Final Report and Feasibility Study

Hinton, Iowa

Program Partners:

Iowa Department of Transportation
Trees Forever
Iowa State University

Iowa's Living Roadways community visioning

Participants

Town Steering Committee

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About ISU Community Design Lab

The Iowa State University Community Design Lab (CDL) partners with communities and organizations, combining local knowledge and design research expertise, to create healthy, livable communities. A primary goal of CDL's work is to effectively inform and engage community members in the process of developing design concepts for each community. Our process involves on-the-ground and investigative research to perform a thorough and engaged inventory and analysis with a focus on landscape performance and user experience of the built environment. The analysis aids us in visualizing community goals and concerns and provides a framework for developing community led strategies and designs. Throughout the process the CDL engages with the community members and stakeholders through committee and public meetings as well as through unique interactive strategies out in the community.

The Community Design Lab is a collaborative team, primarily comprised of landscape architects with additional background in architecture, visual art and community food systems. The team is made up of full-time designers, faculty in the landscape architecture department at Iowa State University, and a rotating cast of graduate and undergraduate design research assistants based on project needs.

Carl Rogers, RLA
Director: Community Design Lab
Department Chair and Associate Professor:
Dept. of Landscape Architecture;
Iowa State University

Chad Hunter
Design Fellow: Community Design Lab
Lecturer: Dept. of Landscape Architecture;
Iowa State University

Program Overview

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

Goals for the Visioning Program include:

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

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

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

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

Community Goals

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

- **Develop streetscape improvements along the Main Street Corridor to reduce traffic speeds and create a more welcoming and connected Main Street**
- **Create a more accessible crossing at HWY 75 and Main St.**
- **Increase community identity through new signage and artful infrastructure updates**
- **Establish a trail and sidewalk plan to increase accessibility and active transportation opportunities throughout the community.**

Capturing the Hinton 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.

HINTON'S COMMUNITY VISIONING PROCESS

Over the course of the Community Visioning process, the steering committee and the general public have been invited to provide feedback about Hinton's transportation system. Residents were asked about existing concerns and assets, but also how they hope that system will evolve in the future to meet the needs of the city. Much of the concern that was raised is related to the intersection of Highway 75 and Main Street. Currently the highway is not a welcoming or safe environment for pedestrians and the crossing, coupled with the degraded railroad, is hard for vehicles to cross safely and efficiently as well. The highway has become a barrier that has limited access and connectivity to the east portion of Main Street. Other primary concerns included speeding traffic along W Main Street/C60 and the lack of trails and sidewalks, which has reduced accessibility to community amenities such as the parks, school and businesses. Along with these concerns, residents and the steering committee expressed a need for greater community identity and welcoming landscapes.

PUBLIC DESIGN CHARRETTE

The design charrette allowed community members to collaborate in the design process. Through interactive models, activities, and mapping, residents helped to shape and direct the designs of signage, trail locations, and streetscape improvements. A collaborative design process such as this builds on local knowledge and creates greater support from residents. The following designs expand on those initial concepts established by the steering committee and the public.

BIOREGIONAL ASSESSMENT

Early in the process, the steering committee is presented with a bioregional assessment. This assessment looks at topics such as: depth to water table, historic and present-day vegetation, historic settlement patterns, the regional watershed, elevation and flow, present-day land cover, and urban forest conditions.

The conditions represented in the assessment help to inform the design decisions throughout the process and the processes presented on the following boards.

Hinton
Project Overview

Iowa State University Community Design Lab
LAs: Chad Hunter & Carl Rogers
Interns: Riley Dunn & Laura Schwartz
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Bioregional Assessment

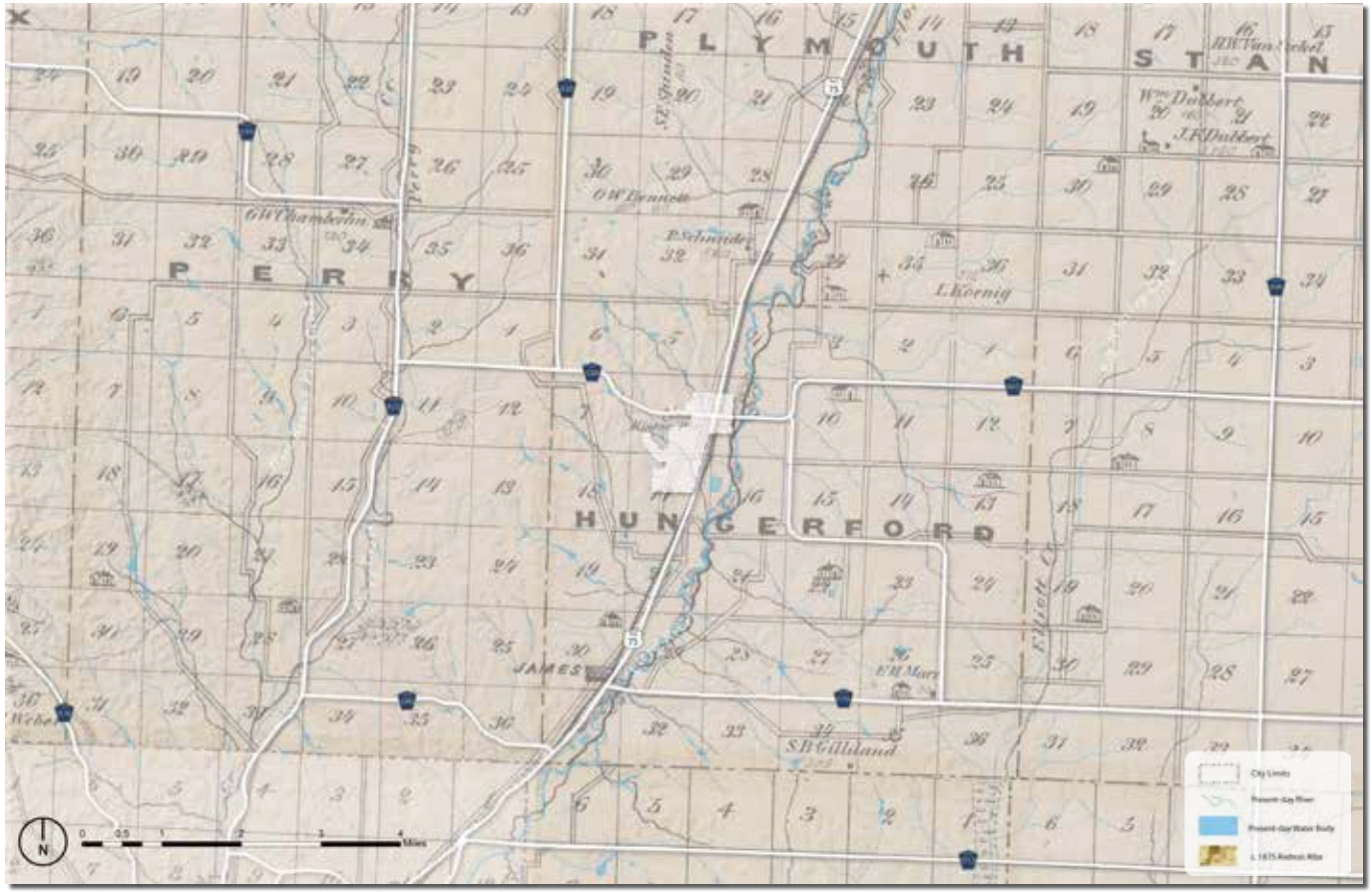
Settlement Patterns

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.

Hinton in Context

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

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



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

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Hinton
Historical Settlement Patterns

Bioregional Context
Julia Badenhope, 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. 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]

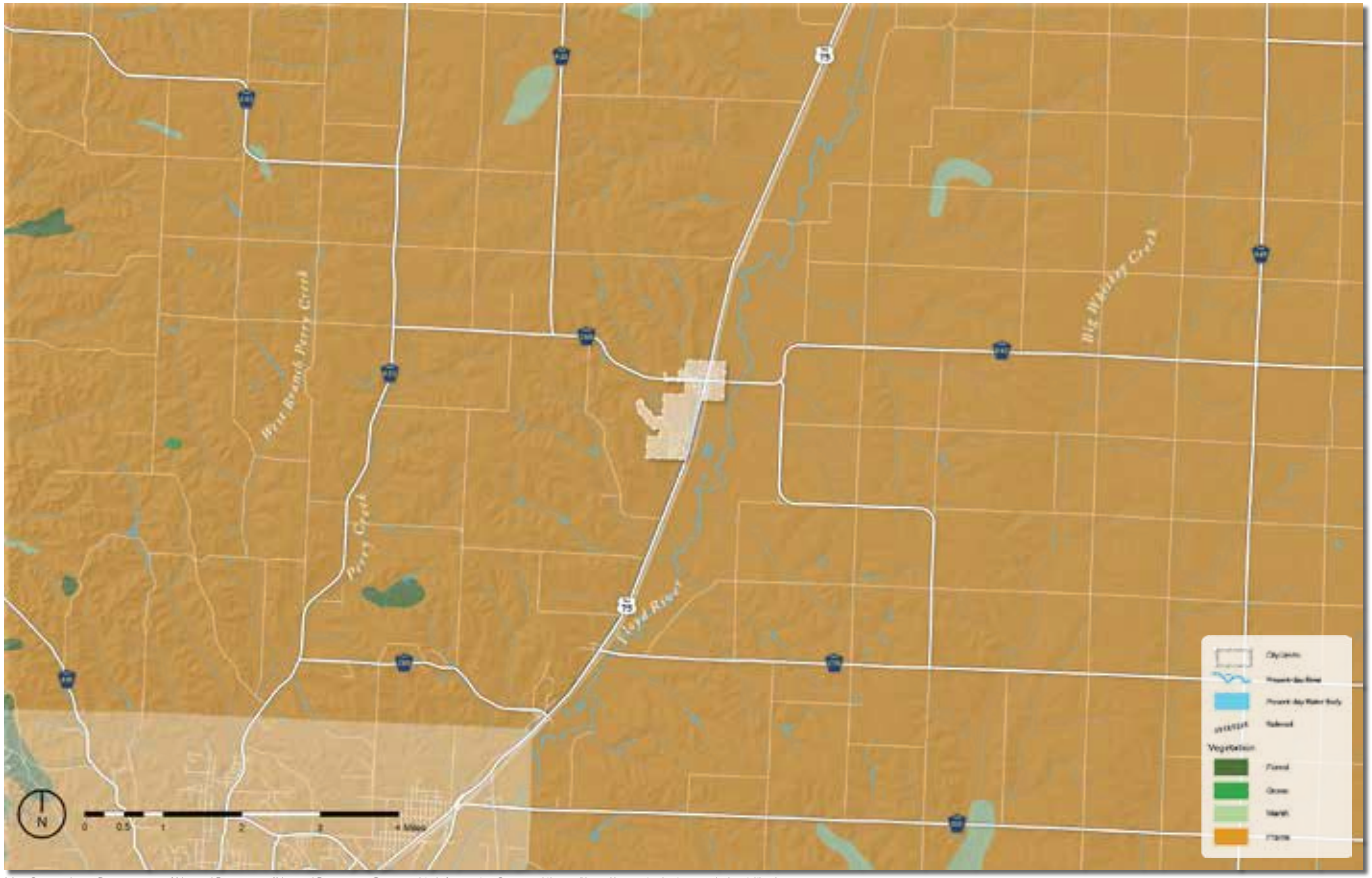
The plant community names mapped by the GLO surveyors varied. The original terminology they used has been preserved in the original data, but we have renamed them on this map to reflect names used to describe contemporary vegetation communities.

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. Grove: Isolated, relatively small, dense stand of small trees.
3. Marsh: Perennial non-woody plants; water and fire dominated.
4. Prairie: Perennial non-woody plants; fire dominated.

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.



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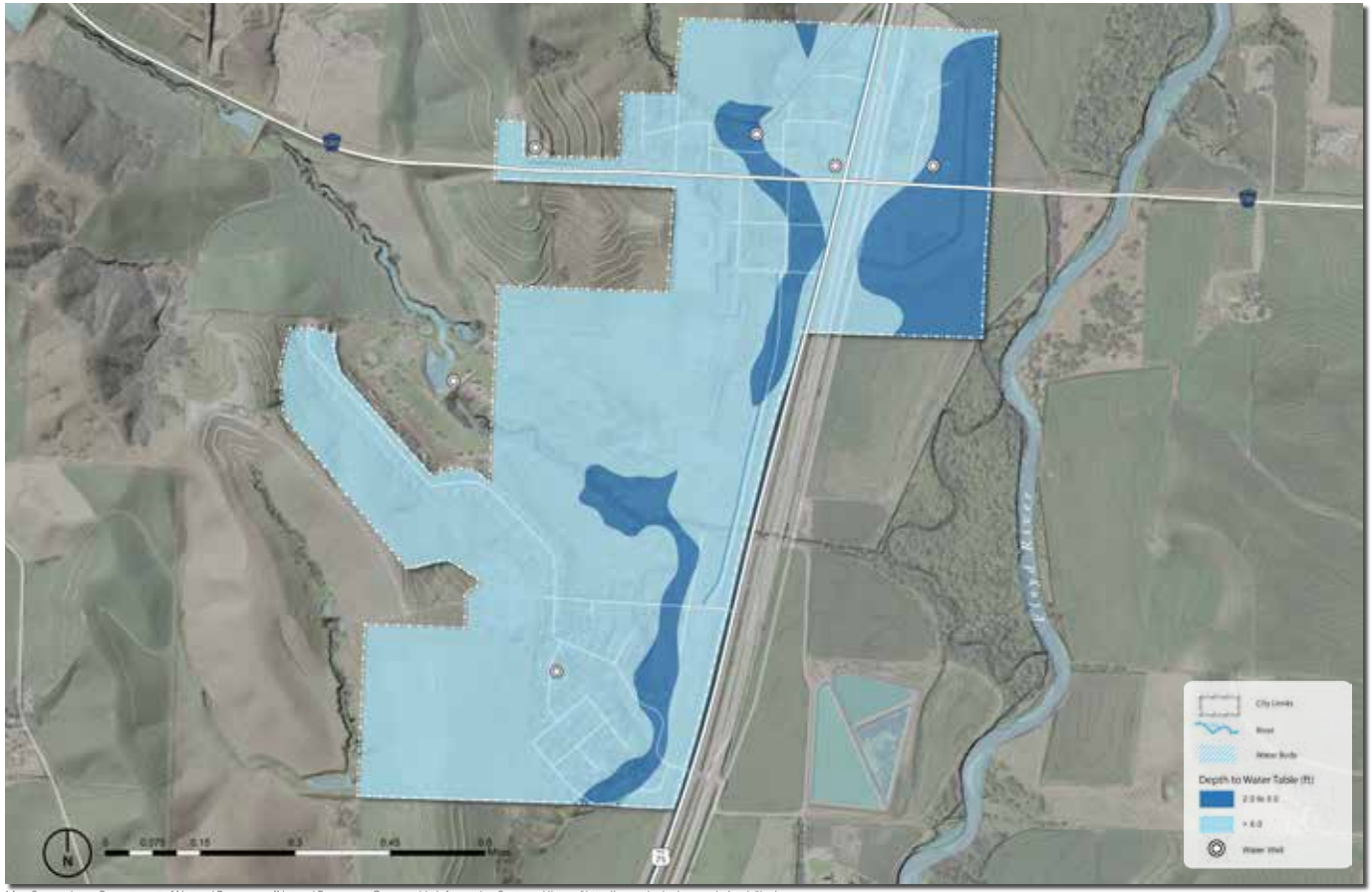
Depth to Water Table

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 groundwater near the surface. Freezing and thawing and upward pressure of rising groundwater can cause cracks or "frost boils" in pavement. Foundations can be wet and require "dewatering," which can be expensive.

Where the value is less than 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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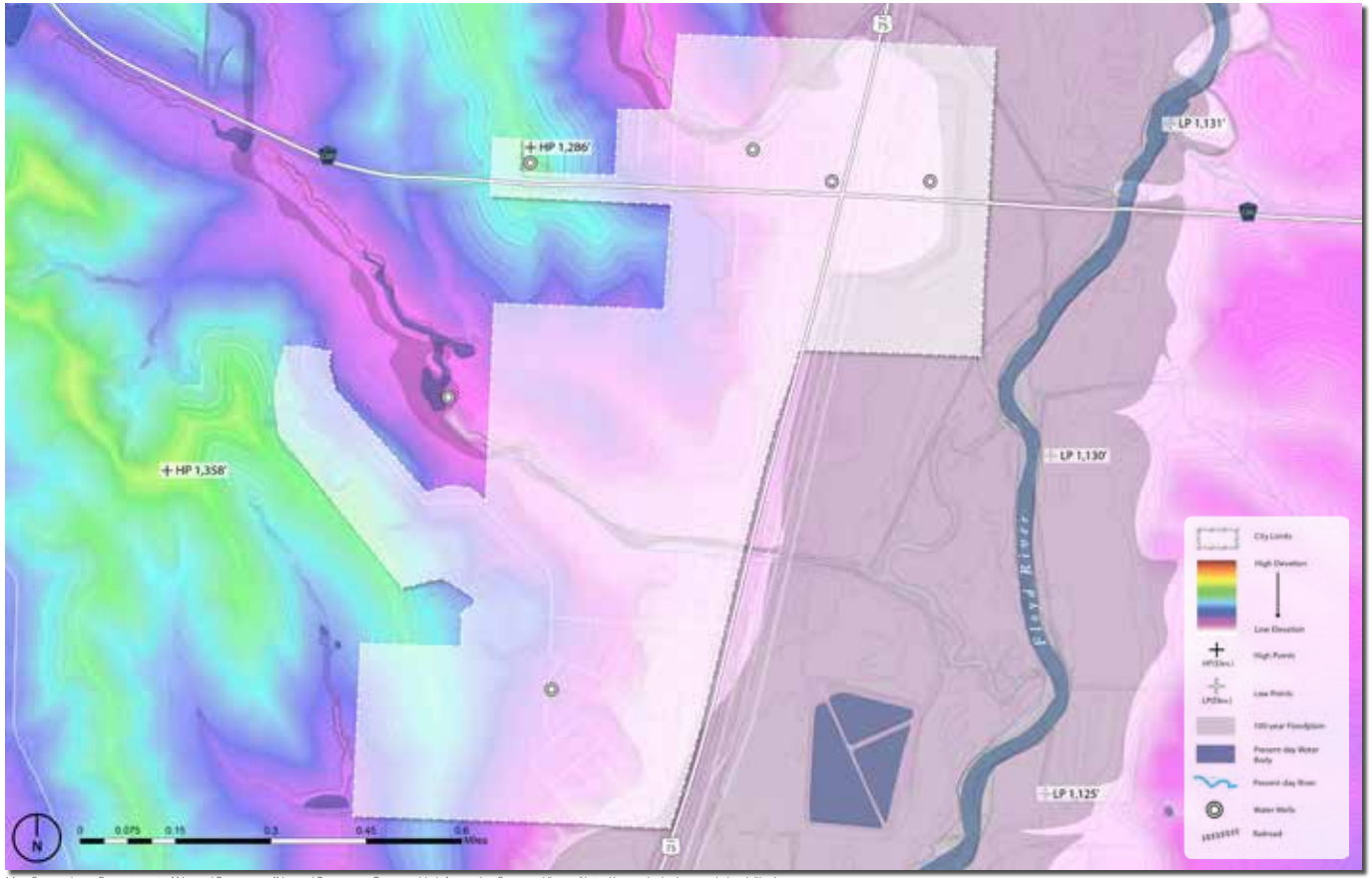
Elevation and Flow

The map to the 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?

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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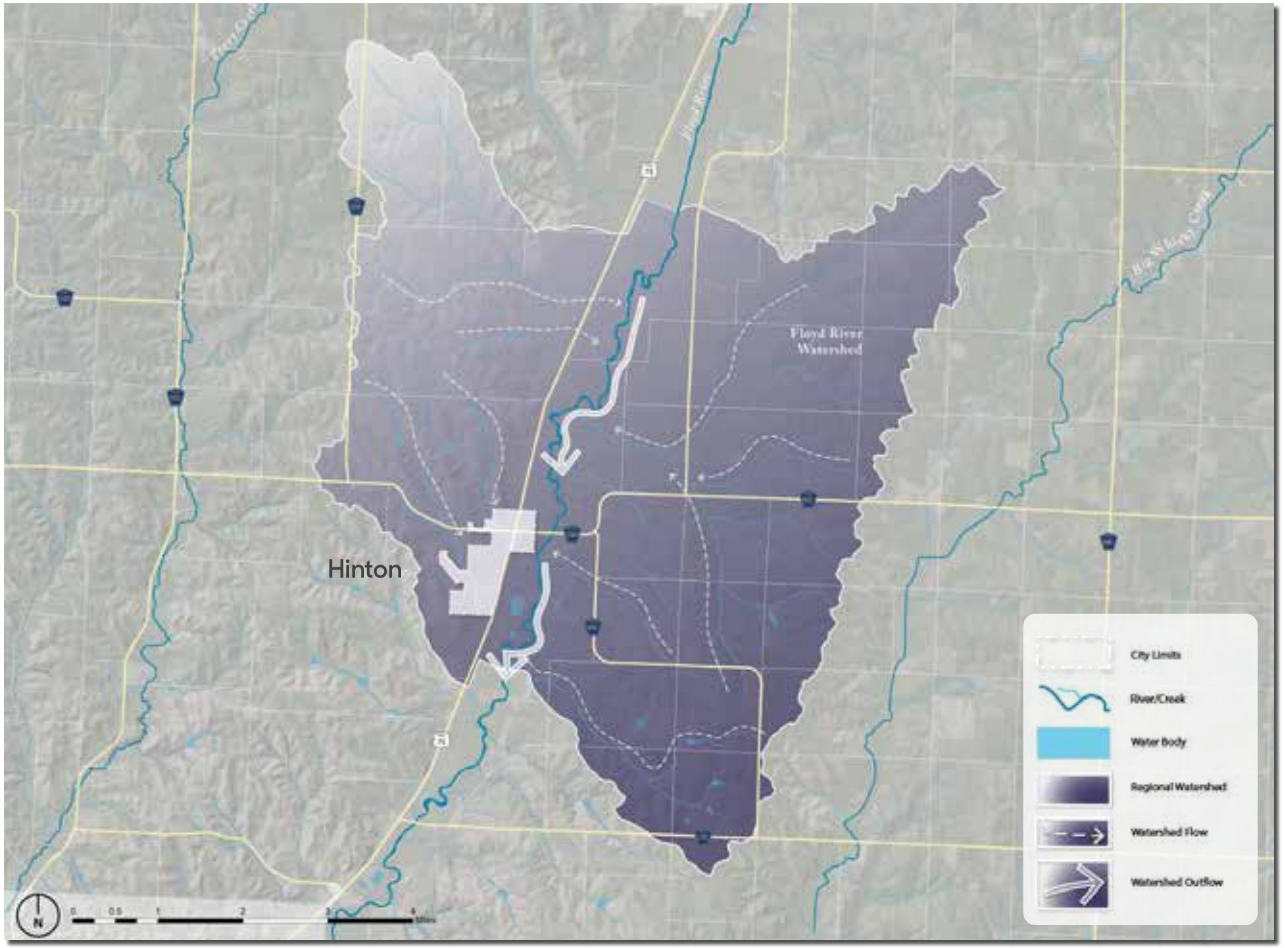
Regional Watershed

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.

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.



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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.

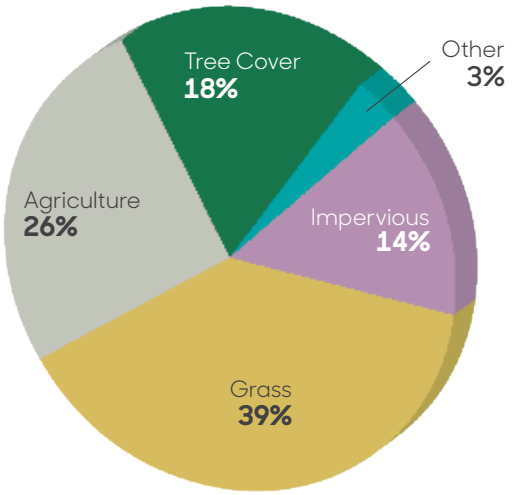
What do you observe about the dominant land-cover types in your community?

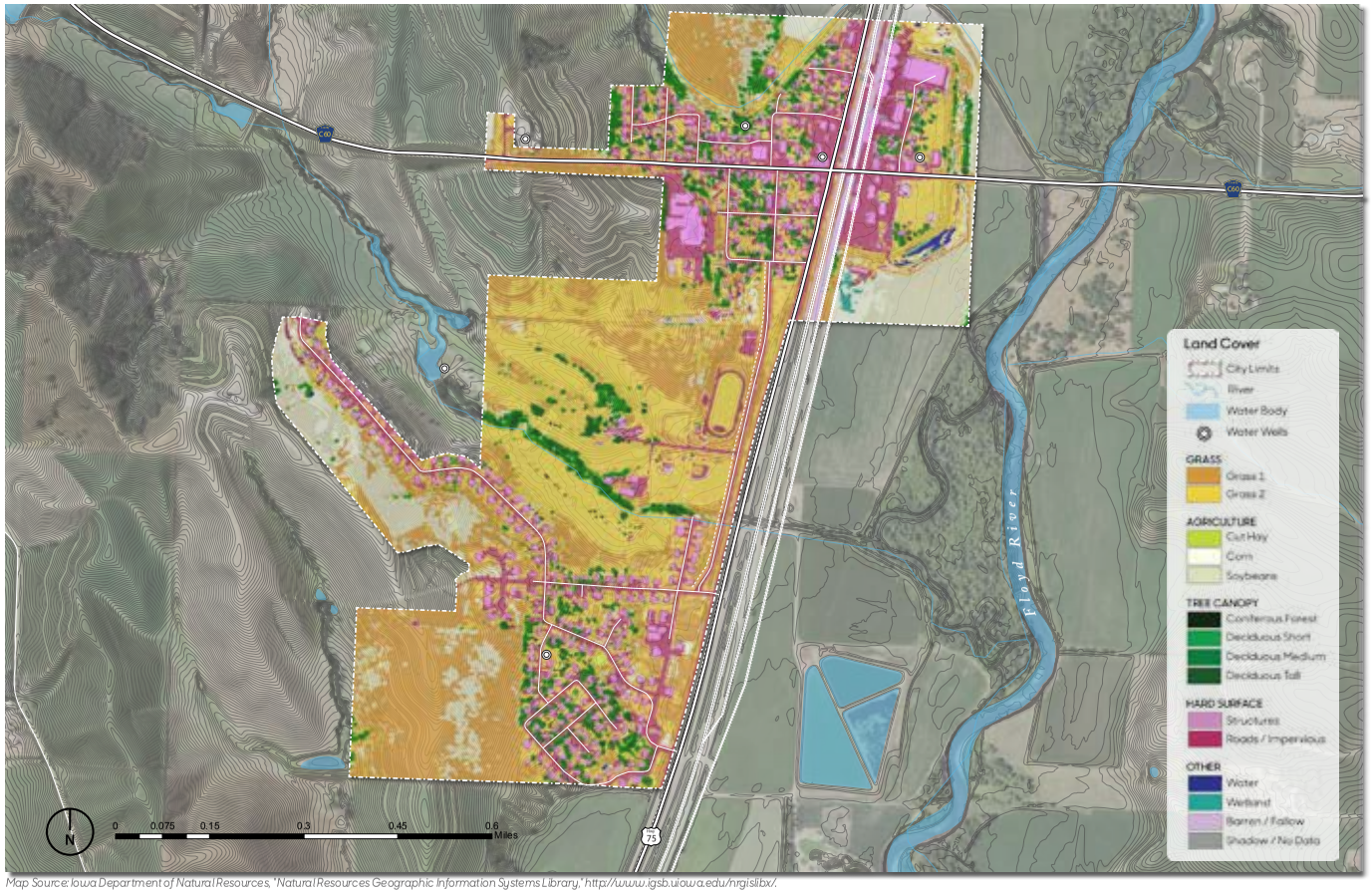
Where is the tree canopy most concentrated?

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





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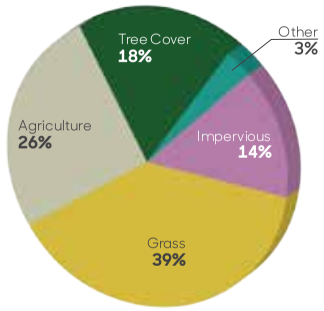

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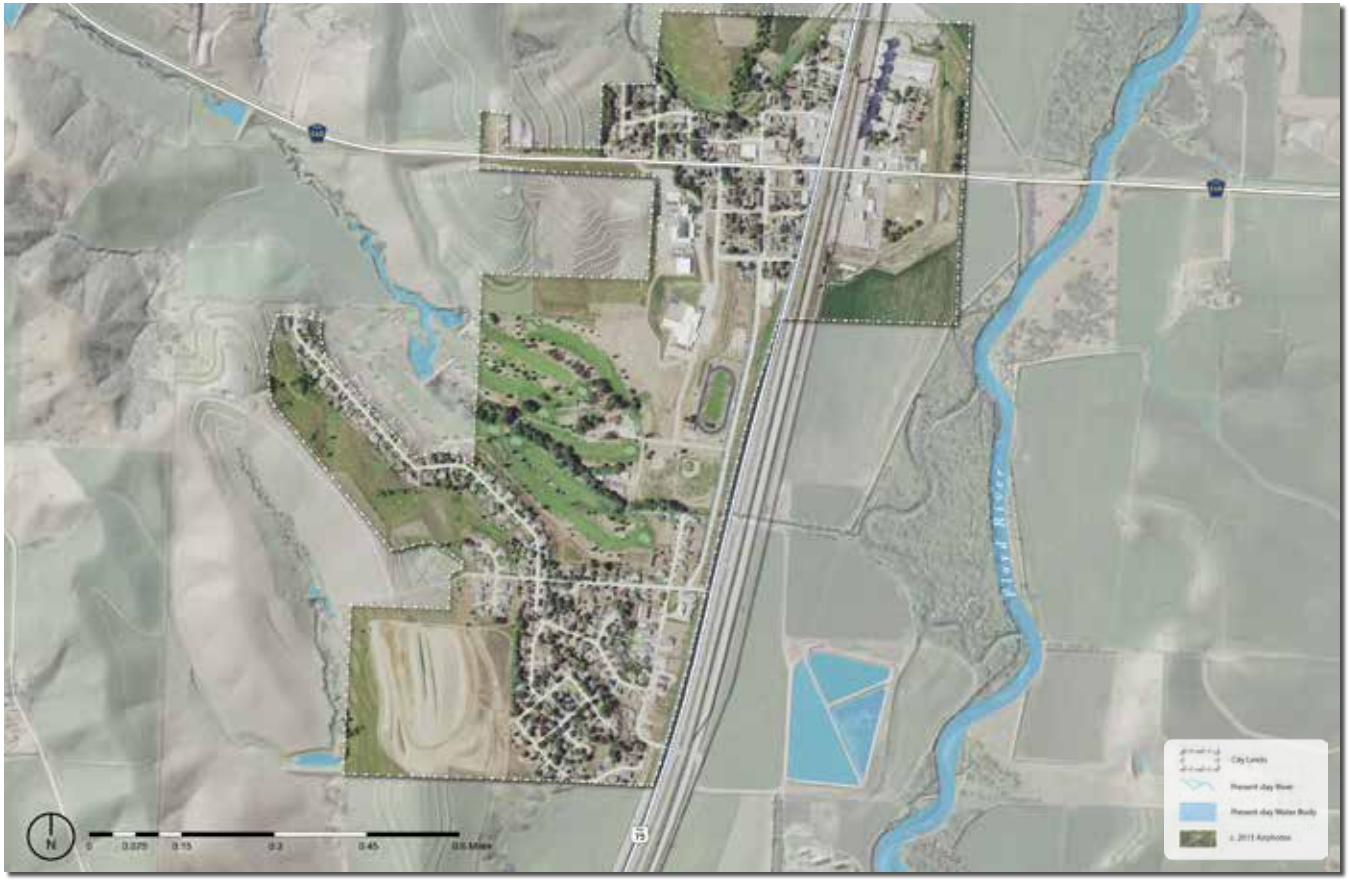
Present Day Vegetation

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 Andrea's 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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The Urban Forest

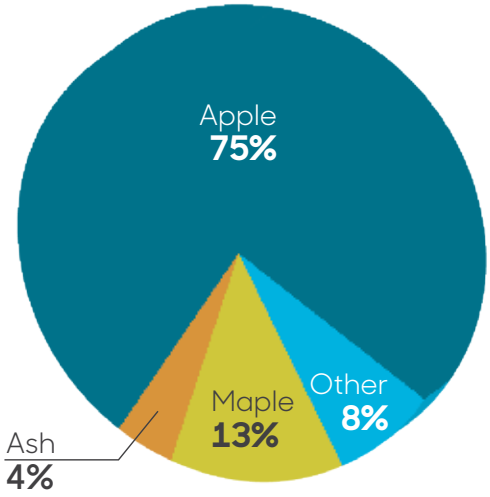
This map depicts city-owned trees that have been surveyed by the Iowa Department of Natural Resources (Iowa DNR).[1] The trees are divided into three categories: healthy trees, hazard trees, and ash trees.

A yellow triangle indicates a "hazard" tree. The hazard designation reflects tree condition using the Iowa DNR's priority rating. Hazard trees are "dangerous, dead, or dying, and no amount of maintenance will increase longevity or safety;" or are infected by "insects, pathogens, or parasites."

A purple cross indicates an "ash" tree. They are under imminent threat from the Emerald Ash Borer (EAB), an invasive beetle that disrupts circulation in the tree resulting in the loss of tens of millions of ash trees in North America.[2] EAB was first discovered in Iowa in 2010 and was confirmed in 65 Iowa counties as of 2018.[3]

The graph shows how many of the city's trees are of the same species. There is a strong possibility that

4% (ash trees) of Hinton's city-owned trees will die once EAB eaches the area. With proper planning and management, the city can improve its canopy by planting suitable trees to gradually replace hazard and ash trees. Improving species diversity will create a more resilient urban forest.



1 Iowa Department of Natural Resources Community Tree Inventories, http://www.iowadnr.gov/Conservation/Forestry/Urban-Forestry/Community-Tree-Inventories.

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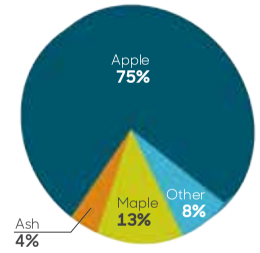

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Transportation Assets and Barriers
Overview

What Factors Affect Transportation in Hinton?
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 Hinton, 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 Hinton'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 Hinton residents with different transportation needs to participate in focus groups. A total of 41 residents attended Hinton's workshop. Participants were separated into five user groups and the Hinton steering committee.


Actives

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


Older Adults

(6 participants): Accessibility—both in terms of physical access and proximity—is a major concern for this user group. Handicapped parking, curb ramps, and smooth surfaces are critical transportation features. Because some people in this user group do not or are unable to drive, having goods and services within walking distance is important.


Youth

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


Parents

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


Steering Committee

(7 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 Vision

W. Main Street's steep hill results in speeding traffic coming into town. A lack sidewalks and crossings makes it difficult to cross.

The trail along Frontage Road is great for recreation, and includes amenities such as benches, trees, and good lighting.

Highway 75 is difficult for drivers and pedestrians to cross.

Michael's Miracle Park is easily accessible and has fun equipment.

The tracks are bumpy, making crossing difficult.

Hinton Golf Course is a great recreational amenity that is easily accessible by trail from the frontage road.

What Factors Affect Transportation in Hinton?

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 Hinton, 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 Hinton'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 Hinton residents with different transportation needs to participate in focus groups. A total of 41 residents attended Hinton's workshop. Participants were separated into five user groups and the Hinton steering committee.

Active Adults

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

Older Adults & Mobility Impaired

(6 participants): Accessibility—both in terms of physical access and proximity—is a major concern for this user group. Handicapped parking, curb ramps, and smooth surfaces are critical transportation features. Because some people in this user group do not or are unable to drive, having goods and services within walking distance is important.

Youth

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

Parents

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

Steering Committee

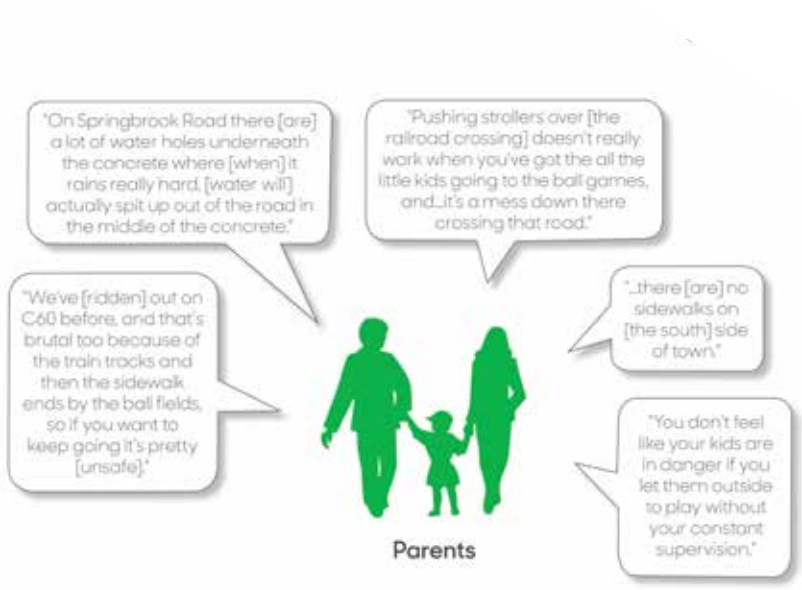
(7 participants): The common denominator for this user group is that their observations are influenced by special knowledge of the transportation system acquired during the Community Visioning assessment process. As a result, this group is more representative of decision makers.

Hinton
Overview

Transportation Assets and Barriers Analysis
Julia Badenhope, Sandra Oberbroeckling, Casey Cox, Emma Georgeff, Clare Kiboko, Alysse Kirkman, Zoey Mauck, Parmiss Sazgar, Chad Schultz
Iowa State University | Trees Forever | Iowa Department of Transportation

Iowa's Living Roadways community visioning

What People Said


"On Springbrook Road there [are] a lot of water holes underneath the concrete where [when] it rains really hard, [water will] actually spit up out of the road in the middle of the concrete."
"Pushing strollers over [the railroad crossing] doesn't really work when you've got the all the little kids going to the ball games, and...it's a mess down there crossing that road."
"...there [are] no sidewalks on [the south] side of town."
"We've [ridden] out on C60 before, and that's brutal too because of the train tracks and then the sidewalk ends by the ball fields, so if you want to keep going it's pretty [unsafe]."
"You don't feel like your kids are in danger if you let them outside to play without your constant supervision."
Parents


"If you were a young mom pushing a stroller, you don't even have really enough room for your stroller to go in front of [businesses along Highway 75] without getting run over by a semi."
"...once spring and summer get here, you do have a lot of people [who] ride their bikes on Highway 75 and on C60..."
"I leave for work early in the morning and there [are] a lot of walkers out at that time and...it's hard to see them."
"Signage would be great...to make people realize that they are actually in the town of Hinton..."
"There's no access [to City Park]. I mean, you put your life in your hands trying to cross the highway and the railroad tracks, and you would never let your kids do that..."
Steering Committee

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 is interested in having more places to do outdoor activities.

Older adults and mobility impaired individuals walk and bike on the walking path on Frontage Road. They enjoy walking to Michael's Miracle Park with their grandkids because it is handicapped accessible.

Youth walk, drive, bike and run to get around town. Like the active group, youth are interested in having more outdoor activity venues.

Parents walk, drive cars and golf carts, bike and run. They are concerned about their children's transportation experience. Parents' top priority is the safety of their kids.

The steering committee bikes, walks, drives, and uses golf carts. They enjoy community spaces such as the community center and the schools, and want to see more trail connections in and out of town.

Hinton

Emerging Themes

Transportation Assets and Barriers
Julia Badenhope and Sandra Oberbroeckling, Casey Cox, Emma Georgeff, Clare Kiboko, Alysse Kirkman, Zoey Mauck, Parmiss Sazgar, Chad Schultz
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Iowa's Living Roadways community visioning

Transportation Inventory and Analysis

The biggest concern identified by the community and steering committee was the quality of the Highway 75 and Main Street intersection. Traffic along Highway 75 and through this intersection can sometimes be moving at high speeds and at others it becomes congested and backed up. Having the train running immediately adjacent to the highway means that if a train is passing or potentially stopped, turning traffic may be stopped for a long period of time. Main Street offers the only east-west through road in town. Accessibility for pedestrians is limited here because there are four lanes of traffic to cross, limited paved landings at the corners, no buffer from traffic, and limited time to make the crossing. Residents have noted that the city park and businesses on E. Main Street ares under-utilized because of these conditions.

The other major concern related to the intersection is the rough crossing at the railroad tracks. There are currently five tracks to cross, and the road has buckled or sags, making a very bumpy crossing. City officials, representatives from each of the railroad companies, and the Iowa DOT have begun talks to get repairs made to that portion of Main Street. Once a commitment is established, the projected time frame for completion is within two years.

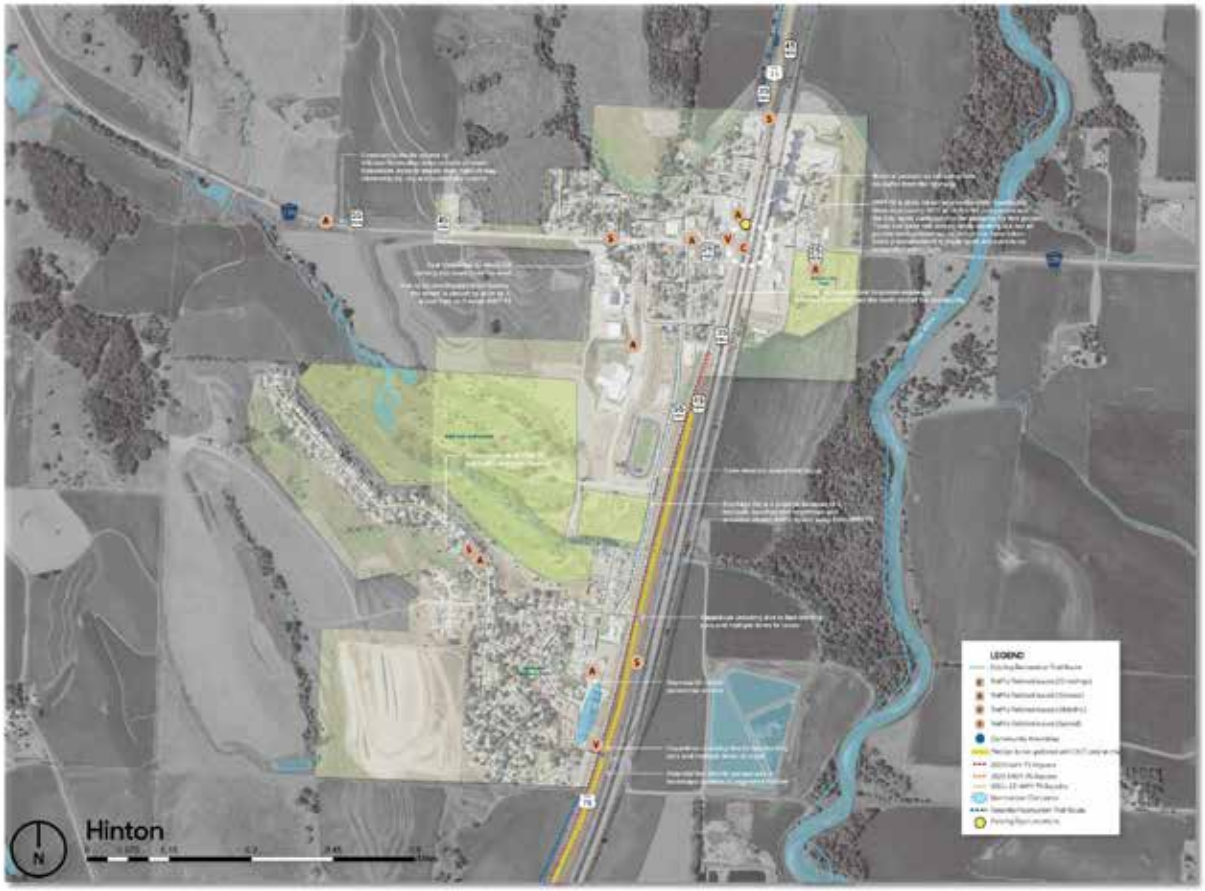
The Highway 75 and Main Street intersection marks the center of the downtown neighborhood. Most of the businesses, the Hinton Community Center, and Hinton City Park are within a block of the intersection along one of those two roads. There is potential for creating an identity component and/or landscape updates to bring greater attention to this area and make it more inviting. These types of updates can help to slow traffic as well.

The Iowa DOT is currently repaving and raising the northbound lanes of Highway 75, from the southern boundary of Hinton to Grover Street. This project is expected to be completed in 2019. Southbound Highway 75 along this stretch is slated for repairs in 2020. The southbound lanes will be lowered to create a more even transition between the northbound and southbound lanes. Visibility when entering and crossing the highway from side streets was identified as a concern during focus groups. The evening out of the road is an effort to minimize those problems. Resurfacing of the highway north of the downtown neighborhood is projected for 2021-2022. The DOT stated that it did not currently have plans for highway improvements in the downtown area, but that a five-lane option was being considered. This expansion option would impact and potentially displace businesses adjacent to the highway.

Concerns over speeding traffic on Main Street were also raised. The hill west of town provides a quick descent into a residential neighborhood. Main Street is a wide road, providing on-street parallel parking on both sides. This width, coupled with the fact that the most of the parking lanes are vacant, gives the perception that the roadway would have a higher speed limit. This condition is less present on E. Main Street.

Frontage Road was identified as a positive street within the community because of its trail with benches and street trees. It also provides a slower alternative route to Highway 75. The low-branching trees, however, at times obstruct the speed limit signs.

Within the residential streets, Springbrook Drive & Titan Road were also identified as having faster traffic. Again these streets are wider to accommodate on-street parking, but the lack of cars leaves it feeling vast. There are also no sidewalks, which results in adults and children walking and riding their bikes in the street with vehicular traffic.



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Hinton
Transportation Inventory

Iowa State University Community Design Lab
LAs: Chad Hunter & Carl Rogers
Interns: Riley Dunn & Laura Schwartz
Iowa State University | Trees Forever | Iowa Department of Transportation

Iowa's Living Roadways community visioning

Community Concept Plan

Hinton's Transportation Goals
Currently plans are taking shape that will address changes along the Highway 75 corridor in the downtown region. As well, conversations are already begun with the railroads and the DOT to improve the railroad crossings on E Main Street. As highway improvements continue on the south side of town, which includes evening out the heights of the north-bound and south-bound lanes, some of the issues raised about difficulty crossing the highway from other community roads will be managed.

With those factors in mind the steering committee chose to turn its primary focus to the Main Street/C60 corridor including the Highway 75 intersection. The goals include:

- **Developing streetscape improvements along the Main Street Corridor to reduce traffic speeds and create a more welcoming and connected Main Street**
- **Creating a safer and more accessible crossing at HWY 75 and Main St.**
- **Increasing community identity through new signage and artful infrastructure updates to complement the streetscape amenities.**
- **Establishing a trail and sidewalk plan to increase accessibility and active transportation opportunities throughout the community. Determine a route through the community that will serve as Hinton's link to the proposed Plywood Trail.**

COST ESTIMATE	
Key Projects	SUBTOTAL
Trail Design	$574,417.50
Downtown Streetscape Improvements	$261,571.50
Signage	$54,415.32
TOTAL	**$890,404.32**

HINTON'S TRANSPORTATION GOALS

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Planning and Strategizing

Developing Details

Creating Community Identity

Hinton
Concept Plan

Iowa State University Community Design Lab
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Iowa's Living Roadways community visioning

Trail Design

Trail Typologies
Multiple trail typologies are proposed for increasing accessibility throughout Hinton. Each length of trail route attempts to make the best use of existing infrastructure and limit the need for new, while connecting people to important amenities in the community. Proposed trail and sidewalk locations are based on those identified by community members during the design process.

Sharrows provide roads where motorized vehicles and bikes are given equal importance on the roadway. Markings on the pavement alert drivers that bikes may be present and let cyclists know that the road is a designated cycle route. Sidewalks are used to complement the sharrow and provide a pedestrian path. Sidewalks should be introduced anywhere along these routes where they are not currently present. Additional lighting is needed to make these routes safe and comfortable for use at various times of day.

Shared-use Trails are a great asset to connect scenic greenways, communities, and natural amenities for runners, walkers, cyclists, and skaters. These trails are independent from the roadway, typically buffered, and operate like a wide sidewalk (8-12'), but accommodating multiple modes of active transportation.

Alleyways offer another potential for bike and pedestrian access, because they typically have minimal vehicular traffic. Alleys are often under-utilized spaces, but as a trail they are given a new life. The surface can be paved or gravel, but would need to be maintained as an even and packed surface for safety. Trail signage at the entrances to the alley would provide awareness to drivers that cyclists and pedestrians may be present.

Starview Drive is one of Hinton's business corridors. Currently there is no pedestrian or bicycle infrastructure to make utilizing this area accessible and users sometimes feel unsafe. This plan suggestions a sharrow for the road, a sidewalk adjacent to the street, and a shared-use trail to the east of the businesses. Vegetation along the trail will help enhance the character of the corridor and define the trail. A mix of urban-tolerant tree species is recommended to diversify from the abundance of crabapples that line the length of trail along First Avenue S.

TRAIL TYPOLOGIES

Multiple trail typologies are proposed for increasing accessibility throughout Hinton. Each length of trail route attempts to make the best use of existing infrastructure and limit the need for new, while connecting people to important amenities in the community. Proposed trail and sidewalk locations are based on those identified by community members during the design process.

SHARROW

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SHARED-USE TRAIL

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ALLEYWAY

Alleyways offer another potential for bike and pedestrian access because they typically have minimal vehicular traffic. Alleys are often under-utilized spaces, but as a trail they are given a new life. The surface can be paved or gravel but would need to be maintained as an even and packed surface for safety. Trail signage at the entrances to the alley would provide awareness to drivers that cyclists and pedestrians may be present.

Stoneview Drive is one of Hinton's business corridors. Currently there is no pedestrian or bicycle infrastructure to make utilizing this area accessible and users sometimes feel unsafe. This plan suggestions a sharrow for the road, a sidewalk adjacent to the street, and a shared-use trail to the east of the businesses. Vegetation along the trail will help enhance the character of the corridor and define the trail. A mix of urban-tolerant tree species is recommended to diversify from the abundance of crabapples that line the length of trail along First Avenue S.

Hinton
Trail Design

Iowa State University Community Design Lab
LAs: Chad Hunter & Carl Rogers
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Iowa State University | Trees Forever | Iowa Department of Transportation

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TRAIL DESIGN				
Primary Typology Enhancements	**QTY**	**UNIT**	**UNIT COST**	**SUBTOTAL**
Sharrows				
Sharrow Pavement Markings*	12	EA	$120.00	$1,440.00
10' Wide Shared-use Trail (Titan Rd to Starview Dr.)				
Excavation (10")	615	CY	$14.00	$8,610.00
Rough Grading	371	CY	$7.00	$2,597.00
Asphalt Paving (4" depth)	20,000	SF	$5.50	$110,000.00
Gravel Base (6" depth)	371	CY	$3.00	$1,113.00
Sidewalk Additions and Replacement				
Excavation	95	CY	$14.00	$1,330.00
PCC Concrete (4" depth)	3,078	SF	$7.00	$21,546.00
Gravel Base (6" depth)	57	CY	$3.00	$171.00
General System Updates				
Bike Route Signs w/ Post	12	EA	$100.00	$1,200.00
Crosswalks (High Visibility)	6	EA	$750.00	$4,500.00
Primary Typology Enhancements Total				**$152,507.00**

TRAIL DESIGN				
Phase II Typology Enhancements	**QTY**	**UNIT**	**UNIT COST**	**SUBTOTAL**
Sharrows				
Sharrow Pavement Markings * (Phase II)	42	EA	$120.00	$5,040.00
10' Wide Shared-use Trail (North HWY 75 to Cedar St.)				
Excavation (10")	147	CY	$14.00	$2,058.00
Rough Grading**	1	AL	$4,000.00	$4,000.00
Asphalt Paving (4" depth)	4,780	SF	$5.50	$26,290.00
Gravel Base (6" depth)	89	CY	$3.00	$267.00
Sidewalk Additions and Replacement***				
Excavation	792	CY	$14.00	$11,088.00
PCC Concrete (4" depth)	25,752	SF	$7.00	$180,264.00
Gravel Base (6" depth)	477	CY	$3.00	$1,431.00
Phase II Typology Enhancements Total				**$230,438.00**
TRAIL DESIGN SUBTOTAL				**$382,945.00**
Mobilization		%15		$57,441.75
Engineering		%15		$57,441.75
Contingency		%20		$76,589.00
TRAIL DESIGN TOTAL				**$574,417.50**

* Sharrow markings to be implemented after each intersection and then at a minimum of 250' between markings. This averages one to two per block in each direction.

** An allotment, rather than cubic yard costs, was provided for rough grading of alternate trail routes since the alignment and location are less established.

*** No calculations were done for sidewalks within the new development on the southwest side of town, because exact road lengths and orientations and whether some sidewalks may already be established is unclear.

Additional notes:
The current alleyways on the north side are sufficient to support the route through them. Clean up, general maintenance and the addition of bike route signage is all that would be required.

Downtown Streetscape

Streetscape Strategies

- Provide visible, well-marked crossings
- Include crosswalks at all intersections linked to the trail
- Narrow the road widths through bump-outs to slow traffic on HWY 75 and Main Street
- Maintain street parking and define parking areas with bump-outs
- Increase greenspace to create a more welcoming environment
- Introduce streetscape elements such as lighting with banners, plantings, and paving details to increase community identity
- Enhance the HWY 75/Main Street intersection to create awareness of the downtown business district
- Extend Main Street streetscape improvements from City Hall to Hinton City Park

Reconstruction of the sidewalks along the west side of HWY 75 will help to make a more accessible corridor for pedestrians. It will also define driveways into businesses, reducing points of conflict for motorists and pedestrians.

On Main Street the major change involves the use of bump-outs to provide the perception of a narrower roadway. Plantings, trees, pedestrian-scale lighting, and paving details create a downtown character for Main Street, which driver's perceive to be areas where traffic speeds are slower. The bump-outs reduce overall road widths creating comfortable crossings for pedestrians and increasing visibility for drivers. The bump-outs also define areas for on-street parking.

The pavement detail in the heart of the intersection takes its cues from the orientation of the railroad and highway. Based on the flow of the Floyd River and the line of the Loess Hills, the primary north-south route is tilted on a slight axis. The original community then developed straight east-west off the railroad axis. The three crossbars of the "H" represent the prominence of the railroad as a historic driver for the community and the three main lines that still define its eastern edge today. The symbol of the "H" is utilized throughout the proposal for banners, community signs, and murals.

Reconstruction of the sidewalks along the west side of HWY 75 will help to make a more accessible corridor for pedestrians. It will also define driveways into businesses, reducing points of conflict for motorists and pedestrians.

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STREETSCAPE STRATEGIES

- Provide visible, well-marked crossings
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Hinton
Downtown Streetscape

Iowa State University Community Design Lab
LAs: Chad Hunter & Carl Rogers
Interns: Riley Dunn & Laura Schwartz
Iowa State University | Trees Forever | Iowa Department of Transportation

Iowa's Living Roadways community visioning

Downtown Streetscape (continued)

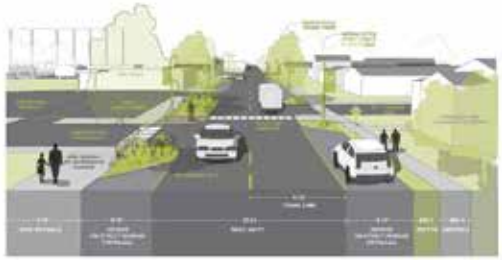
Main Street (Looking East)
Looking east down Main Street the viewshed is defined by street trees and street lamps with historic character. The proposed bump-outs provide the appearance of a narrower street, which will help to slow traffic coming into town from up on the hill. Crosswalks near City Hall and the Post Office create safer crossings to community amenities and set the stage for the Plywood Trail, which would utilize this intersection as it passes through town. Rain gardens in the bump-outs can help reduce stormwater runoff in this location where there is already a high water table.

Main Street (Looking West)
The character of the old town portion of Main Street is carried over into the East Main Street business corridor. This provides a more consistent identity for Main Street as a whole. The same street lamps used at City Hall would be utilized along the entire corridor and be adorned with banners. These additions, along with a selection of street trees and other low-maintenance plantings, would create an inviting and walkable condition for this portion of the corridor.

Highway 75 (Looking North)
Future projections for HWY 75 slate it to be widened to five lanes. In the interim, sidewalks along the highway could be reconstructed to increase pedestrian access to area businesses and create defined crossing points. Redoing the sidewalks would allow for defining driveways into area businesses and reducing conflict points for drivers and pedestrians. The corner landings would be tapered to meet the road surface all around the edge so that larger vehicles can easily make the turns. High-definition crosswalks will make the pedestrian crossing more visible to drivers. It is suggested that trees be added and greenspace updated along the west side of the railroad right-of-way.

Main Street & HWY 75 Intersection
At the intersection of HWY 75 and Main Street, community identity is enhanced by planting low-maintenance trees and perennials, re-establishing green space along the rail lines, and installing community based artworks. The addition of community branding in the heart of the intersection, along with infrastructure and vegetation updates, creates a welcoming entrance into the community. These assets compliment the road diet on Main Street and create safer conditions for drivers and pedestrians.

Adding street trees throughout the streetscape will help to expand the tree cover of the community, which is currently only makes up 18% of the land cover in Hinton. All introduced plantings should be low-maintenance and when possible, tolerant of urban conditions such as: a drought, poor soil and salt spray.



MAIN STREET (Looking East)

Looking east down Main Street the viewshed is defined by street trees and street lamps with historic character. The proposed bump-outs provide the appearance of a narrower street, which will help to slow traffic coming into town from up on the hill. Crosswalks near City Hall and the Post Office create safer crossings to community amenities and set the stage for the Riverwood Trail, which would utilize this intersection as it passes through town. Rain gardens in the bump-outs can help reduce stormwater runoff in this location where there is already a high water table.

MAIN STREET (Looking West)

The character of the old town portion of Main Street is carried over into the East Main Street business corridor. This provides a more consistent identity for Main Street as a whole. The same street lamps used at City Hall would be utilized along the entire corridor and be adorned with banners. These additions, along with a selection of street trees and other low-maintenance plantings, would create an inviting and walkable condition for this portion of the corridor.

HIGHWAY 75 (Looking North)

Future projections for HWY 75 state it to be widened to five lanes. In the interim, sidewalks along the highway could be reconstructed to increase pedestrian access to area businesses and create defined crossing points. Redoing the sidewalks would allow for defining driveways into area businesses and reducing conflict points for drivers and pedestrians. The corner landings would be tapered to meet the road surface all around the edges so that larger vehicles can easily make the turns. High-definition crosswalks will make the pedestrian crossing more visible to drivers. It is suggested that trees be added and greenspace updated along the west side of the railroad right-of-way.

MAIN STREET & HWY 75 INTERSECTION

(Looking Northeast)

(Looking West)

At the intersection of HWY 75 and Main Street, community identity is enhanced by planting low-maintenance trees and perennials, re-establishing green space along the rail lines, and installing community beautification works. The addition of community branding in the heart of the intersection, along with infrastructure and vegetation updates, creates a welcoming entrance into the community. These assets compliment the road diet on Main Street and provide safer crossings for drivers and pedestrians.

Adding street trees throughout the streetscape will help to expand the tree cover of the community, which is currently only makes up 28% of the land cover in Hinton. All the values planted should be low maintenance and when possible, tolerant of urban conditions such as drought, poor soil and salt spray.

Hinton
Downtown Streetscape

Iowa State University Community Design Lab
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Iowa's Living Roadways community visioning

DOWNTOWN STREETSCAPE IMPROVEMENTS				
E Main Street	**QTY**	**UNIT**	**UNIT COST**	**SUBTOTAL**
Bump-outs				
Excavation (5')	460	CY	$14.00	$6,440.00
PCC Concrete (4" depth)	300	SF	$7.00	$2,100.00
Gravel Base (6" depth)	6	CY	$3.00	$18.00
Concrete Paving 6" Curb	250	LF	$18.00	$4,500.00
Curb ramp & ADA Warning Strip	1	EA	$1,500.00	$1,500.00
Clean Fill (4' depth)	351	CY	$10.00	$3,510.00
Amended Top Soil (1' depth)	88	CY	$20.00	$1,760.00
Road Markings/Striping	2500	LF	$2.00	$5,000.00
Plantings				
Low-maintenance Perennials and Turf Grass	1	AL	$5,000.00	$5,000.00
Street Trees	4	EA	$400.00	$1,200.00
Mulch (3" depth)	625	SF	$1.00	$625.00
Bed Prep	1	AL	$1,000.00	$1,000.00
Site Elements				
Pedestrian-Scale Streetlights w/ Banners*	6	EA	$500.00	$3,000.00
Crosswalks (High Visibility)	1	EA	$750.00	$750.00
E Main Street Total				**$36,403.00**

W Main Street	**QTY**	**UNIT**	**UNIT COST**	**SUBTOTAL**
Bump-outs				
Excavation (10")	84	CY	$14.00	$1,176.00
PCC Concrete (4" depth)	490	SF	$7.00	$3,430.00
Gravel Base (6" depth)	9	CY	$3.00	$27.00
Concrete Paving 6" Curb	420	LF	$18.00	$7,560.00
Curb ramp & ADA Warning Strip	6	EA	$1,500.00	$9,000.00
Additional Excavation for Vegetation (gen. 3' depth or 5' for tree pits)	328	CY	$14.00	$4,592.00
Clean Fill (4'depth)	262	CY	$10.00	$2,620.00
Amended Top Soil (1' depth)	66	CY	$20.00	$1320.00
Plantings				
Low-maintenance Plantings and Turf Grass	1	AL	$7,500.00	$7,500.00
Street Trees	8	EA	$400.00	$3,200.00
Site Elements				
Pedestrian-Scale Streetlights w/ Banners*	8	EA	$700.00	$5,600.00
Pedestrian Crossing Sign w/ Post	4	EA	$175.00	$700.00
Crosswalks	3	EA	$750.00	$2,250.00
W Main Street Total				**$48,975.00**

* Estimate for streetlights includes installation and utilities.

DOWNTOWN STREETSCAPE IMPROVEMENTS (continued)				
Highway 75	**QTY**	**UNIT**	**UNIT COST**	**SUBTOTAL**
Right-of-Ways/Sidewalk Replacement & Vegetation Restoration				
Excavation (10")	189	CY	$14.00	$2,646.00
PCC Concrete (4" depth)	3500	SF	$7.00	$24,500.00
Gravel Base (6" depth)	108	CY	$3.00	$324.00
Concrete Paving 6" Curb	590	LF	$18.00	$10,620.00
Driveway Aprons	1700	SF	$12.00	$20,400.00
Excavation for Tree Plantings (5')	37	CY	$14.00	$518.00
Clean Fill (4' depth)	30	CY	$10.00	$300.00
Amended Top Soil (1' depth)	7	CY	$20.00	$140.00
Plantings				
Lawn Prep (till and aerate)	1	AL	$1,000.00	$1,000.00
Street Trees	8	EA	$400.00	$3,200.00
Grass Seed	1	AL	$1,500.00	$1,500.00
Highway 75 Total				**$65,148.00**

Main St. & HWY 75 Intersection	**QTY**	**UNIT**	**UNIT COST**	**SUBTOTAL**
Bump-outs				
Excavation for Paving (10")	28	CY	$14.00	$392.00
Additional Excavation for Vegetation (3')	62	CY	$14.00	$868.00
PCC Concrete (4" depth)	800	SF	$7.00	$5,600.00
Gravel Base (6" depth)	15	CY	$3.00	$45.00
Concrete Paving 6" Curb	95	LF	$18.00	$1,710.00
Curb ramp & ADA Warning Strip	4	EA	$1500.00	$6,000.00
Clean Fill (2' depth)	52	CY	$10.00	$520.00
Amended Top Soil (1' depth)	11	CY	$20.00	$220.00
Plantings				
Low-maintenance Perennials	1	AL	$5,000.00	$5,000.00
Site Elements				
Stained Concrete "H" Emblem	1	AL	$2,000.00	$2,000.00
Crosswalks	2	EA	$750.00	$1,500.00
Intersection Total				**$23,855.00**
DOWNTOWN STREETSCAPE IMPROVEMENTS SUBTOTAL				**$174,381.00**
Mobilization			15%	$26,157.15
Engineering			15%	$26,157.15
Contingency			20%	$34,876.20
DOWNTOWN STREETSCAPE IMPROVEMENTS TOTAL				**$261,571.50**

Community Signage

Community Sign and "Loess" Landscape
Multiple sign locations were discussed at the community design charette. The most popular choice was at the heart of the community just east of the school grounds and trail. This location is very open and visible from the highway. Due to railroad right-of-way requirements, only a small post sign would be possible on the east side of Highway 75. To make an impact a larger sign on the west side of the highway would be necessary.

The sign would be a large limestone slab situated in a mounded landscape, representative of the character of the Loess Hills landscape that is part of the community's identity. The limestone would be engraved with the city's name in the typeface that would be seen in the paving detail in the intersection of HWY 75 and Main Street, and potentially on the grain elevators as shown to the right. The limestone slab and grassy hills would be complemented with flowers and shrubs to draw attention to the sign from the road.

The placement of the sign near the fire station looking up at the schools reinforces the importance of the schools and the youth to the identity of the community. Additional smaller signs could be located on the north and south ends of town, also on the west side of the highway.

The second option would be to create signs with landscapes like the one shown above at both the north and south ends of town.

Grain Elevator Sign
Reuse of the co-op grain elevator as a surface to express community identity arose out of the design charette. The elevator is the most visible feature in the community and can be seen from miles outside of town. For most people, seeing an elevator off in the distance symbolizes that they are approaching a community. The scale of the structure offers great potential as a highly visible canvas from throughout the community. Residents also would like to involve students and community members in the design and implementation of an artwork for the elevator.

Building on the "H" symbol and the typeface utilized for the community sign, this concept proposed by the steering committee envisions the city's name highlighted vertically on the end grain bins. The idea would be to have this on the north and south ends. The ends are the most visible component of the elevator to people coming into town. Just working with a single bin and limiting the amount of artwork would make this strategy a more affordable possibility.

There are great examples all around the country of communities repurposing the grain elevator structure to create works of art that enhance their community. Most famously is the Emerging Terrain project in Omaha (which has now been removed) that utilized large-scale banners all designed by different artists to adorn the individual columns. Artist Guido Van Helten has been updating elevators with his signature black and white portraits all over the world, most recently in Fort Dodge, IA. Some designs can be much simpler and cost effective but still reinforce identity, such as this structure in Mansfield, OH.

COMMUNITY SIGN & "LOESS" LANDSCAPE

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GRAIN ELEVATOR SIGN

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Precedents

There are great examples all around the country of communities repurposing the grain elevator structure to create works of art that enhance their community. Most famously is the Emerging Terrain project in Omaha (which has now been removed) that utilized large-scale banners all designed by different artists to adorn the individual columns. Artist Guido Van Helten has been updating elevators with his signature black and white portraits all over the world, most recently in Fort Dodge, IA. Some designs can be much simpler and cost effective but still reinforce identity, such as this structure in Mansfield, OH.

Hinton
Community Signage

Iowa State University Community Design Lab
LAs: Chad Hunter & Carl Rogers
Interns: Riley Dunn & Laura Schwartz
Iowa State University | Trees Forever | Iowa Department of Transportation

Iowa's Living Roadways community visioning

SIGNAGE				
Community Sign & "Loess" Landscape	**QTY**	**UNIT**	**UNIT COST**	**SUBTOTAL**
Sign				
Limestone	1	AL	$10,000.00	$10,000.00
Engraving	1	AL	$5,000.00	$5,000.00
Installation	1	AL	$1,000.00	$1,000.00
PCC Concrete Foundation (to 42" depth)	1.6	CY	$567.00	$908.00
Plantings				
Clean Fill	3	CY	$10.00	$30.00
Amended Top Soil	5	CY	$20.00	$100.00
Rough Grading for Earthwork	37	CY	$7.00	$259.00
Low-maintenance Perennials and Shrubs	1	AL	$1,500.00	$1,500.00
Ornamental Trees	2	EA	$350.00	$700.00
Community Sign Subtotal*				**$19,497.00**
Mobilization			15%	$2924.55
Engineering			15%	$2924.55
Community Sign Total*				**$25,346.10**
Grain Elevator Sign	**QTY**	**UNIT**	**UNIT COST**	**SUBTOTAL**
Mural				
Materials, Implementation and Artist Fees	1	AL	$20,000	$20,000.00
Grain Elevator Sign Total**				**$20,000.00**
SIGNAGE SUBTOTAL				**$45,346.10**
Contingency			20%	$9069.22
SIGNAGE TOTAL				**$54,415.32**

* The total above represents the estimated costs for implementing only one sign at a single location.

** The steering committee has suggested that they would prefer a community or student led design and implementation for the grain elevator mural. The allotment provided is increased beyond that to account for the potential need for outside services to assist with additional planning or implementation.


HINTON

Implementation Strategies

Step One
Identify a Community Steering Committee to continue the momentum of the Community Visioning process. This group or groups will oversee the selection, planning and development of the projects.

Step Two
Define a ranking for the projects outlined in the feasibility study. This list will help prioritize goal setting, planning, funding. Remember that each concept outlined in the feasibility study can be broken down in to smaller parts. Also there are ways of testing ideas to see how the community will respond to change, such as using temporary paint to mark out the lanes and bump-out areas along Main Street.

Step Three
Identify a project to be implemented. Start with a small scale project such as signage or crosswalks. Implementation of a small project can have a larger catalytic effect. It creates a visible statement that change is happening, keeps the momentum going and can be a great motivation for building support and funding for future projects. Determine whether further design or planning is needed.

Step Four
With each project, identify potential funding sources to finance the implementation of a small scale catalyst project and the higher priority projects.

Step Five
Once a grant, loan or other funding source has been secured, develop a plan for contracting for additional design, advertising for bid and contracting for construction of the project.

Step Six
Select and contract with a Landscape Architect or Design Professional as your lead design consultant for the identified community improvement project. Allow 3-6 months in the project timeline for design and construction documentation development.

Step Seven
Select and execute a contract with a General Contractor as your construction manager for the identified community improvement project. Allow 6 months in the project timeline for construction administration.

Repeat the steps as each new project is determined.

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)