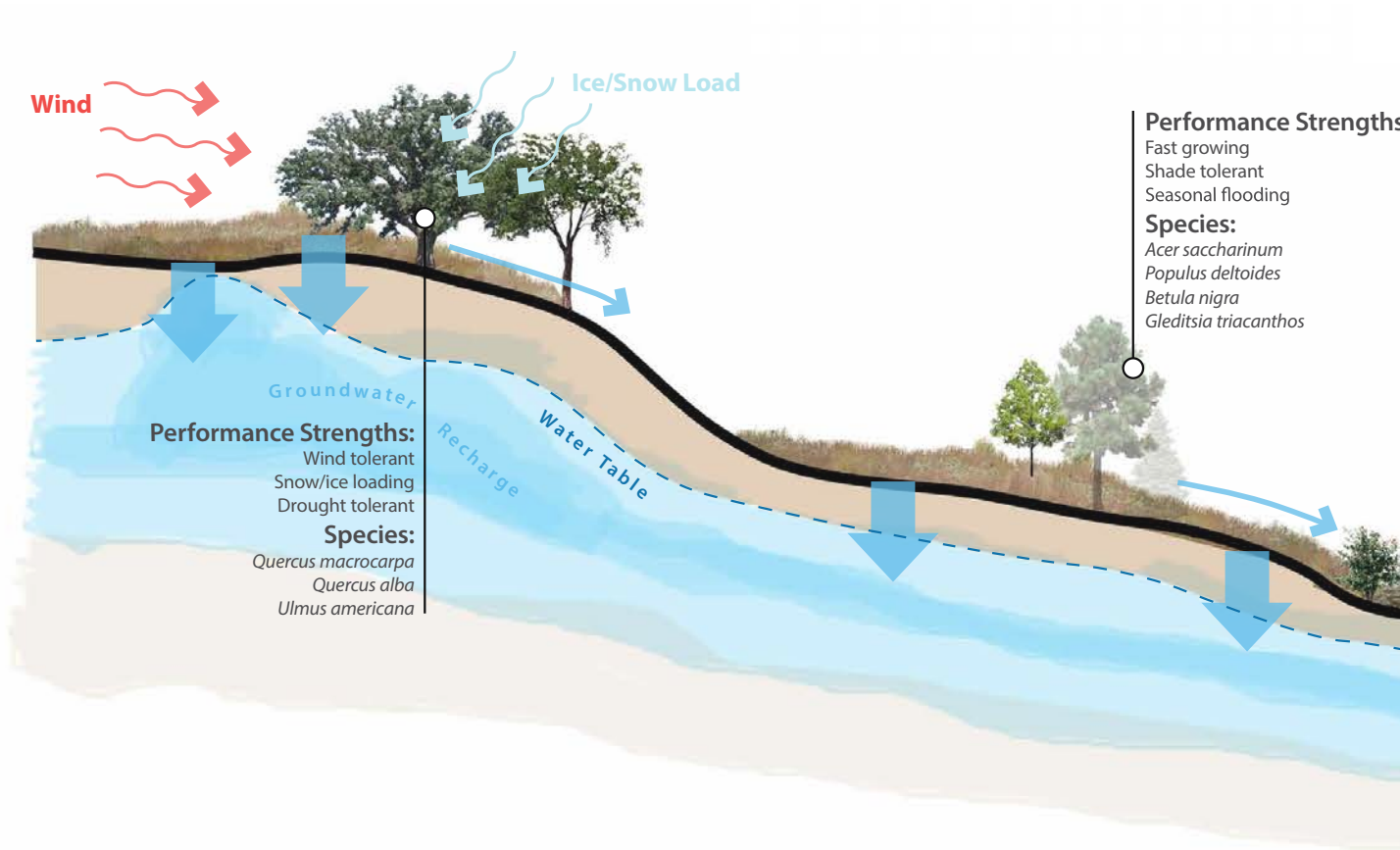
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Bioregional Context

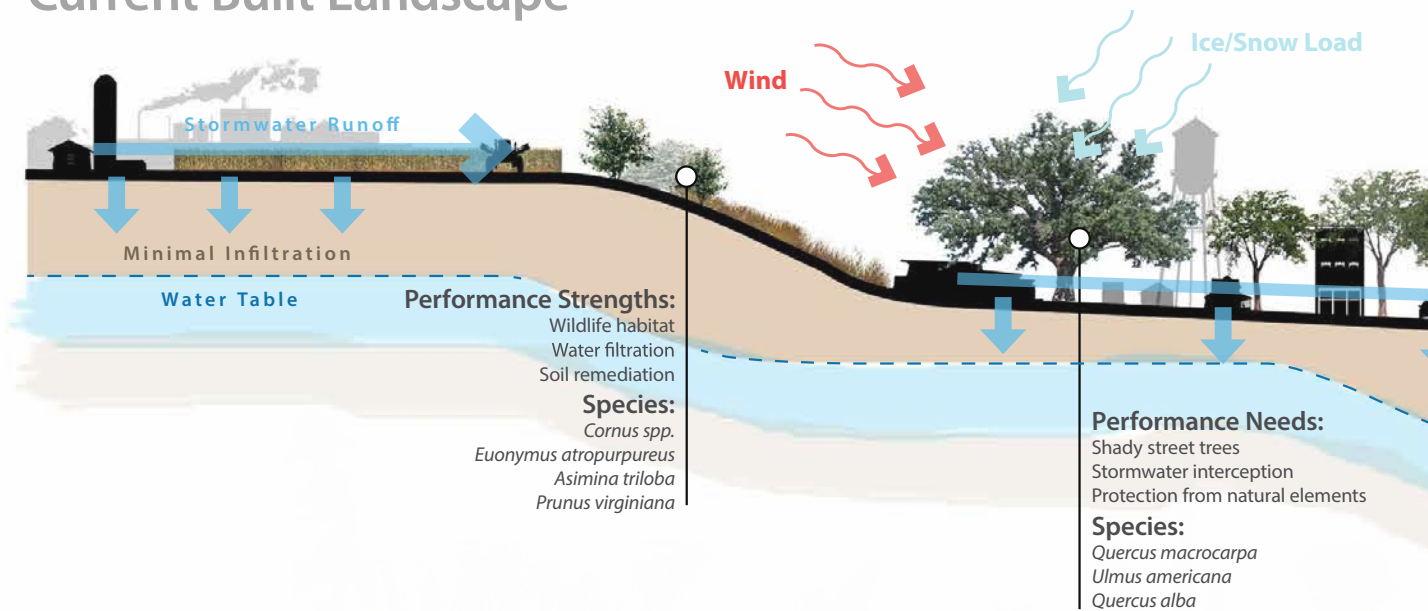
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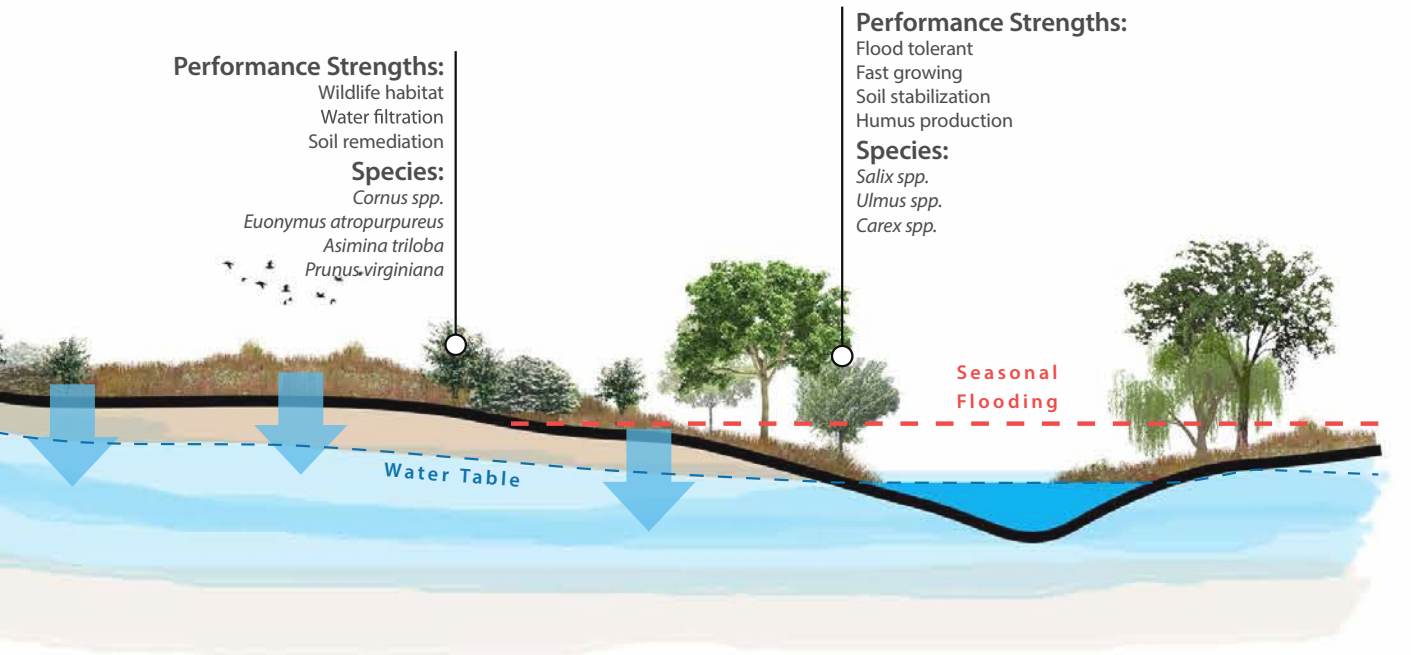
Using Native Plants



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:

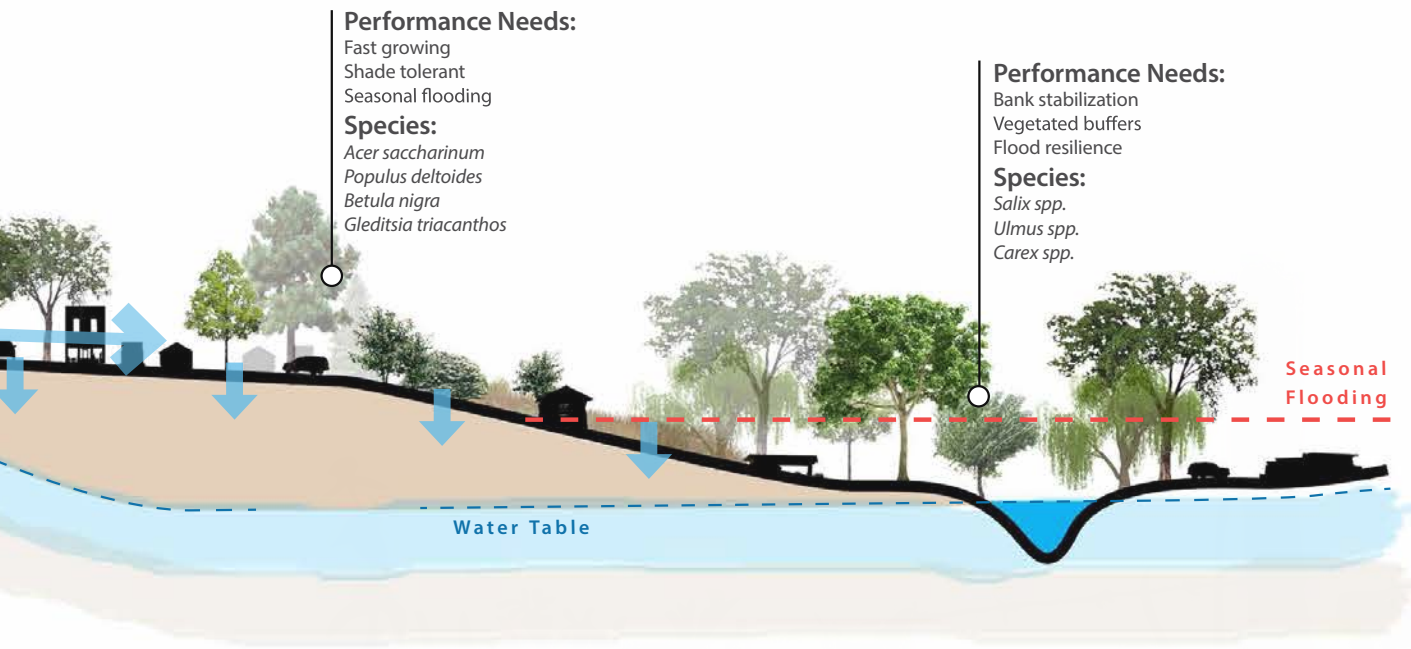
- Flood tolerant
- Fast growing
- Soil stabilization
- Humus production

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

What Factors Affect Transportation in Bedford?

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 Bedford, 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 Bedford'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 Bedford residents with different transportation needs to participate in focus groups. A total of 69 residents attended Bedford's workshop. Participants were separated into five user groups and the Bedford 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.



Fairview Cemetery has smooth, flat pavement, making it a popular place for walking and youth track practices.



Lake of Three Fires is a great place to explore nature and is accessible by many paths.



The roads around the baseball field are in poor condition, and often flood.



Many roads in town, such as Jackson Street, are in poor condition and are often missing sidewalks.



The high curbs on Main Street cause accessibility issues for multiple user groups.



The brick streets in town have historic value and make for beautiful streetscapes as long as they are well maintained.

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(5 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.



(12 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.



(20 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.



(14 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.



(8 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.

Bedford

Overview

Transportation Assets and Barriers Analysis
 Julia Badenhop, Sandra Oberbroeckling, Riley Dunn, Zoey Mauck,
 Parmiss Sazgar, Wei Zhang

Iowa State University | Trees Forever | Iowa Department of Transportation



What People Said

"Another barrier for those folks [who] really want to loop the town, the little piece between Dollar General and Godfather's, there's no sidewalk. Godfather's down to the medical clinic."

"...if there would be some way to get an easement to put a biking, running, walking trail from the school area to the football field/track complex, that would be really nice."

"I've taken too many close calls on my bike that I won't even ride on the roads [highways] anymore."

"You have to walk on the street sometimes because the sidewalks just stop."



Actives

"It is nice to have a nice view, and wildlife... that's one thing when I'm riding my bike that it's kind of fun to come upon an eagle...on the side of the road or something."

"There's quite a few [people at Northside Apartments] who would probably walk if they had the ability to get [to the grocery store] on a sidewalk without walking on the highway."

"There [are] a lot of people who make a [walking] route over to Bibbins Park."

"The brick streets are great. They're quaint, they're beautiful, but they just need upkeep."



Older Adults

"[The sidewalks] are very, very bad if you're in a stroller or a wheelchair, or if you had a cane and things."

"Sometimes I don't feel real comfortable in the cemetery because there [have] been issues up there, but our school lets you do the track; you can come to the schoolhouse and walk."

"[You] can't push a wheelchair, can't push a stroller [down the sidewalk]. My son is in a wheelchair part of the time and walks part of the time, and he couldn't walk safely down [the sidewalk]."

"If you have anybody handicapped, you have to have your own vehicle basically because the trolley doesn't drive all the time...right now we have a hard time getting residents to outings... because the trolley doesn't... always have a permanent driver here for transportation."

"And not all of [the sidewalks] are handicapped accessible; sometimes you [have] to go all the way out and around into the street..."

"It's peaceful and stuff on the hill [at the cemetery], and you can see for miles."



Mobility Impaired

"Especially having special-needs children... the community just embraces them."

"Biking—if you've got young kids and are trying to keep them on the sidewalks—they could crash or then eventually you run out of sidewalks. You'll be on a sidewalk and then there's no sidewalk."

"[The high curb] makes it really hard for older people to get from their car up onto the sidewalk."

"The reservoir's nice to walk; the trails are not good, but it still is pretty."

"[Highway 2 and the four-lane] are definitely the two biggest-talked-about barriers when you have kids going anywhere in town..."



Parents

"I think [the brick streets] give Bedford a really neat look if they can be preserved versus doing away with them."

"The cool thing about Lake of Three Fires is you get to explore nature and there [are] paths that you can take."

"We need more sidewalks...because my mom doesn't let us walk to school even though it's a block away because there [are] no sidewalks on the side."

"The baseball field usually floods."

"I feel like you can walk pretty much anywhere; it's just like half the time you might not be on a sidewalk."



Youth

"We're somewhere in the middle of nowhere, but we're kind of in the middle of everywhere though."

"You can't find anything in this town, coming from a person who moved here. I didn't know where the football field was, I didn't know where the baseball fields were unless I drive by them. There's really nothing to direct you."

"It's sad because so many kids walk to school and you just see them walking on the streets."

"[Bibbins Park] is beautiful. We've got old shade trees. It's nice."

"We go out to the [Lake of Three Fires] a lot and walk around out there."



Steering Committee

"I would love to bike more, but it's just plain not safe to bike... because you have to be on the roads."

Emerging Themes

Actives walk, drive, and bike regularly, either as part of a daily commute or as recreational/sports training. This group is interested in better connectivity in town for pedestrians and cyclists.

Mobility-impaired individuals drive, walk, and use wheelchairs to get around. They also use the Southern Iowa Trolley when it is available. Smooth, accessible surfaces are important to this group.

Older adults primarily walk and drive. They consider the high curbs in the downtown district as barriers. This group would like more handicapped parking downtown.

Youth walk, bike, run, and take the bus. Some older youth drive. This group is interested in having more amenities at the park, the ball fields, the school, and the football/track complex.

Parents walk, drive, and bike. They are concerned about their children's transportation experience. Parents' top priorities include accessibility and safety.

Steering committee members walk and drive to get around town. This group desires a cohesive community identity and a system of way-finding signage identifying important local destinations.



User Types	Destinations and Activities			Good Qualities and Features			Undesirable Qualities and Features			Most Desired Improvements and Activities					
	School	Outdoor Recreation Venues	Cemetery	Pedestrian Amenities	Historic Brick Streets	Smooth, Open Surfaces	Incomplete Sidewalks	Poor Street Conditions	Flooding	Highways 148 and 2	Trail to the City Reservoir	Complete Accessible Sidewalks	Better Street Infrastructure	Trail System	Indoor Recreation Center
<p>Actives</p>	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●
<p>Mobility Impaired</p>	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●
<p>Older Adults</p>	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●
<p>Youth</p>	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●
<p>Parents</p>	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●
<p>Steering Committees</p>	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●

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Steering committee members walk and drive to get around town. This group desires a cohesive community identity and a system of way-finding signage identifying important local destinations.

All user types value the school because it is the focal point of the community and provides several places and venues, including Lake of the City Reservoir, for walking and mobility-impaired individuals value the playgrounds. Participants in every group mentioned pedestrian amenities such as trees, lighting, safety, and views as important. Active and older adults' participation like to walk in Bibbins Park because it is shady and has benches. Although they are currently not in good condition, the brick streets are considered an important asset and steering committee members. Adult users value smooth, good-quality surfaces, such as the new sidewalks along the four-lane and in Front of Dollar General. Incomplete broken and altogether missing sidewalks are major concerns for all groups. The mobility-impaired group noted that not all sidewalks are accessible and mentioned the high curbs in the business district as barriers. All user groups noted the poor condition of the streets, particularly State Street, Garden Street, Jackson Street, Highway 2 near the ball fields, and the ball fields themselves. Some groups consider Highway 148 and 2 to be barriers. Parents are concerned that some kids have to cross 148 to get to school, and people have to cross it to access the trail to the City Reservoir. Residents of all ages go to the City Reservoir to walk, bike, jog, and other activities. However, the trail to access the reservoir is gravel and poorly maintained, making it difficult to bike or push a stroller or wheelchair. Participants all agree would like a better, more surfaces throughout the community. Most user types expressed the desire for better streets throughout town. Older adults, youth, and the steering committee would like the brick streets to be restored. Residents want trail connecting major destinations in town, such as the school, the football/track complex, Bibbins Park, and the Reservoir. Several groups would like a trail from Bibbins Park to Lake of the City Reservoir. All groups except older adults and mobility-impaired would like an indoor recreation center with basketball court, walking track, and a pool, so that people can stay active year-round.

Bedford

Emerging Themes

Transportation Assets and Barriers
 Julia Badenhop, Sandra Oberbroeckling, Riley Dunn, Zoey Mauck, Parmiss Sazgar, and Wei Zhang
 Iowa State University | Trees Forever | Iowa Department of Transportation

Transportation Inventory

Through observation, anecdotal evidence, focus-group research, and discourse with City of Bedford, Taylor County, and Iowa Department of Transportation officials, the Community Visioning team has inventoried existing transportation assets, needs, and concerns throughout the community.

Existing challenges for pedestrians include high curbs and steep slopes in the downtown area, gaps in the sidewalk network along highly traveled pedestrian routes, and impaired visibility for pedestrians and motorists at some intersections, such as those near the recently installed concrete retaining walls along Highway 148.

Specific areas lacking pedestrian connectivity and accessibility are located in the aforementioned downtown area, along Highway 2 between Hy-Vee and Highway 148, to and from the west and north entrances to Bibbins Park, and between downtown and the baseball fields along Main Street.

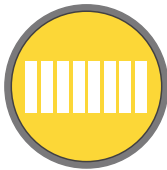
High traffic volumes along Highways 2 and 148 and through downtown present opportunities for traffic-calming measures and enhancement to designated pedestrian routes. Additionally, a lack of pedestrian-scale way-finding signage prevents visitors from easily navigating around town. New way-finding measures can assist visitors seeking to take advantage of the town's various amenities, while improvements to pedestrian routes will enhance connectivity among areas of interest throughout Bedford.

Concept Overview

Based on review of the bioregional assessment and the transportation assets and barriers assessments, and input from focus-group participants, the Bedford Community Visioning steering committee, and local and regional transportation agencies, the design team proposed several transportation improvement concepts. An emphasis on continuous sidewalks, improved crosswalks, increased access to local cultural and recreational amenities, and enhancements to way-finding and site furnishing elements will improve functionality, enhance user experience, and build identity throughout Bedford. These projects aim to make Bedford a more connected, comfortable, and beautiful community for visitors and residents alike.

All projects strive to address a range of community issues that were identified in the information gathering and analysis phase. This ensures the visioning proposal is focused on meeting the needs of the community, building on its strengths, and maximizing the benefit of solutions for what is currently lacking.

These performance-based goals and objectives fall into three primary categories as shown below. Graphic icons corresponding to each category are used to identify these benefits for each proposed project throughout the Bedford Community Visioning documents.



Connectivity

Continuous sidewalks, trail access, improved trails, addition of pedestrian bridge at ball fields



Visibility Improvements

Enhanced crosswalks and traffic signage, traffic calming measures, bumpouts for reduced crosswalk lengths and better visibility



Way-finding and Identity

Metal signage, furnishings and streetscape plantings, enhanced community brand

Cost Opinion Summary

Design Expertise Recommended

The proposed projects may require help beyond the capability of the visioning committee or available city staff. For all proposed improvements, the committee should expect to involve additional professional design consultants, including but not limited to landscape architects, civil engineers, transportation engineers, and graphic designers for detailed design, construction documentation, bidding assistance and construction administration services. Work within the right of way along Highway 148 and Highway 2 should be coordinated with the Iowa Department of Transportation.

Project Scope and Cost Opinion

These projects and their estimated budgets are detailed in the following cost opinions. Estimates presented here are based on industry sources, previous project bid tabulations, and research. Costs are presented in 2019 dollars and will escalate in subsequent years. Local site conditions, labor, and material costs may affect actual construction costs differently than presented in estimate. Area takeoffs, square footages, and linear footages used to calculate and quantify amounts are approximate. A site survey should be provided prior to the design and construction of the following projects. Abbreviations used in the following opinions of probable cost include:

AL = allowance
LF = linear foot

SF = square foot
EA = each

CY = cubic yard
SY = square yard

Cost Opinion Summary

Community Visioning 2019
Bedford, Iowa
October 2019

DOWNTOWN IMPROVEMENTS

1 DOWNTOWN IMPROVEMENTS	\$	743,823	<i>(including Jefferson and Court intersection, Main and Court, Main and Central, Main and Dodge, and streetscape enhancements in between)</i>
DOWNTOWN IMPROVEMENTS TOTAL*		\$ 743,823	

PEDESTRIAN CONNECTION IMPROVEMENTS

1 PEDESTRIAN BRIDGE + SIDEWALK CONNECTION TO BASEBALL FIELDS	\$	298,733	<i>(includes pre-fabricated bridge allowance of \$100,000)</i>
2 POLLOCK BLVD SIDEWALK IMPROVEMENTS TO HY-VEE	\$	215,184	
3 TRAIL CONNECTION IMPROVEMENTS AT BIBBINS PARK AND RESURFACED EXISTING TRAIL	\$	370,960	
4 GRANT STREET SIDEWALK IMPROVEMENTS - MADISON TO BIBBINS PARK	\$	120,740	
5 POLK STREET SIDEWALK IMPROVEMENTS AND TRAIL CONNECTION TO FOOTBALL FIELD [PRIVATE PROPERTY]	\$	288,740	
6 MAIN STREET AND ORCHARD STREET SIDEWALK IMPROVEMENTS FROM MADISON TO FAIRVIEW CEMETERY	\$	139,790	
PEDESTRIAN CONNECTION IMPROVEMENTS TOTAL*		\$ 1,434,147	

**Estimates do not include additional work to existing trails, roadway markings, property easements, land acquisition, or other utility modifications*

SIGNAGE AND IDENTITY

1 BIBBINS PARK ARCHWAY SIGN (BETWEEN POSTS ONLY)	\$	35,000	
2 FREESTANDING WAYFINDING MARKERS	\$	67,000	
3 BIBBINS PARK ENTRY SIGNAGE AND LETTERING	\$	20,080	
SIGNAGE AND IDENTITY		\$ 122,080	

SUMMARY

TOTAL COMBINED PROJECT COSTS		\$ 2,300,050	
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Downtown Improvements

As evidenced by the TAB information (see boards 3a and 3b), a significant accessibility concern in downtown Bedford is the tall height of existing curbs. Often exceeding 8" and in some cases greater than 12" in height, the existing curbs present obstacles for those with limited mobility and occasionally impede necessary clearance for opening doors on cars after parking.

The visioning concept lowers curb heights to a more standard 6" throughout much of downtown. To achieve this, the design team proposes that approximately 6' of the right-of-way be designated as sidewalk, and the slope of the last ~3' of concrete closest to the curb line be adjusted where necessary to lower the curb heights along Court Avenue and Main Street. To help mitigate slopes and bring more green space to downtown, 3'-wide planting bands are proposed intermittently along the street's edge.

Planted bump-outs, new curb ramps, and pavement markings are shown at all intersections to enhance accessibility and walkability. Bump-outs also provide additional shade and green spaces throughout the downtown commercial corridor.

Design Expertise Recommended

The Downtown Improvement projects may require help beyond the capability of the visioning committee or available city staff. For these projects, the committee should expect to involve additional professional design consultants, including but not limited to landscape architects and civil engineers for detailed design, construction documentation, bidding assistance and construction administration services.

Project Scope and Cost Opinion

These projects and their estimated budgets are discussed in more detail in the following pages. Estimates presented here are based on industry sources, previous project bid tabulations, and research. Costs are presented in 2019 dollars and will escalate in subsequent years. Local site conditions, labor, and material costs may affect actual construction costs differently than presented in estimate. Area takeoffs, square footages, and linear footages used to calculate and quantify amounts are approximate. A site survey should be provided prior to the design and construction of the following projects.

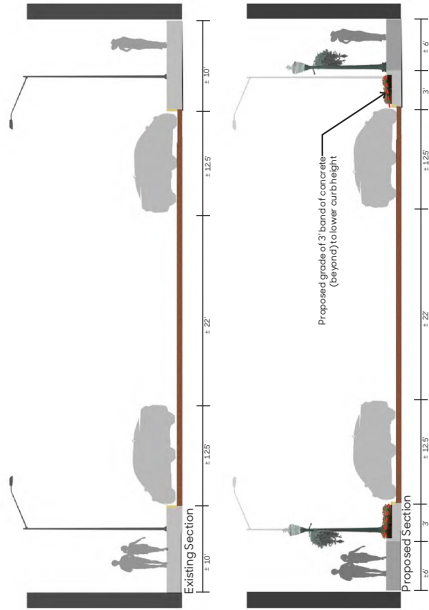


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Downtown improvements plan view

Design Team

LA: Dylan Jones, PLA, ASLA
 Intern: Paola Monllor Torres
 Iowa State University | Trees Forever | Iowa Department of Transportation



Downtown Improvements



Downtown Improvements

Downtown Amenities

In response to input from residents and the steering committee, the design team compiled a palette of cohesive site furnishings and streetscape elements to be implemented throughout downtown. With a similar style and black color, this site amenities palette will work in conjunction with proposed and existing signage to provide a consistent, uniform design vocabulary. Consistency throughout these elements is an important part of cultivating and building upon a town's brand and identity. Every bench, planter, litter receptacle, bike rack, and street sign work with existing architecture to communicate that identity.

Drawing inspiration from Bedford's existing street signs, historic buildings and brick streets, more classic, traditional furnishings and streetscape elements are proposed for the downtown area. A primarily black color scheme with white lettering and graphic components give these elements a timeless appearance that fits seamlessly with the range of existing colors and materials present along Main Street and Court Avenue. Proposed furnishings and streetscape elements include those shown in the image below, as well as bike racks and above-grade planters.



Plan Key:

- 1 Proposed sidewalk sloped to lower curb height to 6"
- 2 Existing sidewalk to remain
- 3 Curb extension with accessible curb ramps
- 4 Plantings within curb extensions
- 5 Proposed planting within proposed sidewalk (43" wide)
- 6 Parking entrance shifted south



Typical intersection plan



Typical intersection improvements

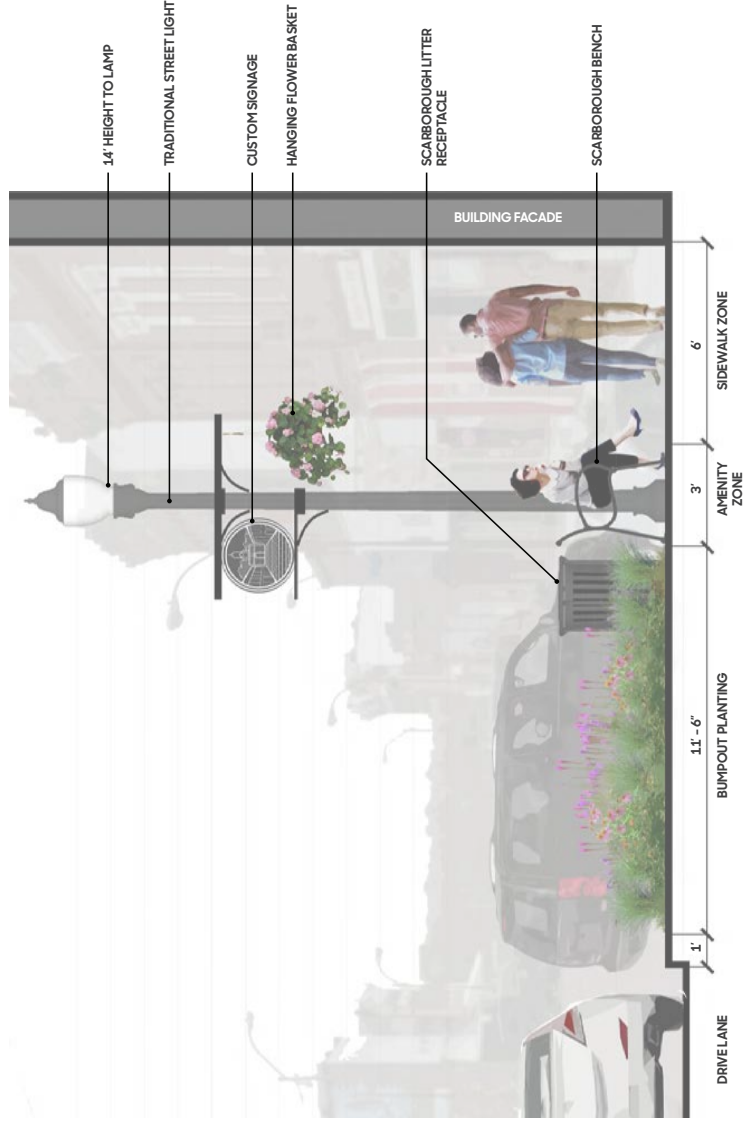
Bedford

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Section showing downtown improvements and site amenities

Design Team

LA: Dylan Jones, PLA, ASLA
Intern: Paola Manlora Torres

Iowa State University | Trees Forever | Iowa Department of Transportation



Downtown Improvements

DOWNTOWN IMPROVEMENTS				
Improvement Description	Unit	Qty.	Unit Cost	Subtotal
1 JEFFERSON & COURT INTERSECTION				
1 Mobilization	AL	1	\$ 3,150.00	\$ 3,150.00
2 Erosion Control/SWPPP	AL	1	\$ 6,250.00	\$ 6,250.00
3 Road/Pavement Removal	SF	1,330	\$ 2.50	\$ 3,325.00
4 Concrete Walk Removal	SF	470	\$ 2.00	\$ 940.00
5 Curb + Gutter Removal	LF	140	\$ 8.50	\$ 1,190.00
6 Proposed Concrete Walk Pavement	SF	1,005	\$ 6.50	\$ 6,532.50
7 New Curb and Gutter	LF	184	\$ 25.00	\$ 4,600.00
8 Planting Soil Mix (786 SF)	CY	30	\$ 85.00	\$ 2,550.00
9 Perennial Plantings	SF	786	\$ 8.00	\$ 6,288.00
10 Canopy Trees (2' B&B)	EA	2	\$ 575.00	\$ 1,150.00
11 Bench	EA	2	\$ 1,750.00	\$ 3,500.00
12 Trash Receptacle	EA	2	\$ 1,300.00	\$ 2,600.00
			<i>Section Subtotal</i>	\$ 42,075.50
			<i>20% Contingency</i>	\$ 8,415.10
			<i>Site Survey, Design & Engineering Costs</i>	\$ 6,300.00
			<i>Downtown Improvements - Jefferson & Court Intersection Subtotal</i>	\$ 56,790.60
2 MAIN & COURT INTERSECTION				
1 Mobilization	AL	1	\$ 6,300.00	\$ 6,300.00
2 Erosion Control/SWPPP	AL	1	\$ 10,000.00	\$ 10,000.00
3 Road/Pavement Removal	SF	2,650	\$ 2.50	\$ 6,625.00
4 Concrete Walk Removal	SF	1,225	\$ 2.00	\$ 2,450.00
5 Curb + Gutter Removal	LF	260	\$ 8.50	\$ 2,210.00
6 Proposed Concrete Walk Pavement	SF	2,360	\$ 6.50	\$ 15,340.00
7 New Curb and Gutter	LF	375	\$ 25.00	\$ 9,375.00
8 Planting Soil Mix (1438 SF)	CY	54	\$ 85.00	\$ 4,590.00
9 Perennial Plantings	SF	1,438	\$ 8.00	\$ 11,504.00
10 Canopy Trees (2' B&B)	EA	8	\$ 575.00	\$ 4,600.00
11 Bench	EA	4	\$ 1,750.00	\$ 7,000.00
12 Trash Receptacle	EA	4	\$ 1,300.00	\$ 5,200.00
			<i>Section Subtotal</i>	\$ 85,194.00
			<i>20% Contingency</i>	\$ 17,038.80
			<i>Site Survey, Design & Engineering Costs</i>	\$ 12,800.00
			<i>Downtown Improvements - Main & Court Intersection Subtotal</i>	\$ 115,032.80

Downtown Improvements

DOWNTOWN IMPROVEMENTS				
Improvement Description	Unit	Qty.	Unit Cost	Subtotal
3 MAIN & CENTRAL INTERSECTION				
1 Mobilization	AL	1	\$ 6,500.00	\$ 6,500.00
2 Erosion Control/SWPPP	AL	1	\$ 10,000.00	\$ 10,000.00
3 Road/Pavement Removal	SF	2,784	\$ 2.50	\$ 6,960.00
4 Concrete Walk Removal	SF	1,224	\$ 2.00	\$ 2,448.00
5 Curb + Gutter Removal	LF	262	\$ 8.50	\$ 2,227.00
6 Proposed Concrete Walk Pavement	SF	2,408	\$ 6.50	\$ 15,652.00
7 New Curb and Gutter	LF	385	\$ 25.00	\$ 9,625.00
8 Planting Soil Mix (1525 SF)	CY	57	\$ 85.00	\$ 4,845.00
9 Perennial Plantings	SF	1,525	\$ 8.00	\$ 12,200.00
10 Canopy Trees (2' B&B)	EA	8	\$ 575.00	\$ 4,600.00
11 Bench	EA	4	\$ 1,750.00	\$ 7,000.00
12 Trash Receptacle	EA	4	\$ 1,300.00	\$ 5,200.00
			<i>Section Subtotal</i>	\$ 87,257.00
			<i>20% Contingency</i>	\$ 17,451.40
			<i>Site Survey, Design & Engineering Costs</i>	\$ 13,100.00
			Downtown Improvements - Main & Central Intersection Subtotal	\$ 117,808.40
4 MAIN & DODGE INTERSECTION				
1 Mobilization	AL	1	\$ 6,200.00	\$ 6,200.00
2 Erosion Control/SWPPP	AL	1	\$ 10,000.00	\$ 10,000.00
3 Road/Pavement Removal	SF	2,695	\$ 2.50	\$ 6,737.50
4 Concrete Walk Removal	SF	750	\$ 2.00	\$ 1,500.00
5 Curb + Gutter Removal	LF	250	\$ 8.50	\$ 2,125.00
6 Proposed Concrete Walk Pavement	SF	1,895	\$ 6.50	\$ 12,317.50
7 New Curb and Gutter	LF	394	\$ 25.00	\$ 9,850.00
8 Planting Soil Mix (1600 SF)	CY	60	\$ 85.00	\$ 5,100.00
9 Perennial Plantings	SF	1,600	\$ 8.00	\$ 12,800.00
10 Canopy Trees (2' B&B)	EA	8	\$ 575.00	\$ 4,600.00
11 Bench	EA	4	\$ 1,750.00	\$ 7,000.00
12 Trash Receptacle	EA	4	\$ 1,300.00	\$ 5,200.00
			<i>Section Subtotal</i>	\$ 83,430.00
			<i>20% Contingency</i>	\$ 16,686.00
			<i>Site Survey, Design & Engineering Costs</i>	\$ 12,500.00
			Downtown Improvements - Main & Dodge Intersection Subtotal	\$ 112,616.00
5 SIDEWALKS BETWEEN INTERSECTIONS (INCLUDES WEST SIDE OF STATE ST INTERSECTION)				
1 Mobilization	AL	1	\$ 20,000.00	\$ 20,000.00
2 Erosion Control/SWPPP	AL	1	\$ 25,000.00	\$ 25,000.00
3 Road/Pavement Removal (State St)	SF	450	\$ 2.50	\$ 1,125.00
4 Concrete Walk Removal	SF	5,450	\$ 2.00	\$ 10,900.00
5 Curb + Gutter Removal (State St)	LF	65	\$ 8.50	\$ 552.50
6 Proposed Concrete Walk Pavement	SF	3,900	\$ 6.50	\$ 25,350.00
7 New Curb and Gutter (State St)	LF	65	\$ 25.00	\$ 1,625.00
8 Decorative Light Poles (with hanging flower basket)	EA	20	\$ 7,500.00	\$ 150,000.00
9 Planting Soil Mix (1500 SF)	CY	56	\$ 85.00	\$ 4,760.00
10 Perennial Plantings	SF	1,500	\$ 8.00	\$ 12,000.00
			<i>Section Subtotal</i>	\$ 251,312.50
			<i>20% Contingency</i>	\$ 50,262.50
			<i>Site Survey, Design & Engineering Costs</i>	\$ 40,000.00
			Downtown Improvements - Sidewalks / Streetscape Subtotal	\$ 341,575.00
			DOWNTOWN IMPROVEMENTS TOTAL*	\$ 743,822.80

*Estimates do not include property easements, land acquisition, or other utility modifications.
Signage estimates included in separate category.

Pedestrian Connections – North

Other areas identified for pedestrian connectivity improvements include the route along Pollock Boulevard (Hwy 2) between Hy-Vee and the existing sidewalks on Illinois Street and Madison Street (Hwy 148), the multi-use recreational trail between Bibbins Park and the Bedford Water Supply Lake north of town, and the connection to Bibbins Park from Madison Street via Grant Street.

A continuous sidewalk is being proposed along the south side of Pollock Boulevard to connect the Hy-Vee to the existing pedestrian routes through town along Illinois and Madison Streets. A sidewalk connection is also being proposed between Madison Street and State Street along Grant Street to provide pedestrians with direct access to the west entrance of Bibbins Park.

In addition to new concrete surfacing, new pedestrian routes will incorporate curb ramps, retaining walls, pedestrian crossing signs, and marked street crossings at intersections to alert vehicular traffic to pedestrian activity and maintain comfort and accessibility for all users.

An extension of the existing recreational trail across Pollock Boulevard (Hwy 2) to the north entrance of Bibbins Park will provide more convenient access to the trail and associated amenities to the north around the Bedford Water Supply Lake. Resurfacing the existing gravel trail with asphalt and adding new plantings are intended to provide comfort and encourage more activity on the multi-use trail between Bibbins Park and the lake.

Design Expertise Recommended

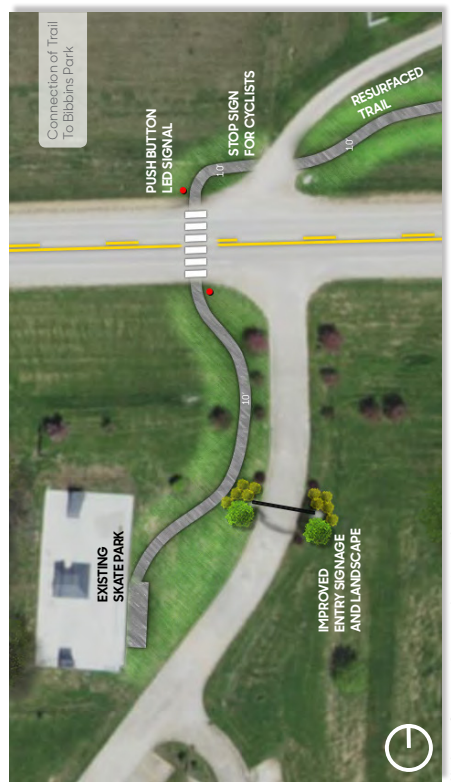
The Pedestrian Connections projects may require help beyond the capability of the visioning committee or available city staff. For these projects, the committee should expect to involve additional professional design consultants, including but not limited to landscape architects and civil engineers for detailed design, construction documentation, bidding assistance and construction administration services.

Project Scope and Cost Opinion

These projects and their estimated budgets are discussed in more detail in the following pages. Estimates are based on industry sources, previous project bid tabulations, and research. Local site conditions, labor, and material costs may affect actual construction costs differently than presented in estimate. Area takeoffs, square footages, and linear footages used to calculate and quantify amounts are approximate. A site survey should be provided prior to the design and construction of the following projects. Any sidewalk or trail that crosses Highway 2 or Highway 148, and any improvement within the state highway right of way requires coordination with the Iowa Department of Transportation.



Highway 2 connection to Hy-Vee



Highway 2 connection to pedestrian trail



Pedestrian Connections

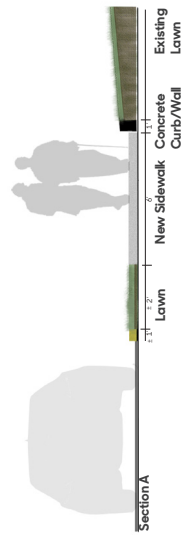
Pedestrian Connections

Other areas identified for pedestrian connectivity improvements include the route along Pollock Boulevard (Hwy 2) between Hy-Vee and the existing sidewalks on Illinois Street and Madison Street (Hwy 148), the multi-use recreational trail between Bibbins Park and the Bedford Water Supply Lake north of town, and the connection to Bibbins Park from Madison Street via Grant Street.

A continuous sidewalk is being proposed along the south side of Pollock Boulevard to connect the Hy-Vee to the existing pedestrian routes through town along Illinois and Madison Streets. A sidewalk connection is also being proposed between Madison Street and State Street along Grant Street to provide pedestrians with direct access to the west entrance of Bibbins Park.

In addition to new concrete surfacing, new pedestrian routes will incorporate curb ramps, retaining walls, pedestrian crossing signs, and marked street crossings at intersections to alert vehicular traffic to pedestrian activity and maintain comfort and accessibility for all users.

An extension of the existing recreational trail across Pollock Boulevard (Hwy 2) to the north entrance of Bibbins Park will provide more convenient access to the trail and associated amenities to the north around the Bedford Water Supply Lake. Resurfacing the existing gravel trail with asphalt and adding new plantings are intended to provide comfort and encourage more activity on the multi-use trail between Bibbins Park and the lake.



Section A



Trail and bridge improvements



Improved connection to highway and Hy-Vee from Madison St.



Continuous sidewalk on Grant St. to Bibbins Park



Design Team
 LA: Dylan Jones, PLA, ASLA
 Intern: Paola Monllor Torres
 Iowa State University | Trees Forever | Iowa Department of Transportation

Pedestrian Connections – Ball Fields

The transportation assets and barriers analysis information clearly shows Bedford residents' and committee members' desire to improve pedestrian connectivity across town, especially to sport complexes and recreation and retail areas, and to have continuous sidewalks along highly-traveled pedestrian corridors. As seen on board 3c, an improved trail system and complete/accessible walks ranked the highest for most desired improvements.

The route between downtown and the city ball fields (along Main St), was identified as needing connectivity and circulation improvements. There is currently no sidewalk linking downtown to the ball fields, and convenient access to the ball fields for those walking from downtown or parking on Main Street is limited by existing site topography and drainage. To address these concerns, a continuous sidewalk has been proposed along the south side of Main Street from State Street to just beyond Dotur Street. Intermittent ornamental and overstory trees lining this section of Main Street assist with traffic calming while providing additional shade for pedestrians walking between downtown and the ball fields on hot summer days.

A pedestrian bridge (~30' length) is proposed to cross the drainage way along the north side of Main Street, giving users more convenient access to the ball fields from the proposed sidewalk or for those parked along Main Street.



Main St. to ball fields plan view

Pedestrian Connections

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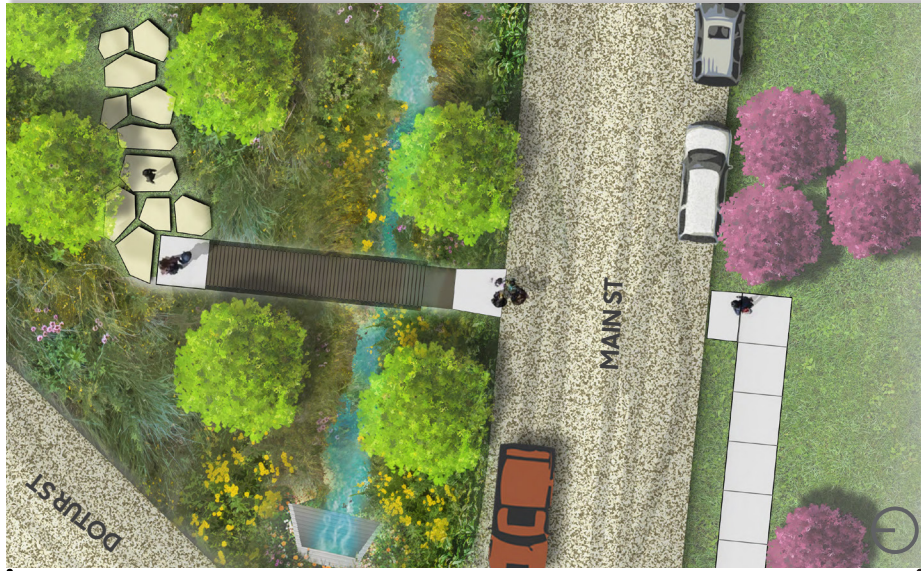
Design Team

LA: Dylan Jones, PLA, ASLA
Intern: Paola Monlor Torres

Iowa State University | Trees Forever | Iowa Department of Transportation



Pedestrian Connections



Bridge crossing enlargement plan



Pedestrian Connections

PEDESTRIAN CONNECTION IMPROVEMENTS

Improvement Description	Unit	Qty.	Unit Cost	Subtotal
1 PEDESTRIAN BRIDGE + SIDEWALK CONNECTION TO BASEBALL FIELDS				
1 Mobilization	AL	1	\$ 16,500.00	\$ 16,500.00
2 Site Preparation and Grading Allowance (15,500 SF)	AL	1	\$ 12,400.00	\$ 12,400.00
3 30' L x 10' W Pre-fabricated Bridge	AL	1	\$ 100,000.00	\$ 100,000.00
4 Proposed Concrete Walk Pavement (6' W x 680' L, 5" thick over aggregate base)	SF	4,375	\$ 7.50	\$ 32,812.50
5 New Curb and Gutter	LF	52	\$ 25.00	\$ 1,300.00
6 Planting Soil Mix (3,000 SF)	CY	110	\$ 85.00	\$ 9,350.00
7 Perennial Plantings	SF	3,000	\$ 8.00	\$ 24,000.00
8 Canopy Trees (2" B&B)	EA	21	\$ 575.00	\$ 12,075.00
9 Ornamental Trees	EA	26	\$ 450.00	\$ 11,700.00
10 Restoration Seeding (hydroseed turf 5' along new walks)	SY	380	\$ 3.00	\$ 1,140.00
			<i>Section Subtotal</i>	\$221,277.50
			<i>20% Contingency</i>	\$ 44,255.50
			<i>Site Survey, Design & Engineering Costs</i>	\$ 33,200.00
			<i>Pedestrian Bridge + Sidewalk Connection Subtotal</i>	\$ 298,733.00
2 POLLOCK BLVD SIDEWALK IMPROVEMENTS TO HY-VEE				
1 Mobilization	AL	1	\$ 12,000.00	\$ 12,000.00
2 Site Preparation and Grading Allowance (25,600 SF)	AL	1	\$ 20,500.00	\$ 20,500.00
3 Proposed Concrete Walk Pavement (6' W x 1600' L, 5" thick over aggregate base)	SF	9,600	\$ 6.50	\$ 62,400.00
4 Push-button LED Signal at Highway	EA	2	\$ 12,500.00	\$ 25,000.00
5 Crosswalk Striping	AL	1	\$ 750.00	\$ 750.00
6 Retaining Wall	LF	600	\$ 60.00	\$ 36,000.00
7 Restoration Seeding (hydroseed turf 5' along new walks)	SY	890	\$ 3.00	\$ 2,670.00
			<i>Section Subtotal</i>	\$159,320.00
			<i>20% Contingency</i>	\$ 31,864.00
			<i>Site Survey, Design & Engineering Costs</i>	\$ 24,000.00
			<i>Pollock Blvd Sidewalk Improvements to Hy-Vee Subtotal</i>	\$215,184.00
3 TRAIL CONNECTION IMPROVEMENTS AT BIBBINS PARK AND RESURFACED EXISTING TRAIL				
1 Mobilization	AL	1	\$ 20,000.00	\$ 20,000.00
2 Site Preparation and Grading Allowance	AL	1	\$ 60,000.00	\$ 60,000.00
3 Proposed Concrete Walk Pavement	SF	2,500	\$ 6.50	\$ 16,250.00
4 Resurfaced Trail to Lake (10' W x 2,000' L)	SY	2,222	\$ 65.00	\$ 144,430.00
5 Push-button LED Signal at Highway	EA	2	\$ 12,500.00	\$ 25,000.00
6 Ornamental Trees	EA	12	\$ 450.00	\$ 5,400.00
7 Shrubs	EA	14	\$ 75.00	\$ 1,050.00
8 Restoration Seeding (hydroseed turf 5' along new walks)	SY	890	\$ 3.00	\$ 2,670.00
			<i>Section Subtotal</i>	\$274,800.00
			<i>20% Contingency</i>	\$ 54,960.00
			<i>Site Survey, Design & Engineering Costs</i>	\$ 41,200.00
			<i>Trail Connection Improvements at Bibbins Park and Trail Resurfacing Subtotal</i>	\$370,960.00

PEDESTRIAN CONNECTION IMPROVEMENTS				
Improvement Description	Unit	Qty.	Unit Cost	Subtotal
4 GRANT STREET SIDEWALK IMPROVEMENTS - MADISON TO BIBBINS PARK				
1 Mobilization	AL	1	\$ 6,700.00	\$ 6,700.00
2 Site Preparation and Grading Allowance (20,000 SF)	AL	1	\$ 16,000.00	\$ 16,000.00
3 Proposed Concrete Walk Pavement (4' Sidewalks)	SF	5,500	\$ 6.50	\$ 35,750.00
4 Crosswalk Striping	AL	2	\$ 750.00	\$ 1,500.00
5 Push-button LED Signal at Madison	EA	2	\$ 12,500.00	\$ 25,000.00
6 Restoration Seeding (hydroseed turf 5' along new walks)	SY	1,500	\$ 3.00	\$ 4,500.00
			<i>Section Subtotal</i>	\$89,450.00
			<i>20% Contingency</i>	\$ 17,890.00
			<i>Site Survey, Design & Engineering Costs</i>	\$ 13,400.00
			Grant Street Sidewalk Improvements Subtotal	\$120,740.00
5 POLK STREET SIDEWALK IMPROVEMENTS AND TRAIL CONNECTION TO FOOTBALL FIELD (PRIVATE PROPERTY)				
1 Mobilization	AL	1	\$ 16,000.00	\$ 16,000.00
2 Site Preparation and Grading Allowance (Public Sidewalks) (21,000 SF)	AL	1	\$ 17,000.00	\$ 17,000.00
3 Proposed Concrete Walk Pavement (4' Public Sidewalks)	SF	6,000	\$ 6.50	\$ 39,000.00
4 Crosswalk Striping	AL	1	\$ 750.00	\$ 750.00
5 Push-button LED Signal	EA	2	\$ 12,500.00	\$ 25,000.00
6 Retaining Wall	LF	100	\$ 60.00	\$ 6,000.00
7 Restoration Seeding (hydroseed turf 5' along new walks)	SY	1,700	\$ 3.00	\$ 5,100.00
8 Site Preparation and Grading Allowance (Private Trail) (27,000 SF)	AL	1	\$ 22,000.00	\$ 22,000.00
9 Proposed Concrete Walk Pavement (8' Private Trail)	SF	12,000	\$ 6.50	\$ 78,000.00
10 Restoration Seeding (hydroseed turf 5' along new walks)	SY	1,700	\$ 3.00	\$ 5,100.00
			<i>Section Subtotal</i>	\$213,950.00
			<i>20% Contingency</i>	\$ 42,790.00
			<i>Site Survey, Design & Engineering Costs</i>	\$ 32,000.00
			Polk Street Sidewalk Improvements and Trail Connection Subtotal	\$288,740.00
6 MAIN STREET AND ORCHARD STREET SIDEWALK IMPROVEMENTS FROM MADISON TO FAIRVIEW CEMETERY				
1 Mobilization	AL	1	\$ 7,700.00	\$ 7,700.00
2 Site Preparation and Grading Allowance (33,000 SF)	AL	1	\$ 26,500.00	\$ 26,500.00
3 Proposed Concrete Walk Pavement (4' Sidewalks)	SF	9,450	\$ 6.50	\$ 61,425.00
4 Restoration Seeding (hydroseed turf 5' along new walks)	SY	2,650	\$ 3.00	\$ 7,950.00
			<i>Section Subtotal</i>	\$103,575.00
			<i>20% Contingency</i>	\$ 20,715.00
			<i>Site Survey, Design & Engineering Costs</i>	\$ 15,500.00
			Main and Orchard Streets Sidewalk Improvements Subtotal	\$139,790.00
			PEDESTRIAN CONNECTION IMPROVEMENTS TOTAL*	\$1,434,147.00
*Estimates do not include additional work to existing trails, roadway markings, property easements, land acquisition, or other utility modifications				

Signage and Identity

Way-finding Signage

Bedford's many distinct historical monuments and buildings provide the city's residents and visitors alike with a wide array of scenic views and compelling landmarks from which the steering committee and design team have drawn inspiration for way-finding and identity signage concepts.

A series of markers are proposed to highlight some of the historic architectural and recreational amenities that can be found throughout the city. The imagery shown on these sign markers is inspired by views around town including those of the Courthouse, the Lenox Round Barn, the multi-use loop trail, and recreation area. Each marker also features a backdrop of trees and vegetation, harkening back to the town's original name: "Grove."

These signs are to have a traditional look comprised of powder-coated steel with white text and imagery to complement the existing downtown street signs. Along with the light poles, proposed black planters, litter receptacles, and benches, the way-finding signs are part of a cohesive collection of site amenities to bring consistency to these elements throughout Bedford. Additionally, new gateway signage mounted to existing columns at Bibbins Park will upgrade the park entrances.

Design Expertise Recommended

Signage and Identity projects may require help beyond the capability of the visioning committee or available city staff. For these projects, the committee should expect to involve a landscape architect and graphic designer for detailed design, construction documentation, bidding assistance and construction administration services.

Project Scope and Cost Opinion

These projects and their estimated budgets are discussed in more detail in the following pages. Estimates are based on industry sources, previous project bid tabulations, and research. Local site conditions, labor, and material costs may affect actual construction costs differently than presented in estimate. Area takeoffs, square footages, and linear footages used to calculate and quantify amounts are approximate.



Way-finding Signage



Sign panel options

Bedford

Signage and Identity

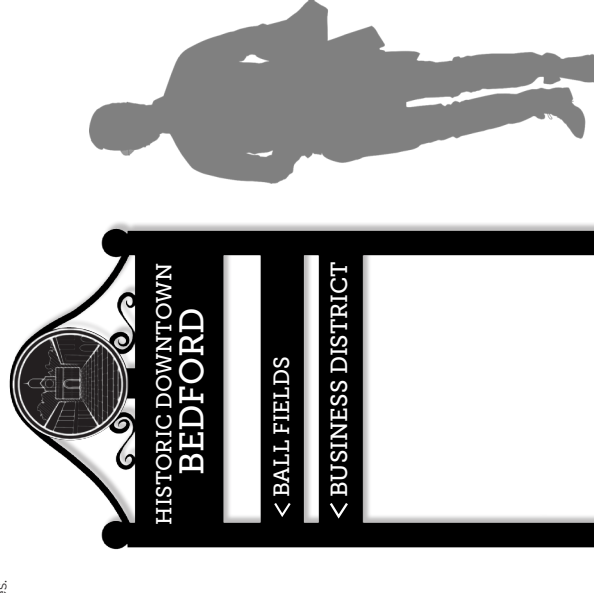
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Existing street signs – inspiration for proposed signage



Design Team

LA: Dylan Jones, PLA, ASLA
Intern: Paola Monllor Torres

Iowa State University | Trees Forever | Iowa Department of Transportation



Bibbins Park, highway entrance



Bibbins Park, Grant St. entrance



Downtown signage

Signage and Identity

SIGNAGE AND IDENTITY				
<i>Improvement Description</i>	<i>Unit</i>	<i>Qty.</i>	<i>Unit Cost</i>	<i>Subtotal</i>
1 BIBBINS PARK ARCHWAY SIGN (BETWEEN POSTS ONLY)				
1 Mobilization	AL	1	\$ 2,000.00	\$ 2,000.00
2 Custom Steel Archway Sign	EA	1	\$ 12,500.00	\$ 12,500.00
3 Planting Allowance	AL	1	\$ 3,000.00	\$ 3,000.00
4 Utilities Allowance (monument uplighting and electrical)	AL	1	\$ 5,000.00	\$ 5,000.00
			<i>Section Subtotal</i>	\$22,500.00
			<i>20% Contingency</i>	\$ 4,500.00
			<i>Design & Engineering Costs</i>	\$ 8,000.00
			<i>Bibbins Park Archway Sign Subtotal</i>	\$ 35,000.00
2 FREESTANDING WAYFINDING MARKERS				
1 Mobilization	AL	1	\$ 3,500.00	\$ 3,500.00
2 Steel Light Pole Attachment Display Marker	EA	20	\$ 750.00	\$ 15,000.00
3 Steel Wayfinding Sign (Pedestrian Scale)	EA	1	\$ 7,000.00	\$ 7,000.00
4 Steel Wayfinding Sign (Roadway Scale)	EA	1	\$ 15,000.00	\$ 15,000.00
5 Utilities Allowance (monument uplighting and electrical)	AL	1	\$ 7,000.00	\$ 7,000.00
			<i>Section Subtotal</i>	\$47,500.00
			<i>20% Contingency</i>	\$ 9,500.00
			<i>Design & Engineering Costs</i>	\$ 10,000.00
			<i>Freestanding Wayfinding Markers Subtotal</i>	\$ 67,000.00
3 BIBBINS PARK ENTRY SIGNAGE AND LETTERING				
1 Mobilization	AL	1	\$ 1,500.00	\$ 1,500.00
3 Custom Steel Display Marker	EA	1	\$ 750.00	\$ 750.00
4 Custom Steel Letters	EA	11	\$ 400.00	\$ 4,400.00
5 Planting Allowance	AL	1	\$ 3,000.00	\$ 3,000.00
6 Utilities Allowance (monument uplighting and electrical)	AL	1	\$ 5,000.00	\$ 5,000.00
			<i>Section Subtotal</i>	\$14,650.00
			<i>20% Contingency</i>	\$ 2,930.00
			<i>Design & Engineering Costs</i>	\$ 2,500.00
			<i>Bibbins Park Entry Signage and Lettering Subtotal</i>	\$ 20,080.00
			SIGNAGE AND IDENTITY TOTAL*	\$122,080.00
*Estimates do not include structural analysis or modifications to existing park columns/poles, property easements, land acquisition, or other utility modifications				

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Implementation Strategies

YEAR ONE

- TASK 1 Identify and form a Community Steering Committee [which meets on a minimum of a quarterly basis].
- TASK 2 Identify and rank in order of importance and priority, the community improvement project(s) that were identified in the feasibility study.
- TASK 3 Identify eligible and related potential grant or other funding sources to finance the community improvement project(s) chosen to be implemented first.
- TASK 4 Submit application(s) for eligible and related grant and/or loan programs, and/or promote potential project(s) through fundraising efforts to help finance the first improvement.
- MEASUREMENT OF SUCCESS Formed a Community Steering Committee.
 Prioritized the community improvement projects identified in the Feasibility Study.
 Created a list of eligible grant and/or loan funding sources and/or fundraising ideas for financing the first community improvement project.
 Submitted a grant and/or loan application and other required documentation or conducted fundraising for the first community improvement project.

YEAR TWO

- TASK 1 Upon a successful grant and/or loan application and/or fundraising effort: develop a schedule for contracting for design, advertising for bid, and contracting for construction of the first community improvement project.
- TASK 2 Select and execute a contract with a Landscape Architect/Design Professional as your lead design consultant for the first community improvement project [Design and Construction Documentation phase].
- TASK 3 Send the construction documents out for bid. Select and execute a contract with a General Contractor as your construction manager for the first community improvement project [Retain a Design Professional for Construction Administration services during the construction phase].
- MEASUREMENT OF SUCCESS Received a successful grant and/or loan award letter, or raised/allocated enough funds to design and construct the first community improvement project.
 Selected a Landscape Architect / Design Professional to prepare the full scope of design documents and bid documents for construction of the first community improvement project.
 Sent the project out for bid and selected a General Contractor to complete the construction of the first community improvement project.

YEAR THREE

TASK 1 Identify eligible and related potential grant or other funding sources to finance the community improvement project(s) chosen to be implemented second.

TASK 2 Submit application(s) for eligible and related grant and/or loan programs and/or promote potential project(s) through fundraising efforts to help finance the second improvement project.

MEASUREMENT OF SUCCESS Created a list of eligible grant and/or loan funding sources and/or fundraising ideas for financing the second community improvement project.

Submitted a grant and/or loan application and other required documentation or conducted fundraising for the second priority community improvement project.

YEAR FOUR

TASK 1 Upon a successful grant and/or loan application and/or fundraising effort: develop a schedule for contracting for design, advertising for bid, and contracting for construction of the second community improvement project.

TASK 2 Select and execute a contract with a Landscape Architect/Design Professional as your lead design consultant for the second community improvement project [Design and Construction Documentation phase].

TASK 3 Send the construction documents out for bid. Select and execute a contract with a General Contractor as your construction manager for the second community improvement project [Retain a Design Professional for Construction Administration services during the construction phase].

MEASUREMENT OF SUCCESS Received a successful grant and/or loan award letter, or raised/allocated enough funds to design and construct the second community improvement project.

Selected a Landscape Architect / Design Professional to prepare the full scope of design documents and bid documents for construction of the second community improvement project.

Sent the project out for bid and selected a General Contractor to complete the construction of the second community improvement project.

Repeat Year Three and Four tasks as necessary to complete all community improvement projects.

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

- 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)