



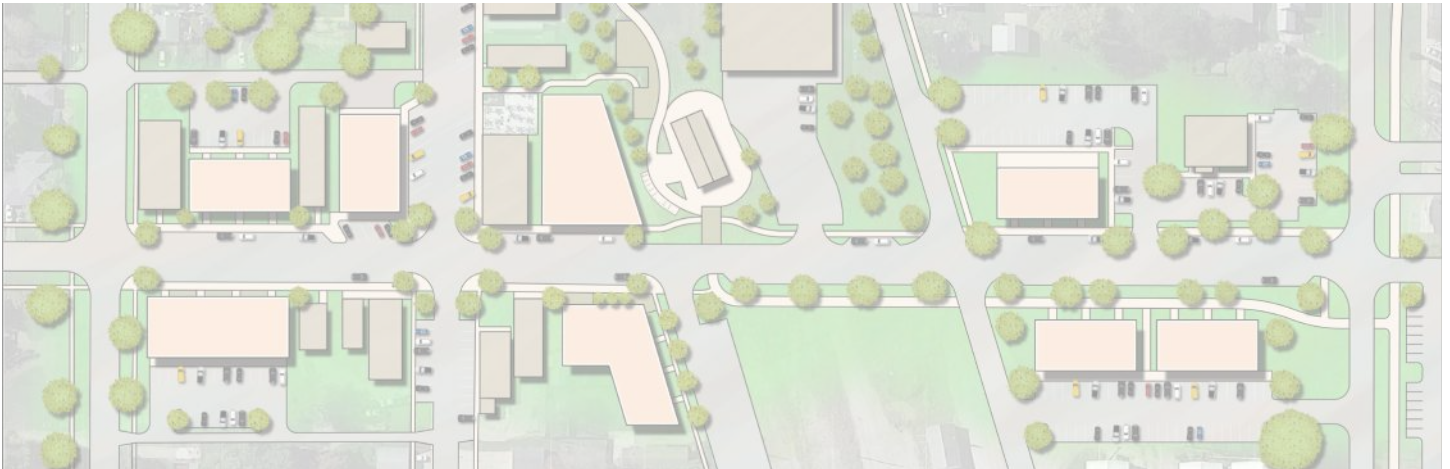
IOWA'S
LIVING
ROADWAYS

Bondurant

Community Visioning Final Report and Feasibility Study // 2015



Bondurant Community Visioning Final Report and Feasibility Study



Prepared by:
RDG Planning & Design

Program Partners:
Iowa Department of Transportation
Trees Forever
ISU Landscape Architecture
ISU Extension Community and Economic Development

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Participants

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Brandon Birdsall	Jen Keeler	Dan Olson
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Consultant History and Expertise



From our newest team members to the founding principals who began their practices in the 1960s, RDG Planning & Design is a multifaceted network of design and planning professionals. Diverse in knowledge and experience, we are united in the pursuit of meaning for our clients and ourselves. Officially formed in 1989 as the Renaissance Design Group Corporation and crafted to bring well established firms together into practice, our two business centers of RDG IA Inc. and RDG Schutte Wilscam Birge, Inc. create one distinct organization with the shared purpose of creating meaning together.

CREATE.

Creation is a result of every interaction with our clients and those they serve. Ultimately, we help create lasting relationships between people and the places they live and love.

MEANING.

We find meaning in relationships, and in people and the deep connections they have to their environments. When we find meaning, we achieve a deeper understanding of how to create the very best spaces to work, live, and play.

TOGETHER.

The most important member of our team is you. You know your needs better than anyone else, and you're the advocate for the effort because you'll love and care for your space long after we celebrate its completion.

Fifty years of dedication to success have taken us around the world. Today, our commitment to communication and technology allows us to engage our clients anywhere they may be from our offices in Omaha, Nebraska; Ames and Des Moines, Iowa; and Ft. Myers, Florida. We're free from boundaries and able to work on a regional, national, or global scale. Our interdisciplinary approach allows us to integrate our broad areas of expertise and apply the right team members to any given endeavor.

163 EMPLOYEES | **64** LICENSED PROFESSIONALS | **42** LEED APS | **58%** OF STAFF ARE STOCKHOLDERS

Program Overview

The City of Bondurant is one of 10 communities selected to participate in the 2015 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 Bondurant visioning committee identified a number of goals and priority areas during the visioning process, which are included below:

- Iowa Highway 65 Beautification
- Improvements to Lake Petocka
- Increased connectivity throughout Bondurant
- Implementation of consistent community landscaping
- Creation of way-finding signage
- Enhancements to Bondurant's Downtown District

Capturing the Bondurant Vision

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

1. Program Overview
2. Local Geography
3. Bioregional Assessment (9 total)
4. Transportation Assets and Barriers Assessment (3 total)
5. Transportation Behavior and Needs Assessment (6 total)



Existing Bondurant Trailhead



Review of community analysis



Community goal-setting meeting



Voting during goal-setting meeting



Voting during goal-setting meeting



Preliminary design presentation

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7. Concept Overview
8. Iowa Highway 65 Enhancements
9. Lake Petocla Park Improvements
10. Community Connectivity
11. Community Landscaping
12. Signage Overview
13. Downtown Enhancements

Bondurant

Program Overview

Landscape Architect and Intern: RDG Planning & Design - Bruce Niedermeyer, ASLA and Sara Davids

Iowa Department of Transportation - Trees Forever

ISU Landscape Architecture Extension

ISU Extension Community and Economic Development

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Program Overview - Continued

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7. Concept Overview
8. Iowa Highway 65 Enhancements
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12. Signage Overview
13. Downtown Enhancements

Local Geography

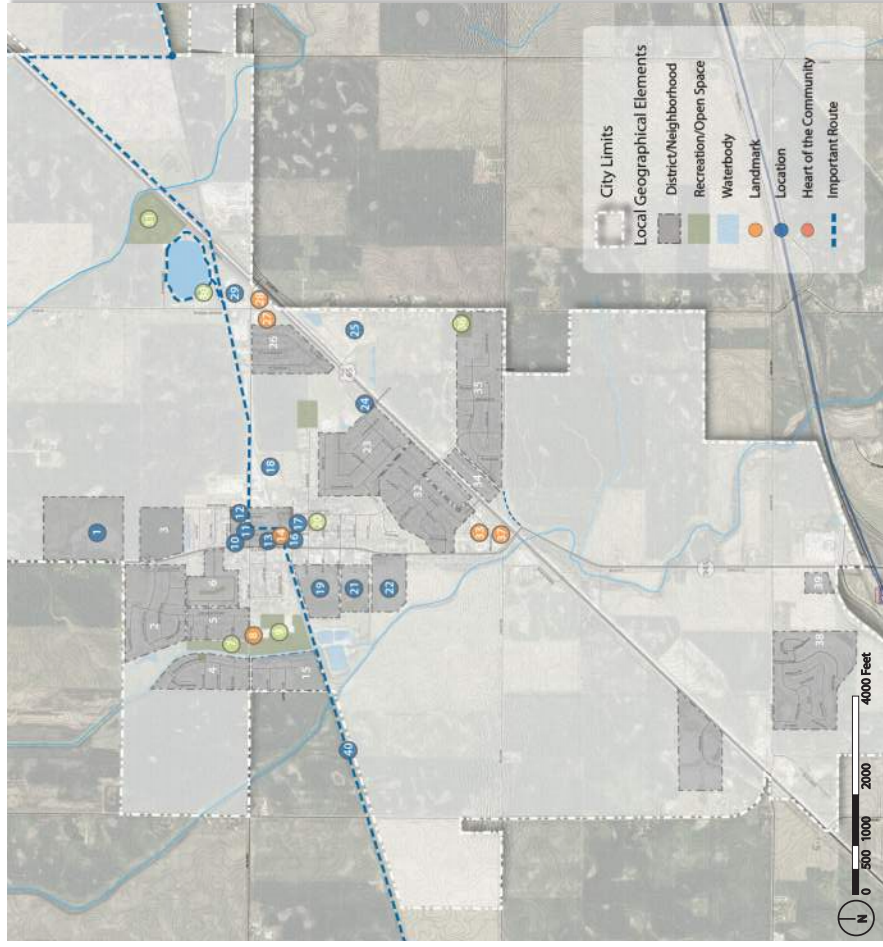
Bondurant is located along US Highway 65 just north of Interstate 80. Most development is on the west side of the highway. The major north-south corridor in town is Grant Street (also State Highway 945) and 2nd Street is the major east-west corridor. Two stoplights are located along the US 65 corridor - at Grant Street S and 32nd Street SW.

Downtown Bondurant is defined by 3rd Street NE, Grant Street N, 1st Street SE, and Lincoln Street NE. Destinations in the downtown area along 2nd Street include **city hall (12)**, the **Bondurant Community Library (10)**, and the **post office (11)**. At the south end are the **Public Safety Building/Fire Department (13)**, and **Founder's Irish Pub (16)**. Founder's is in one of the oldest buildings in town and historically was a bank, a church, a post office, and a barbershop. Across the street from the barbershop is the **Old Legion Building (17)**, which is currently being renovated as retail space.

The Bondurant-Farrar District schools are located in Bondurant. The **Bondurant-Farrar High School (1)** is the northernmost developed area in town. The **middle school (19)**, **Anderson Elementary (21)**, and **Morris Elementary (22)** are all located on the west side of Grant Avenue South. Although **Country Estates (40)** trailer park is located outside city limits, children who live there are bussed to school in Bondurant.

Bondurant has 11 designated residential developments and one more under construction. Residential areas west of Grant Street N and north of the Chichaqua Valley Trail are **Efnor Estates (15)**, **Mallard Pointe (4)**, **Deer Ridge (5)**, **Renaud Ridge (6)**, and **Arbor Ridge (2)**. The **new housing development (3)** under construction is across from Arbor Ridge. Southwest of downtown and just east of US 65 are **Meadow Brook North (23)** and **Meadow Brook South (31)**. Several housing developments and the **Courtyard Estates (25)** are somewhat disconnected from Bondurant "proper," including **Lincoln Estates (33)**, **The Cove (34)**, and **Wolf Creek (37)**, which are on the east side of US 65, and **Paine Heights (26)**, which borders US 65 in the northeast part of town.

Business, industry, and agriculture are also part of Bondurant's local geography. The **Bondurant Business Park (24)** adjacent to US 65 houses an engineering firm and a dog-boarding business. At US 65 and 2nd St NE is **Diamond Crystal Brands (29)**, and just east of downtown are the **grain elevators (18)**. To the south along I-80 is **Manatts Construction (38)**, and to the west, outside city limits, are **MidAmerican Energy (43)** and the **Facebook Data Center (42)**.



Map Data Source: Iowa Department of Natural Resources, "Natural Resources Geographic Information System Library," accessed January 2015, <https://programs.iowadnr.gov/ingifilist/>

Bondurant

Local Geography

Iowa State University: Julia Badenhope, Sandra Oberbroeckling, Colby Fangman, Miao Fangzhou, Anh Le, Jessica Adiwijaya

Iowa Department of Transportation

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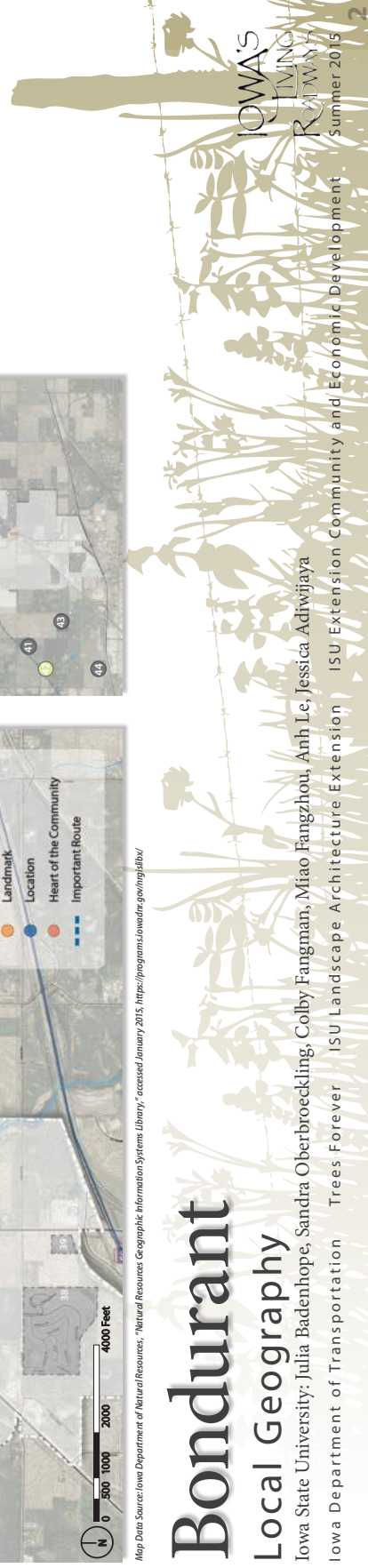


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Landmarks as defined by Bondurant residents are the **depot trailhead (14)** in the downtown area, **Plaza RV (27)** and the **Wooden Nickel (28)** at US 65 and 2nd Street NE, the **Brick Street Market (32)** and **Casey's General Store (36)** located north of US 65 and Grant Street South, and the **Freedom Rock (8)** in front of the American Legion Hall on 2nd Street NW. The **Chichaqua Valley Trail (39)** is an important route through town that is also used as a landmark.

Recreational and open spaces in and around Bondurant include several local parks—**City Park (20)**, **Eagle Park (7)**, and **Wisteria Heights Park (35)**—as well as the cemetery, the **soccer fields (9)**, **Lake Petocka (30)** and the **Bondurant Regional Sports Complex (31)**. **Griffs Valley RV Park (41)** is located west of town along the Chichaqua Trail.



Local Geography - Continued

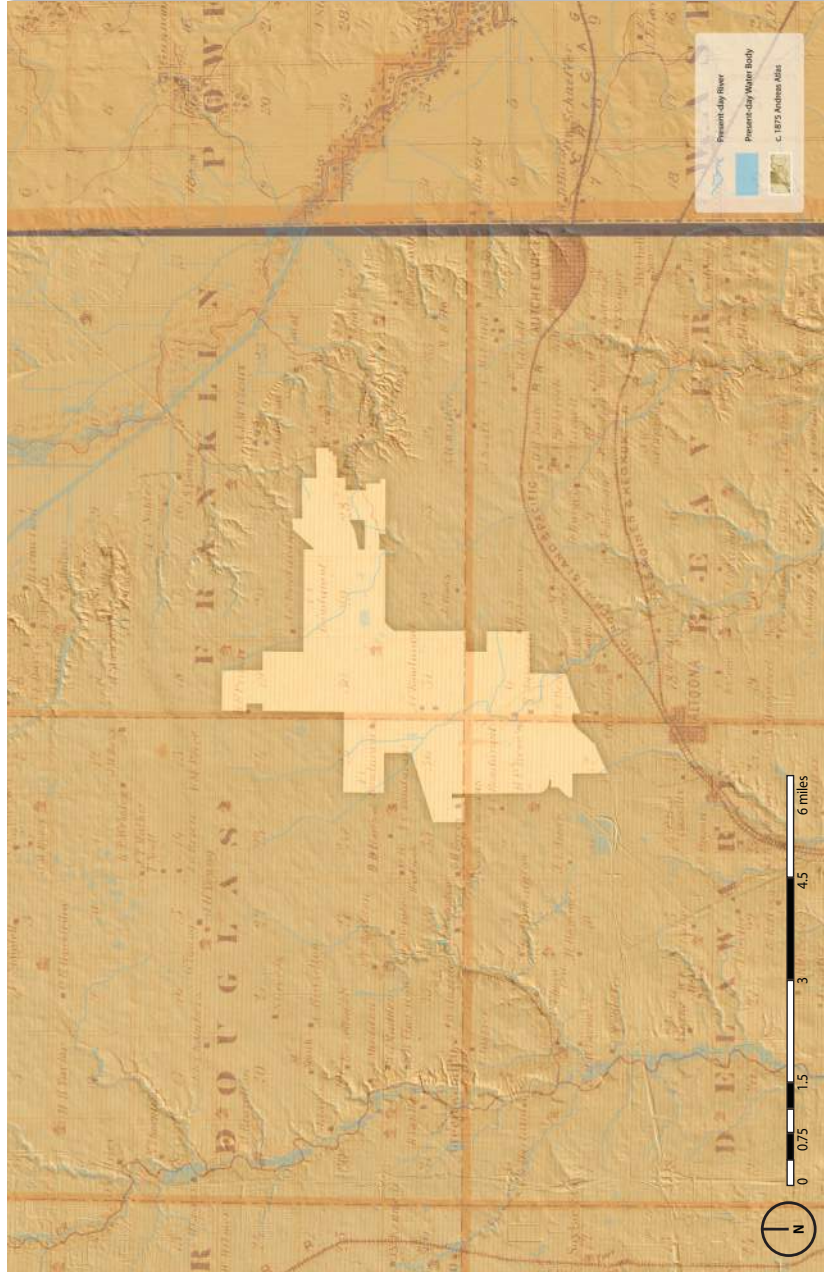
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Historic Settlement Pattern

During the 1800s, state atlases were one of the most underdeveloped branches of American cartography. Responding to that need, an entrepreneur named Alfred Andreas joined a group of former military associates to canvass and map counties in the state of Illinois. Using the experience he gained in Illinois, Andreas devised a plan to earn more money from mapping by subdividing the counties into smaller areas and producing more detailed maps. This idea led to Andreas' production of the Illustrated Historical Atlas of the State of Iowa – 1875, which had nearly 23,000 subscribers.

The historic atlas depicts useful information such as administrative boundaries, transportation routes, forest coverage, water bodies, cities, rural family settlements, and so on. Overlaying present-day city boundaries on Andreas atlas map reveals how far the city has expanded laterally over time. As with the historic vegetation map, map overlays can be used to reveal where remnant vegetative communities may still exist in the region.



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Historic Settlement Pattern

Iowa State University: Julia Badenhop, Sandra Oberbroeckling, Colby Fangman, Miao Fangzhou, Anh Le, Jessica Adiwijaya

Iowa Department of Transportation Trees Forever ISU Landscape Architecture Extension ISU Extension Community and Economic Development Summer 2015



Historic Vegetation

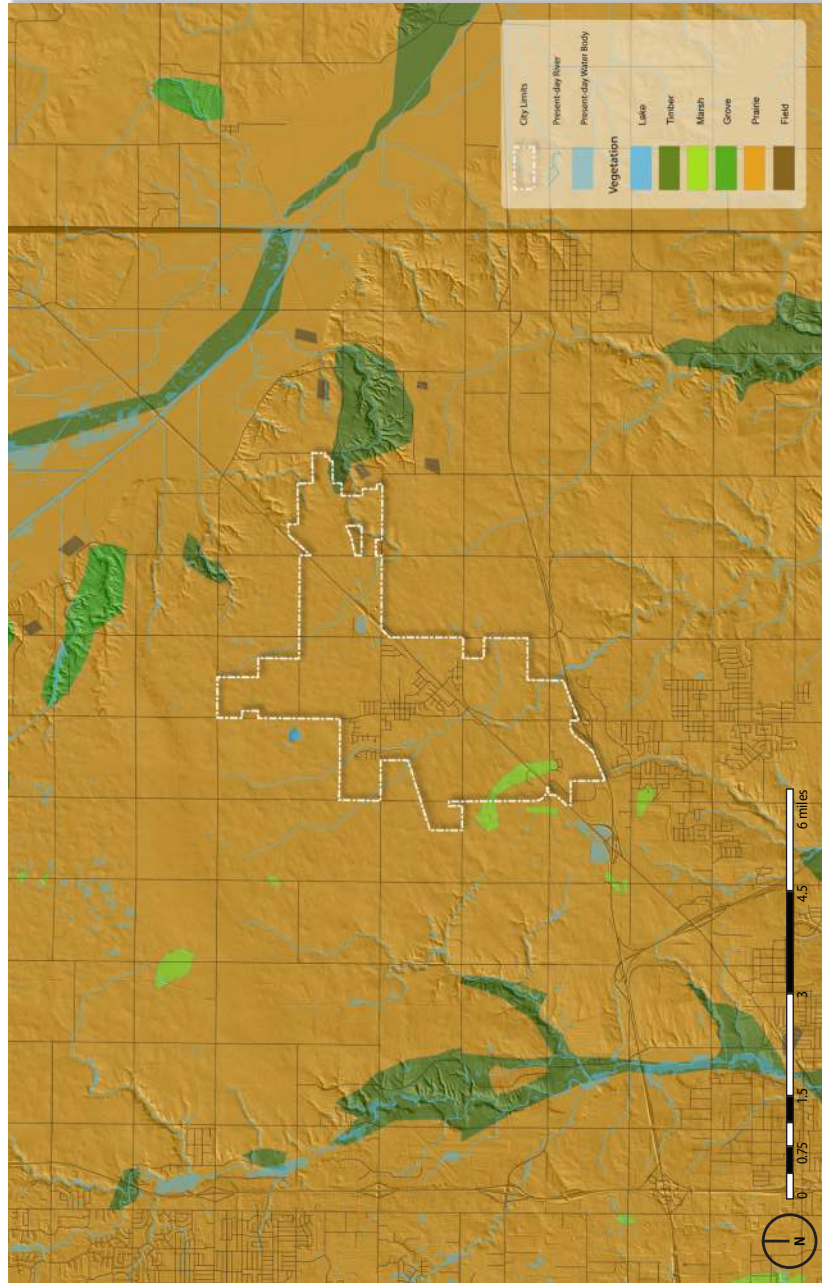
Historic vegetation maps provide insight into vegetative patterns that existed within the landscape prior to significant disturbance associated with nonnative settlement. When combined with other maps that depict vegetative conditions from other eras, this map is helpful in predicting where pockets of native vegetation of various types may still exist. When considering future landscape restoration, the maps provide insight into what types of vegetation thrived historically and could thrive again.

The plant communities mapped by the United State General Land Office (GLO) surveyors varied in classification as time went on, and the extent of each surveyor's plant knowledge influenced how they classified vegetation. When faculty and students at Iowa State University interpreted the hand-drawn maps and notes to create a GIS map, they did not recategorize any vegetation types. For example, "slough" and "marsh" appear as separate map units, but both describe similar conditions - herbaceous vegetation on perennially wet to partially flooded land. "Oak barrens," adjacent "timber," and "large expanses of timber" are also identified. "Oak barrens" undoubtedly referenced what is called oak savanna today. Oak savannas are frequently burned woodlands dominated by oak and hickory species with a unique, shade-tolerant, prairie community beneath. "Timber" and "prairie," as used by the GLO, are catchall names that included many vegetation types. Examining water-table data can reveal hydraulic patterns that would have influenced what specific plant communities were present in vast areas of "timber" and "prairie."

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Depth to Water Table

Water Table

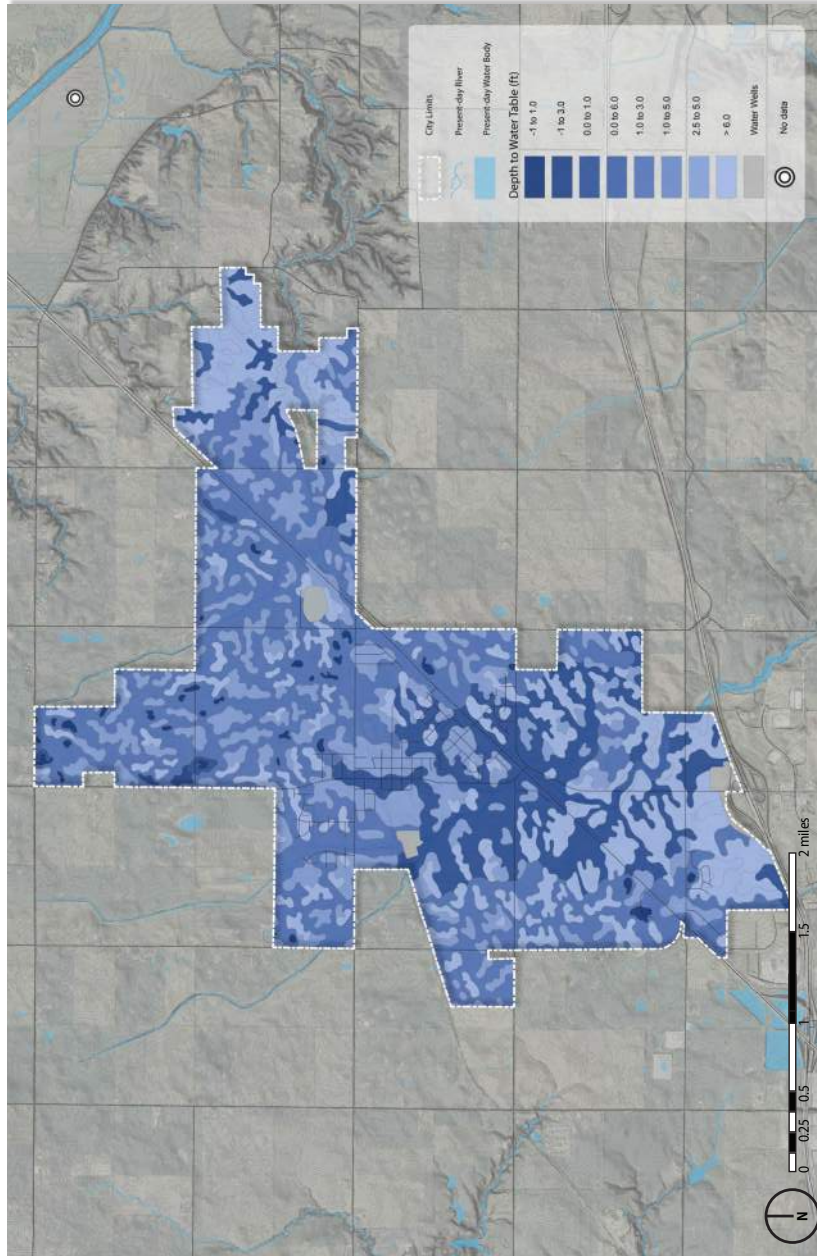
The water table is a groundwater-saturated zone in the soil that becomes rivers, springs, and lakes when the water table reaches the surface. The water table generally mimics surface topography, but there are differences depending on the permeability and porosity of soils and bedrock in the area. The water-table depth is typically defined as a range because the depth is constantly changing with the seasons and the weather. For example, an area with a water-table depth ranging from one foot to three feet is closer to one foot below the surface after the spring snowmelt. Impermeable layers such as concrete also affect the water table by preventing precipitation from infiltrating into the soil and contributing to the subsurface water level. As a result, the water table is lower in those areas.

Prior to the significant landscape alterations caused by nonnative settlement, the water table was a driving factor that affected vegetation growth in the area. For example, historically a quaking aspen in the landscape would indicate that water is located not far below the surface. Today, quaking aspens are highly sought-after specimen trees and are found in many places they would not have existed historically.

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Map Data Source: Iowa Department of Natural Resources, "Natural Resources Geographic Information Systems Library," accessed January 2015. <https://programs.iowadnr.gov/iglib/>

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Depth to Water Table

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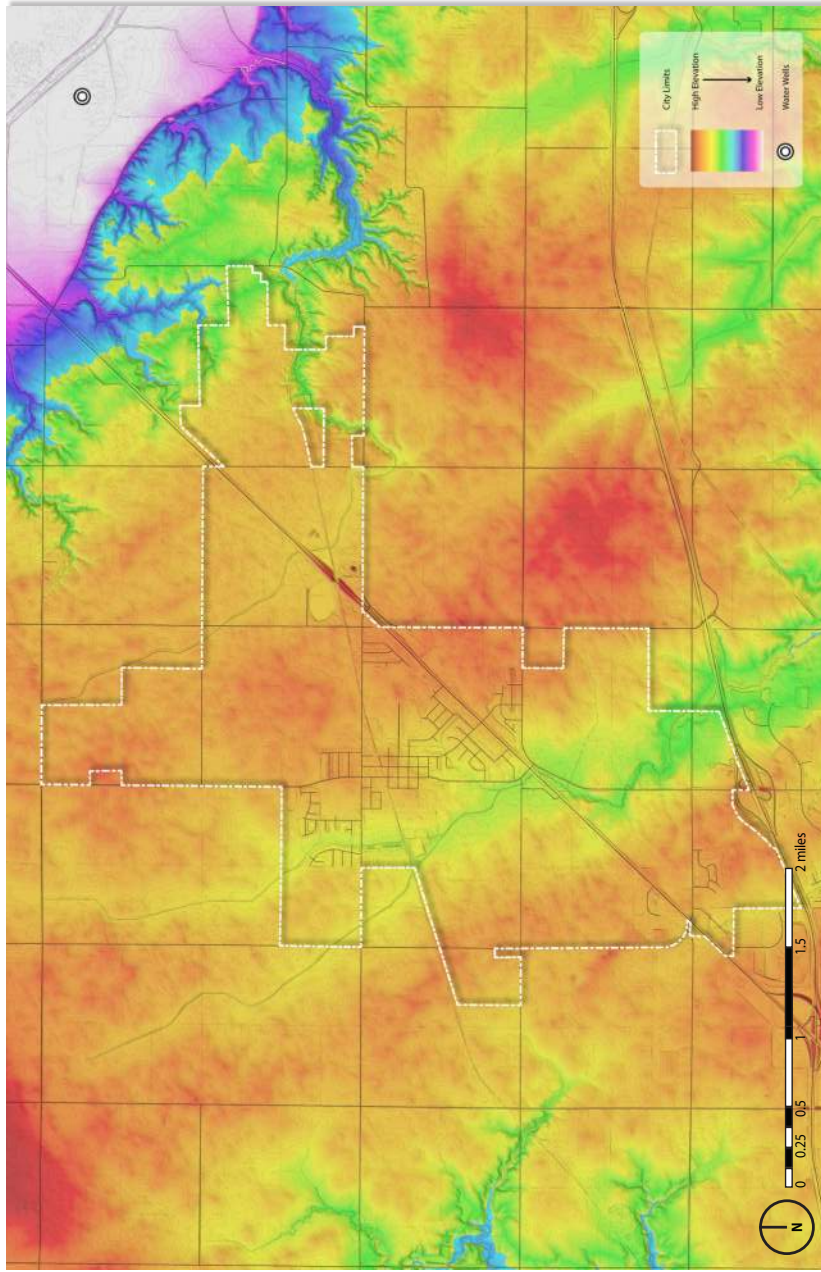
Landscape Elevation

Implications of Elevation

The map to the left displays elevation using warm and cool colors. The warm colors represent higher elevations and the cool colors represent lower elevations. The elevation of the land and how quickly it changes greatly impacts many landscape systems. Areas where the color changes quickly signifies a high slope percentage, which can be a major barrier to transportation access and development.

The colorization also helps reveal the direction of surface runoff. In general, runoff will move from areas with warmer colors to the nearest area with a cooler color. Valleys where runoff is collected are easily identified because they appear as cool-colored veins surrounded by warmer colors.

Wind is another landscape system affected by elevation because areas at higher elevations have greater exposure to wind conditions. This can be an asset during the warm summer months, but it becomes a liability during the cold winter months. The wind rose below represents wind data that was recorded at a nearby, regional airport.

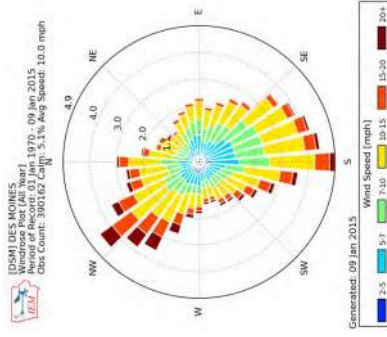


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Regional Watersheds & Drainage Patterns

Regional Watersheds

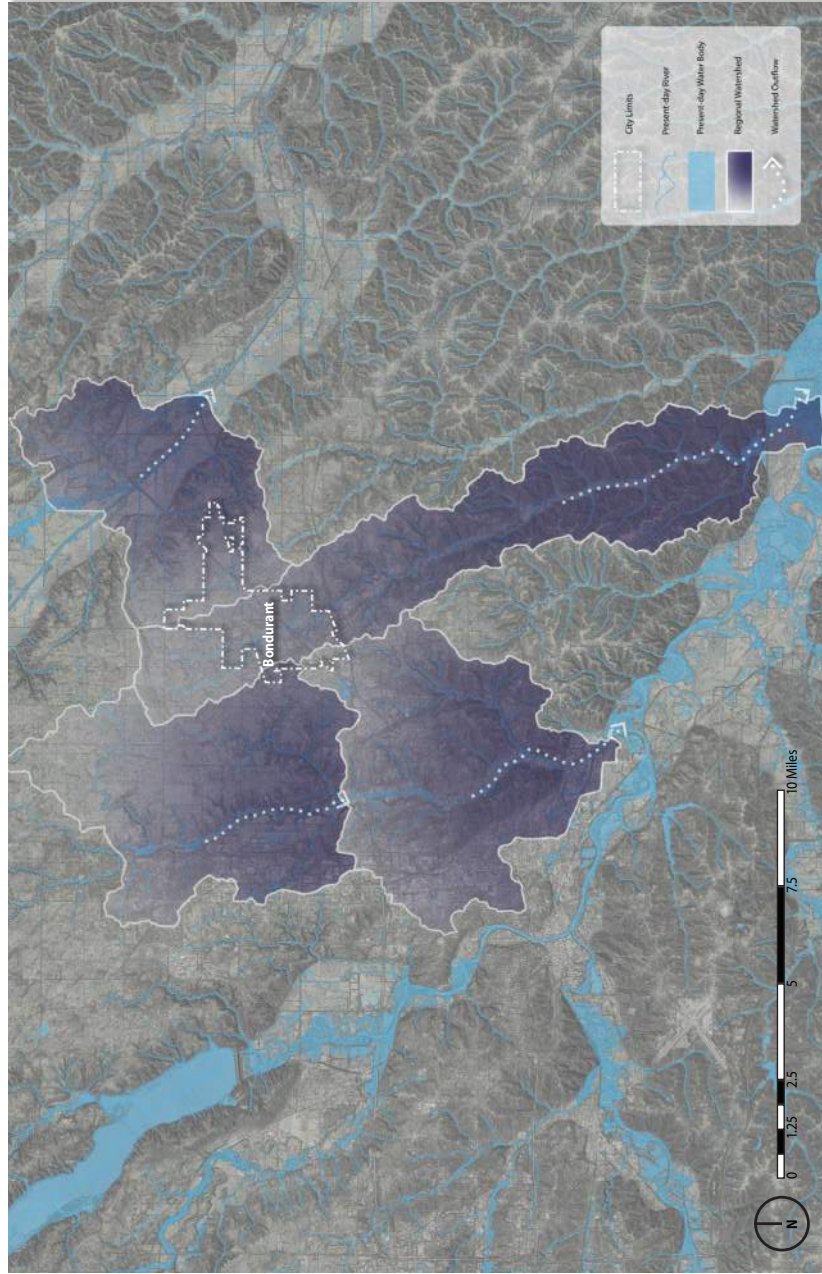
Watersheds are expanses of landscape that are confined by the slope and elevation of the terrain. When in plan view, watershed boundaries show the extent of a drainage area that is flowing to a single outlet. The watershed boundary is defined by the highest ridgelines circling around to the outlet where water flows out of the watershed. The boundary determines whether precipitation is directed into one watershed or an adjacent watershed. It is important to consider scale when identifying and defining watersheds because they are nested features that can be examined at many scales. For example, many sub-watersheds that are smaller than a city block fit together like puzzle pieces to make a watershed encompassing an entire city or more. This puzzle hierarchy builds upward to watersheds that cover thousands of miles, such as the Mississippi River watershed.

Where a community lies within its watershed determines what capacity it has to manage large watershed issues. For example, a community located in a lowland floodplain will have little capacity to reduce the amount of water draining toward it from upland areas. That said, communities always have the power to reduce their contribution to the total runoff production for the watershed.

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Regional Watersheds & Drainage Patterns

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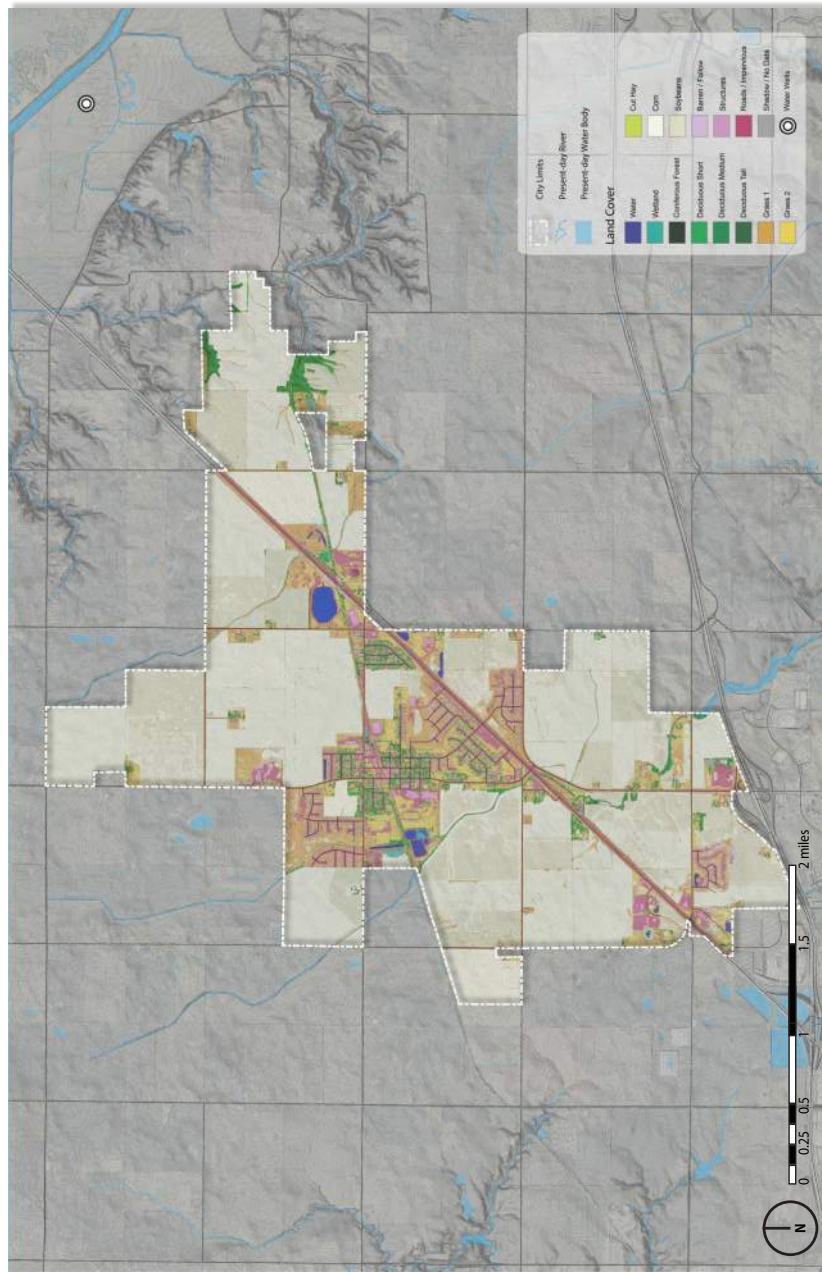
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Present-Day Land Cover

The land-cover map depicts both natural and man-made surfaces on the landscape based upon aerial imagery. The Iowa DNR created 15 unique classes for this dataset, including water, wetland, coniferous forest, deciduous forest (short, medium, tall), grass (type 1, type 2), cut hay, corn, soybeans, barren/fallow land, structures, roads/impervious, and shadow/no data. These classes are useful in clearly distinguishing different types of landscape features that would otherwise be difficult to discern from an aerial photograph.

For example, the balance of pervious and impervious coverage is clearly evident because impervious areas are represented as pink or magenta. Large expanses of impervious surfaces can cause significant drainage issues without proper planning, because they prevent the infiltration of precipitation and provide little to no friction to slow precipitation that is running off the surface.



Map Data Source: Iowa Department of Natural Resources, "Natural Resources Geographic Information Systems Library," accessed January 2015. <https://programs.iowadnr.gov/gislib/>

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Bondurant

Present-Day Land Cover

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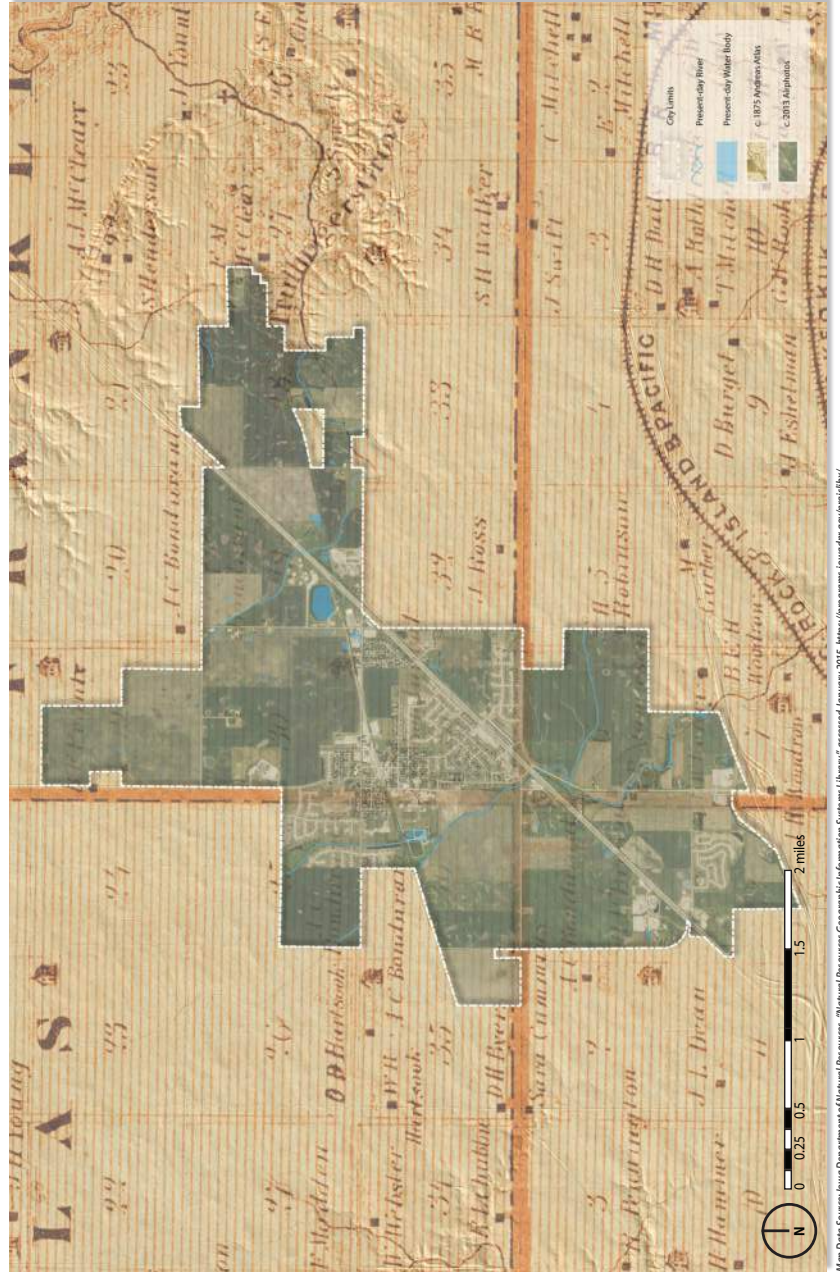
Iowa Department of Transportation Trees Forever ISU Landscape Architecture Extension ISU Extension Community and Economic Development

Summer 2015

Present-Day Vegetation

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

Interestingly, there are typically no tree markings in close proximity to most communities. Possible causes of this phenomenon are earlier harvesting of forest resources or the fact that community founders may have avoided wet areas. Today, most Iowa communities have a good amount of canopy coverage. Although trees may have been cleared during early settlement, the settlers would have replanted tree species that they found useful and pleasant, which eventually resulted in the establishment of urban forests. Those species would include trees that produce fruits and nuts, as well as others that provide wind protection and shade. These choices may explain the overplanting of maple species across the state. In addition to their pleasant appearance, most maples have a fast growth rate that quickly provides shade and wind protection, as well as the additional benefit of producing the sap required to make maple syrup.



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Summer 2015

39

Strategies for Using Native Plants

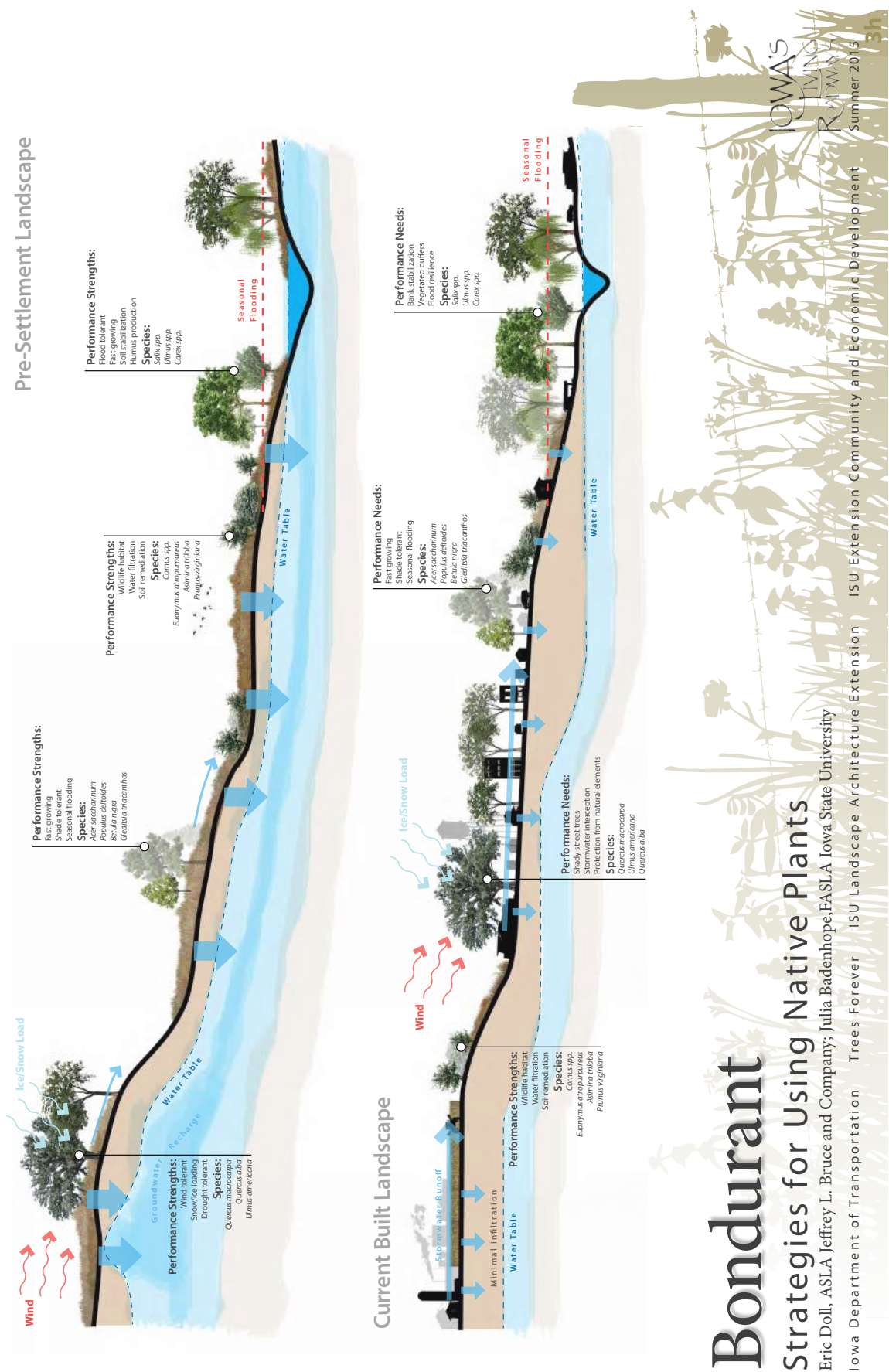
As open space disappears, it becomes increasingly necessary to look at our own landscapes as a refuge for biodiversity. Native organisms including plants, mammals, birds, amphibians, and insects create an intricate web of life. This is a wonderful natural orchestration with each species' life cycle highly dependent on the others.

For example: Spring wild flowers are pollinated by and provide nectar to tiny flies. These flies become food for early spring birds. The timing is orchestrated perfectly. It is not a coincidence that the local native plants have seeds and berries ready just when the birds need them. Bird droppings are the best way to get their seed dispersed. Plants and animals that have evolved together depend upon each other for survival.

Unfortunately, native plants, a vital part of the natural web of life, are being lost at an alarming rate. Removing a certain native plant from the landscape will likely remove the insect that feeds on that plant, which in turn may eradicate the bird that feeds on that insect. And this is just a simplified example. The loss of a species can quickly escalate to affect an entire ecosystem. To paraphrase Paul Ehrlich, author of *Native Plants: Relationship of Biodiversity to the Function of the Biosphere*, removing native species from an ecosystem is like taking rivets out of an airplane wing; it is impossible to know which one will be the last one that was holding the whole thing together.

There are real and practical pay-offs to encouraging a more biologically diverse city. Healthy, balanced ecosystems clean our water and our air. Pollinators are vital to food production.

There are also other profound reasons for using native plants in our cities. Aesthetically and spiritually, native plants enhance our sense of place. Native plants are one of the most visible elements in the local landscape. They are part of what makes a region unique. Learning and growing native plants promotes a deeper understanding and respect for the land. This information was developed by the Native Plant Society of northeastern Ohio.



Bondurant

Strategies for Using Native Plants

Eric Doll, ASLA, Jeffrey L. Bruce and Company; Julia Badenhop, FASLA, Iowa State University

Iowa Department of Transportation

Trees Forever

ISU Landscape Architecture Extension

ISU Extension Community and Economic Development

Summer 2015

Urban Forestry Conditions

The Urban Forest

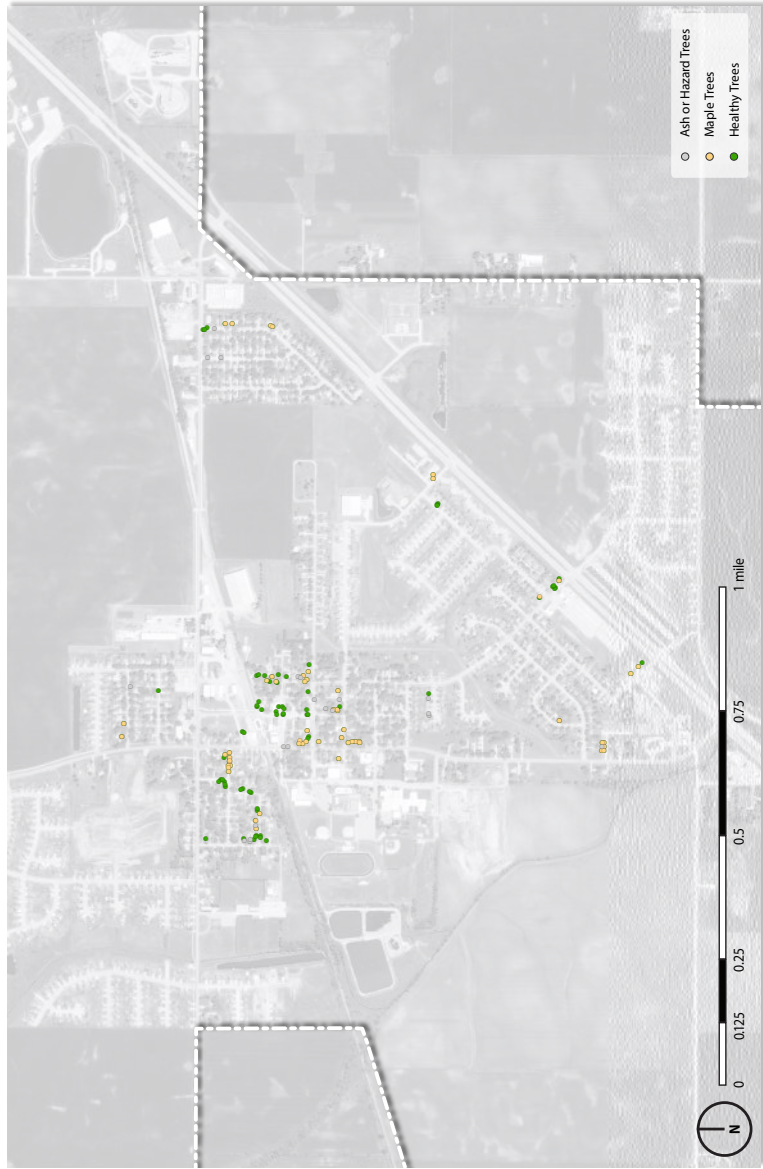
The map on the left depicts public right-of-way trees that have been surveyed by the Iowa Department of Natural Resources (Iowa DNR). The trees are divided into three categories: healthy trees, ash and hazardous trees, and maple trees. Hazardous trees were determined using the Iowa DNR's priority rating. The ratings range from one to seven with seven being a public safety issue. Trees with a rating of five or higher were classified as hazardous trees. Ash trees were combined with hazardous trees because of the ongoing spread of the emerald ash borer, an exotic beetle that has killed more than 10 million ash trees in the United States. Maple trees are given their own category because of extensive overuse across the state.

The bar graph depicts the breakdown of the tree species surveyed by the Iowa DNR. Take note of the large number of ash and maple trees. Creating biodiversity - that is, increasing the variety of trees - in the urban forest will make it more resilient should a new exotic bug or plant disease emerge.

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Iowa Department of Transportation Trees Forever ISU Landscape Architecture Extension ISU Extension Community and Economic Development Summer 2015

Transportation Assets and Barriers - Overview

Context

Transportation behavior - how and why people drive, walk, and bike where they do - is different in each community. These behaviors are influenced by regional and local elements such as highways, topography, sidewalk conditions, and destination. People have destinations in mind when they set out to go somewhere, but barriers such as difficult intersections, broken sidewalks, and lack of shade or visibility create negative experiences residents want to avoid. By talking to small groups of people and mapping destinations and desired connections, as well as barriers and other problems, we can get a good sense for what works well and what should be changed.

A total of 37 people attended the Bondurant focus groups, including 8 seniors, 5 active recreationists, 6 steering committee members, 10 parents, and 8 youth. Participants took photographs of 39 assets and 109 barriers in the community, for a total of 148 images.

Transportation Assets and Barriers - Analysis of Assets

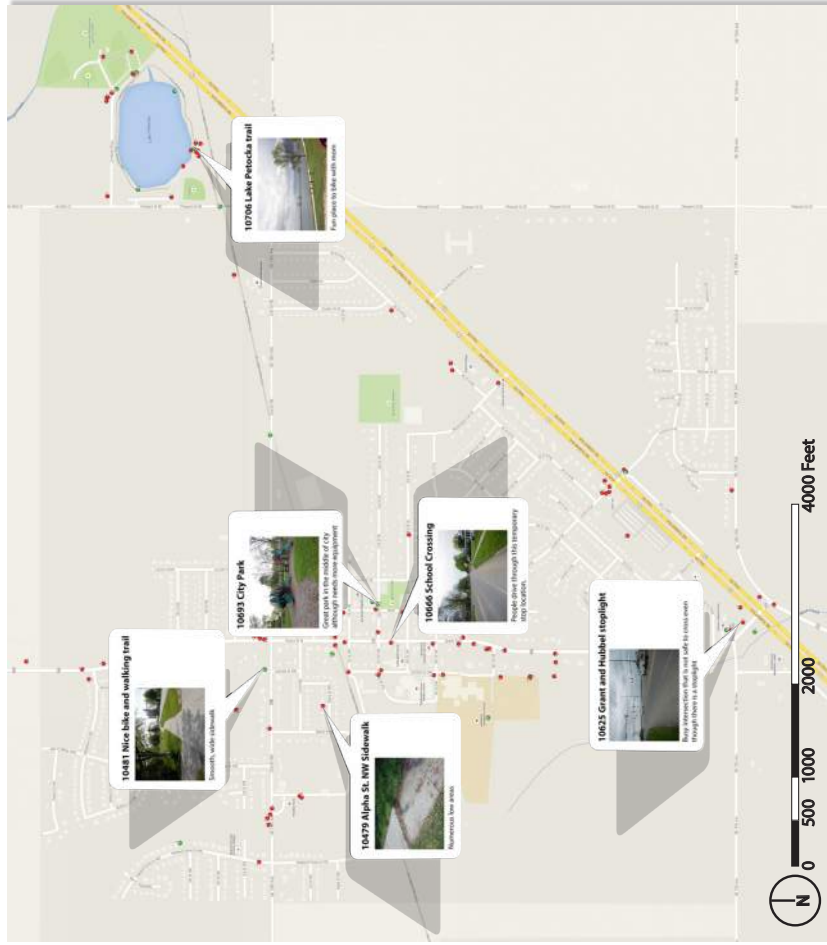
Transportation Assets

Transportation assets are facilities that provide access and create positive user experiences while people are traveling. Biking and walking are the most popular forms of exercise among Bondurant residents, and many of them take advantage of the **Chichaqua Valley Trail (1)**. Trail users enjoy the east section of the trail because it passes through a wooded area with a lot of wildlife - I saw a turkey popping its head up the other day.

The section of Chichaqua to the west recently opened, giving trail users access to Slater, the High Trestle Trail, and Des Moines trail system. Trail users like this newer section because it offers a “nice, open view.” Cyclists are excited about the fact that they can bike all the way to Des Moines. Participants in all the demographics groups mentioned the recently restored **depot trailhead (2)**, which offers parking, restrooms, a water fountain, seating, and shade. Residents value the existing **connector trails (3)** throughout town and would love to have more of them.

Lake Petocka (4) is a popular destination among all focus group demographics. Residents enjoy walking and biking on the Lake Petocka Trail. Active participants indicated that people go snowshoeing along the trail and ice fishing in the lake during the winter.

Seniors, parents, and youth enjoy **City Park (5)**, which has been expanded and will soon have a new shelter and a walking trail. According to parents and seniors, a lot of people walk their dogs in **Paine Heights (6)** and along **Lincoln Street SE (7)** from 1st Street SE to Meadow Brook South. The youth noted that they like to play at the **parks (8)** in town, as well as at **Anderson Elementary School (9)** and the **soccer fields (10)** behind the middle school. The **sports complex (11)** is also frequently used. The youth mentioned that the snowdrifts behind **Mallard Point (12)** are good for sledding.



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Depot Trailhead

"It's obviously very hazardous to try to cross on foot as well—bike, foot; any crossing of 65 other than in a vehicle is a difficult thing."

"There's a nice bike trail that comes from the high school, but as you come a little bit further south it's narrow rather than the 10-foot width, it gets narrow right near the library."

"I like [to walk in] the neighborhoods because I...see people I know and I like the trees and the shade...you see people and what they're doing to houses and flowers..."

Bondurant

Transportation Assets and Barriers | 1. Overview

Iowa Department of Transportation Trees Forever ISU Landscape Architecture Extension ISU Extension Community and Economic Development

IOWA'S
LIVING
RURALITY
Summer 2015

4a

Transportation Assets and Barriers - Analysis of Assets - Continued

Focus group participants identified several “future assets” - improvements that they know are going to take place in the near future. Perhaps the most significant of these future assets is the **sidewalk (13)** along Grant from Anderson Elementary to the Hwy 65 intersection. This addition will meet the needs of seniors, who would like a sidewalk to the grocery store, bank, and Casey’s.

A new **trail segment (14)** will extend from that intersection to Altoona, along Mud Creek. Another welcome addition will be the **pedestrian underpass (15)** at Hwy 65 and Lincoln Street, because it will provide a safe place for cyclists and pedestrians to cross Hwy 65 and connect Lincoln Estates and the Cove Neighborhood to the main part of town.

Desired Connections

Bondurant is a rapidly growing community, which creates a unique set of problems - namely, many of the neighborhoods are disconnected from each other and from the main part of the community. Participants in the parents and steering committee groups suggested connecting Paine Heights to Meadow Brook north by extending one of the neighborhood streets. Parents noted that Wolf Creek Neighborhood is isolated and needs to be more connected to the rest of the community. The steering committee group suggested connecting the community through an additional trail loop along NE 70th Ave and NE 88th Street.

Transportation Assets and Barriers - Analysis of Barriers

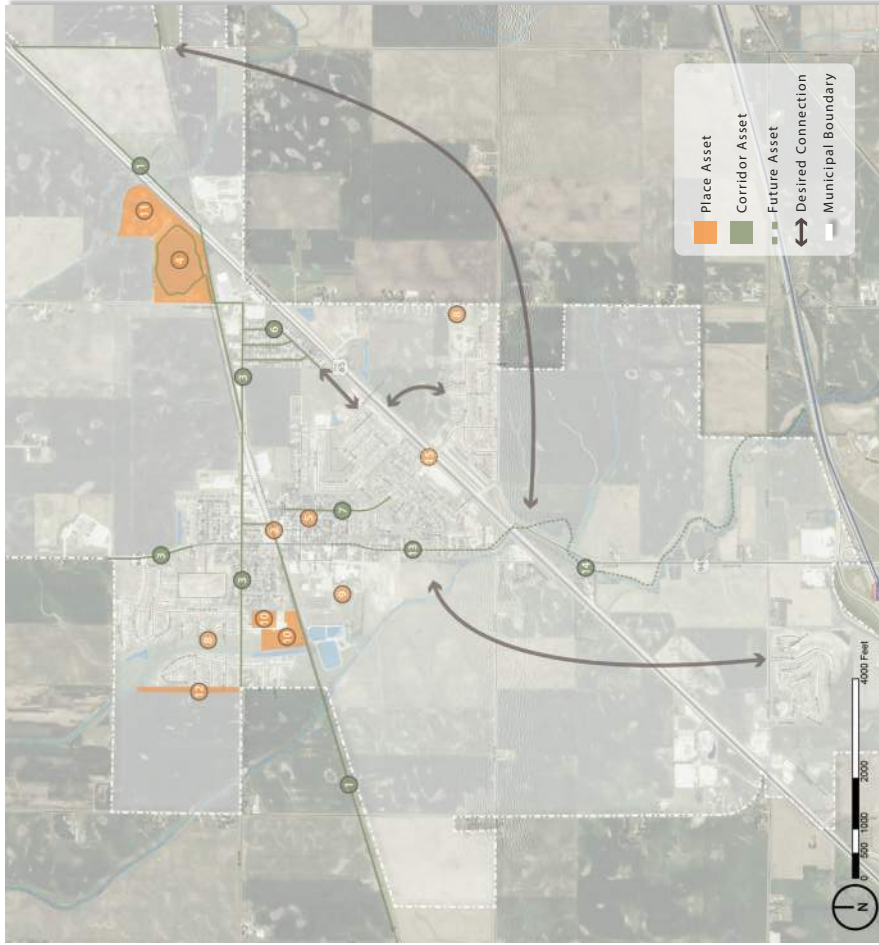
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Transportation use can be disrupted by physical or perceptual barriers that restrict access, create negative user experiences, and undermine desired qualities in the built environment. In Bondurant, **Hwy 65 (1)** is a significant transportation barrier. The highway intersects with three city streets. The intersection of **Hwy 65 and Lincoln (2)** is uncontrolled and difficult for all traffic to cross. A pedestrian underpass is planned that will alleviate the problem for pedestrians and cyclists.

The **Hwy 65 and 2nd (3)** intersection is confusing because there are three stop signs - one at the highway, and two where 2nd St intersects with NE 80th St and NE 78th Ave. This area is often congested because **2nd St (4)** is a busy corridor and is the only access road to Lake Petocka and the sports complex. The **Hwy 65 and Grant (5)** intersection is configured in the same manner as that of 2nd, but has a stoplight at the highway instead of a stop sign. Congestion is also a serious problem because the timing of the stoplight is off and **Grant (6)** is the major route to the middle and elementary schools. **NE 80th St (7)** also has a lot of traffic, as it is the main route to Bondurant from Interstate 80.

Parent, youth, active and steering committee participants noted that **Grant St (6)** at the elementary and middle schools is congested at school start and release times. This problem is exacerbated by the lack of sidewalks or bike lanes. Congestion also occurs at Tailfeather and **Grant (8)** before and after school.

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Bondurant

Transportation Assets and Barriers | 1. Analysis of Assets

Iowa Department of Transportation Trees Forever ISU Landscape Architecture Extension ISU Extension Community and Economic Development Summer 2015

IOWA'S
LIVING
RAILWAY

Transportation Assets and Barriers - Analysis of Barriers - Continued

narrow gravel road and people park on both sides, making it nearly impassable. They suggested that it be widened. Seniors and parents mentioned that the sidewalks in the old neighborhoods are not in the best shape.

Seasonal Weather Barriers

Seasonal weather such as wind, snow, and heavy rain affects vehicular, bicycle, and pedestrian traffic in Bondurant. **Blowing and drifting snow (11)** is a problem in certain parts of town because Bondurant is surrounded primarily by open fields. Drifting sites identified by participants include NE 78th Avenue on both the east and west sides of town, 2nd Avenue between downtown and Paine Heights, Hwy 65 between the intersection with Grant and the Metro Waste Authority. The Mallard Point Neighborhood is unprotected from the wind from the northwest, which causes snow to drift on the streets. Blowing snow causes whiteouts on NE 72 Street by Arbor Ridge and the high school.

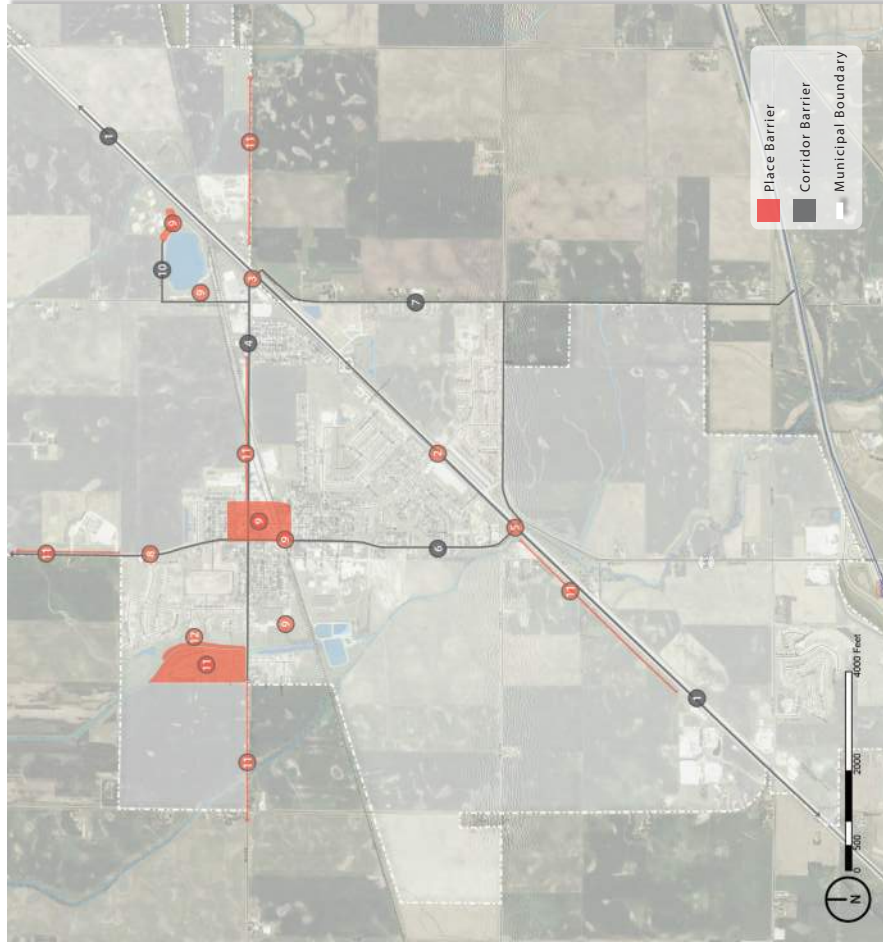
Heavy rains or snow melt causes water to pool in the parking lot at **Lake Petocka (9)** and gravel washes onto the trail, making walking and biking difficult. Homes on the east side of **Mallard Point Drive (12)** occasionally experience flooding in their basements caused by Mud Creek. Some participants noted that they are unable to use the Lake Petocka trail when it snows because it is not cleared.

Desired Enhancements

The parent, active recreationist, senior, and steering committee all named improving safety along Highway 65 as their top priority for enhancements. Participants in all of the groups would like safer pedestrian crossings at highway intersections. Widening 2nd and Grant Sts to alleviate congestion was also noted as important. The active group suggested building a through route parallel to Grant between NE 70th and NE 78th to absorb some of the traffic from Grant.

People in all of the focus groups noted that they would like benches along the Chichaqua Valley Trail. Parents mentioned improving the landscaping along the trail, and active participants would like it to be a multi-use trail that can accommodate cyclists, pedestrians, dogs, and strollers. The senior group suggested putting pedestrian lights along the trail that connects the east and west parts of the Chichaqua Trail, specifically where the trail intersects with 2nd Street, the intersection of Main and 2nd, and at the depot trailhead.

In general, residents would like to have more and better sidewalks throughout town, including at recreation areas such as City Park and Lake Petocka. Steering committee members would like to have the sports venues consolidated at the sports complex, which would also require additional parking. Youth and steering committee members want more recreational opportunities at Lake Petocka. Other desired improvements include more trees throughout town, larger parks, a splash pad, and a rec center with a pool.



Map Source: Iowa Department of Natural Resources, "Natural Resources Geographic Information Systems Library," accessed May 2015, <http://www.igis.iowa.edu/html/gibv/>.

Bondurant

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Iowa Department of Transportation Trees Forever ISU Landscape Architecture Extension ISU Extension Community and Economic Development

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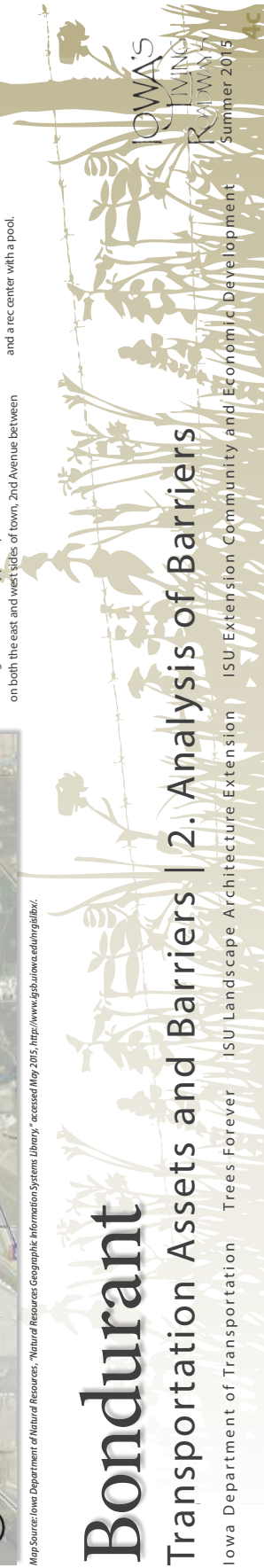
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Transportation Behavior and Needs - Preferred Commuting Routes

Preferred Commuting Routes

This map shows the commuting routes identified in the survey. The frequency that the routes are used is depicted by their thickness, with most frequently used routes being the thickest. The most common route among respondents is south on US 65 to the Interstate 80 interchange southwest of town, at which some commuters continue west on I-80, while some go east to 1st Ave S toward Altoona. Some respondents enter and exit town by going west on 2nd St/NE 78 Ave toward I-35. Commuters also use Grant St S quite often.

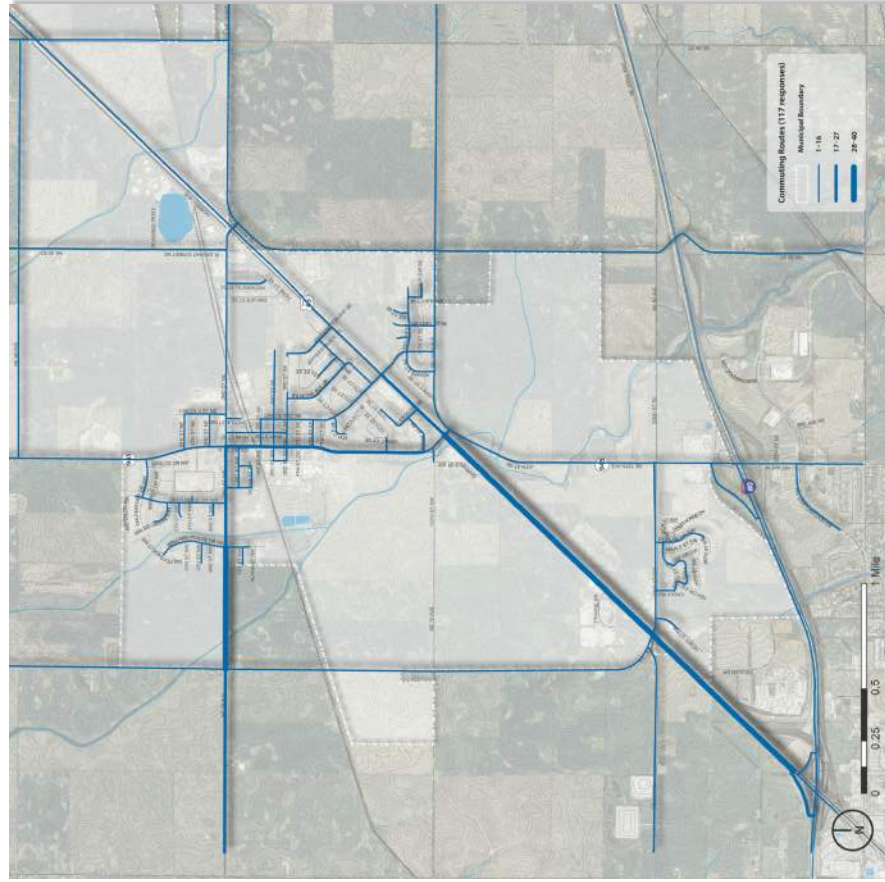
The circulation patterns that emerge when survey participants biking, running, walking, and commuting routes are overlaid are useful indicators of important areas where transportation enhancements may be employed. Such improvements could include reducing the conflicts between vehicular and pedestrian traffic by creating better visibility, defining crossing points, and improving signage.

The demographics of the respondents are somewhat different from those obtained from the 2013 American Community Survey Five-Year Estimate. The respondents average age is 47.3, while the 2013 estimated average age is only 28.1. The percentage of survey participants who are married or widowed is higher than that of the census data by almost 20%. The percentage of single and divorced participants is more than 20% lower than the census data show. The average household size of respondents is slightly lower than the estimated average.

Methodology

With assistance from Iowa State University's Survey and Behavioral Research Service, ISU visioning program staff conducted a survey to better understand the transportation patterns and behaviors, needs, and desires of Bondurant residents. Surveys were mailed to 400 randomly selected residents living in Bondurant and the surrounding area. To increase the response rate, the study was publicized through the local media and follow-up packets were mailed to nonrespondents.

With adjustments for ineligible respondents (e.g., incorrect addresses, no longer living in the community), the final sample size was 365. A total of 140 people returned surveys, for a response rate of 38.4%.



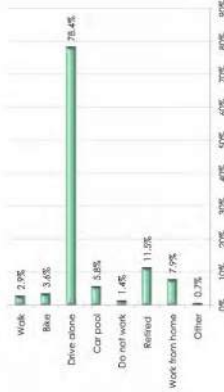
Map Source: Iowa Department of Natural Resources, "Natural Resources Geographic Information Systems Library," accessed May 2015, <http://www.igis.iowa.edu/reginfo/>. Route data derived from the 2015 Designing Livable Communities survey conducted by Iowa State University.

Bondurant

Transportation Behavior and Needs | 1. Preferred Commuting Routes

Iowa Department of Transportation Trees Forever ISU Landscape Architecture Extension ISU Extension Community and Economic Development

Respondents modes of commuting (139 responses)



The figure above shows the modes of transportation that Bondurant respondents use to get to work. More than 78% of survey respondents drive alone to work. Just over 11% are retired and nearly 8% work from home. Please note that some respondents indicated that they use more than one mode of transportation to get to work; therefore, percentages add up to more than 100%.

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Demographic information

	ISU Survey	US Census
Average age	47.3	28.1
Gender		
Female	31.5%	53.2%
Male	68.5%	46.8%
Marital status		
Married	77.5%	58.6%
Single/divorced	18.8%	40.4%
Widowed	3.6%	10.0%
Average household size	2.94	3.16

The demographics of the respondents are somewhat different from those obtained from the 2013 American Community Survey Five-Year Estimate. The respondents average age is 47.3, while the 2013 estimated average age is only 28.1. The percentage of survey participants who are married or widowed is higher than that of the census data by almost 20%. The percentage of single and divorced participants is more than 20% lower than the census data show. The average household size of respondents is slightly lower than the estimated average.

Methodology

With assistance from Iowa State University's Survey and Behavioral Research Service, ISU visioning program staff conducted a survey to better understand the transportation patterns and behaviors, needs and desires of Bondurant residents. Surveys were mailed to 400 randomly selected residents living in Bondurant and the surrounding area. To increase the response rate, the study was publicized through the local media and follow-up packets were mailed to nonrespondents.

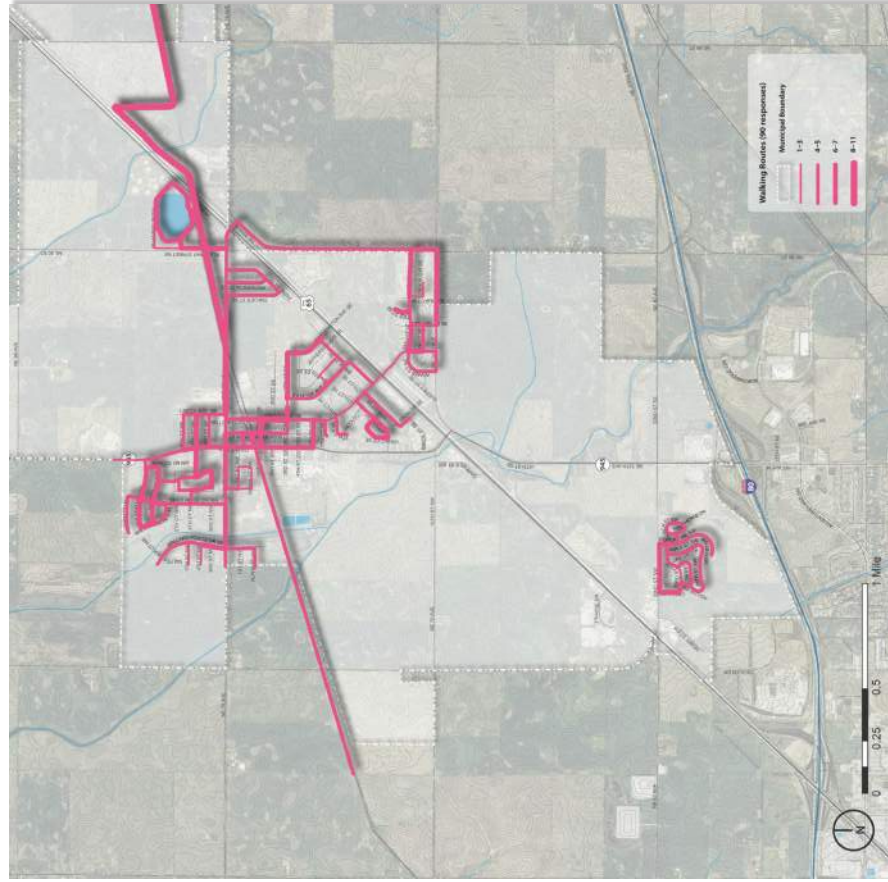
With adjustments for ineligible respondents (e.g., incorrect addresses, no longer living in the community), the final sample size was 365. A total of 140 people returned surveys, for a response rate of 38.4%.



Transportation Behavior and Needs - Preferred Walking Routes

Preferred Walking Routes

Ninety survey participants provided information about the walking routes they use, which are identified on the map. The frequency that the routes are used is depicted by their thickness, with most frequently used routes being the thickest. Clearly, the Chichaqua Valley Trail is the most popular venue for walking. A number of people also walk the trail around Lake Petocka. Second Ave NE is the most commonly used street for walkers, particularly between Deer Ridge Dr NW and Snyder St SE, presumably because it accesses the trail. The section of Grant St between the downtown area and the school complex is also heavily used. Participants walk the streets in the various neighborhoods in town, including Mallard Pointe and Arbor Ridge to the north; Paine Heights, Meadow Brook North and South, and the Cove in central Bondurant; and Wolf Creek, the southernmost neighborhood in town.



Preferred types of exercise (139 responses)



Walking is clearly the most popular form of exercise, at 65.5%. At 36%, biking is the second most popular activity. Almost 39% of respondents indicated that they engage in other activities for exercise. Just over 17% of respondents indicated that they do not exercise.

Of the 35% who do other activities, 9 people indicated that they work out at home; 5 people engage in sports such as baseball, softball, basketball, and tennis; and 6 people exercise by lifting weights. Some participants noted the physical labor they do at work.

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Bondurant

Transportation Behavior and Needs | 2. Preferred Walking Routes

Iowa Department of Transportation

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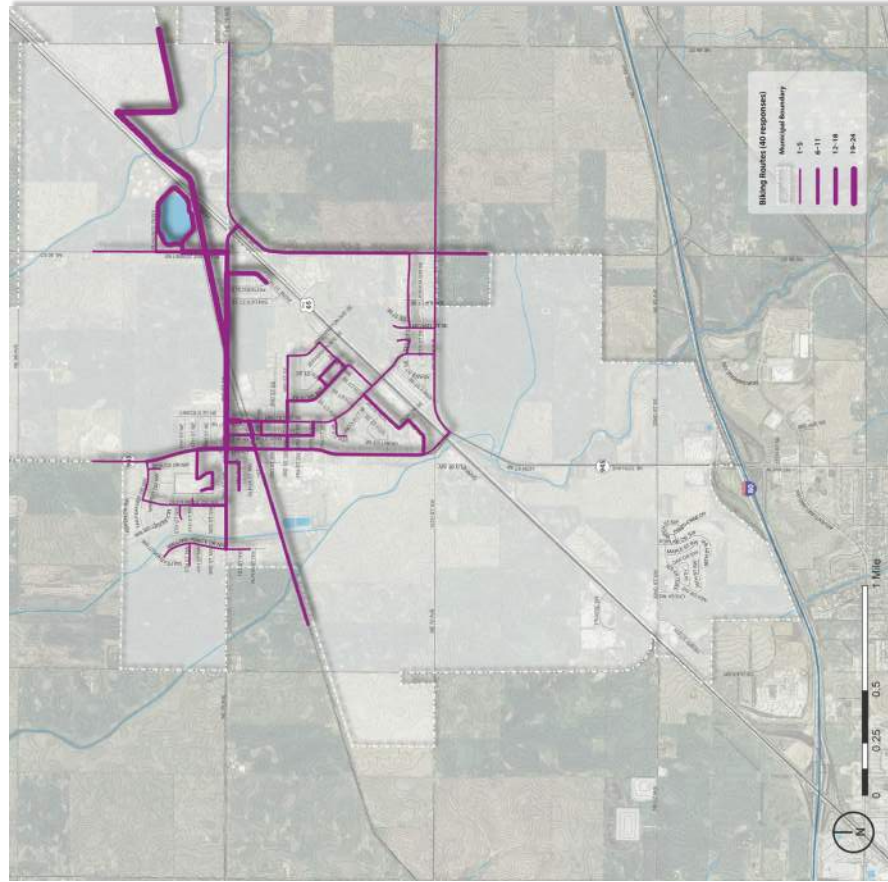
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Transportation Behavior and Needs - Preferred Biking Routes

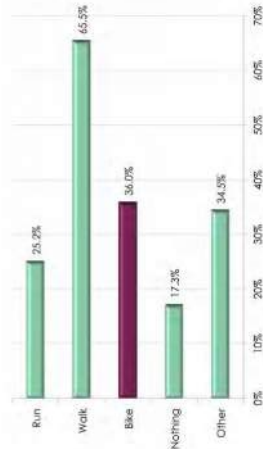
Preferred Biking Routes

Forty survey participants provided information about the biking routes they use, which are identified on the map. The frequency that the routes are used is depicted by their thickness, with the most frequently used routes being thickest. The cycling routes identified by respondents are similar to those provided by walkers, in that the Chichaqua Valley Trail and 2nd St NE are the most heavily traveled routes. Cyclists also ride the trail around Lake Petocka, as well as on neighborhood streets. Some cyclists ride north or south on NE 80th St. Others ride on Grant St and connect to NE 70 Ave or NE 72 St.



Map Source: Iowa Department of Natural Resources, "Natural Resources Geographic Information Systems Library," accessed May 2015, <http://www.gis.iuiowa.edu/rnglib/>. Route data derived from the 2015 Designing Livable Communities survey conducted by Iowa State University.

Preferred types of exercise (139 responses)



Thirty-six percent of respondents who answered this question indicated that they bike for exercise. The percentages for each activity are shown with the graph. Please note that some respondents indicated that they engage in more than one form of exercise; therefore, the percentages do not equal 100.

Preferred Biking Routes

Forty survey participants provided information about the biking routes they use, which are identified on the map. The frequency that the routes are used is depicted by their thickness, with the most frequently used routes being thickest. The cycling routes identified by respondents are similar to those provided by walkers, in that the Chichaqua Valley Trail and 2nd St. NE are the most heavily traveled routes. Cyclists also ride the trail around Lake Petocka, as well as on neighborhood streets. Some cyclists ride north or south on NE 80th St. Others ride on Grant St and connect to NE 70 Ave or NE 72 St.

Bondurant

Transportation Behavior and Needs | 3. Preferred Biking Routes

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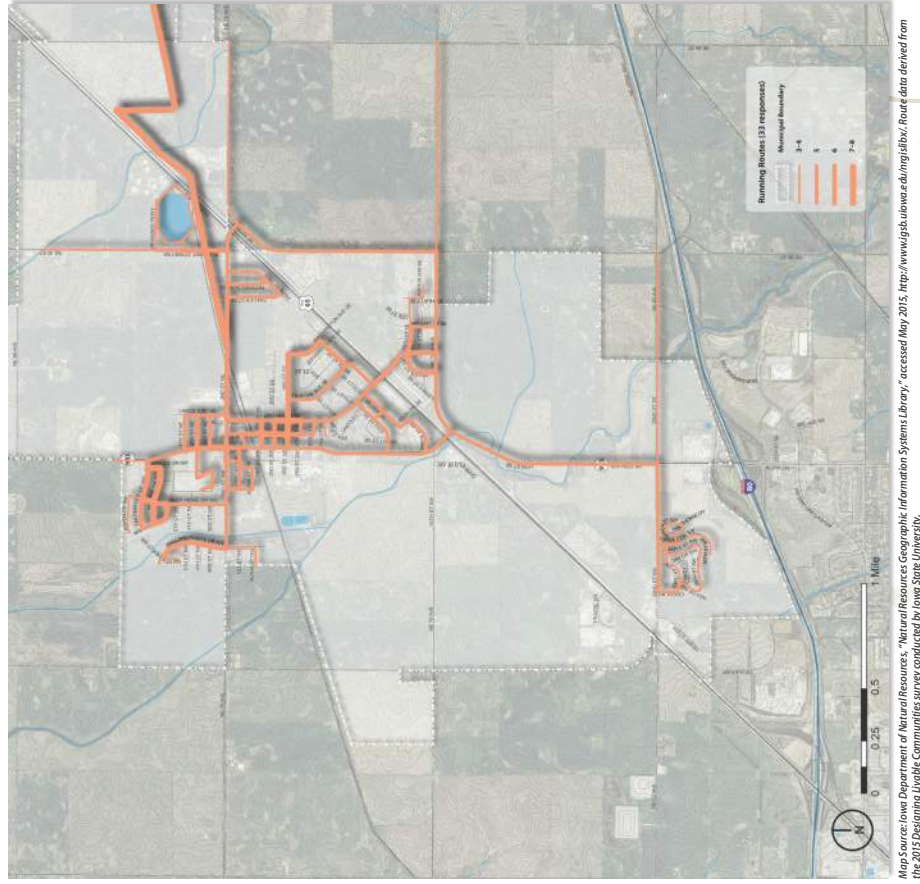
Summer 2015

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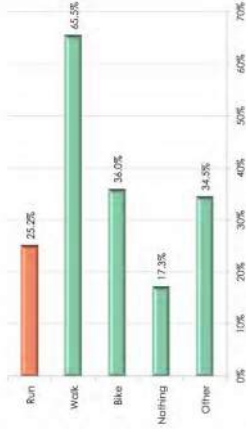
Transportation Behavior and Needs - Preferred Running Routes

Preferred Running Routes

Thirty-three survey participants provided information about the running routes they use, which are identified on the map. The frequency that the routes are used is depicted by their thickness, with the most frequently used routes being thickest. As with walkers and cyclists, survey participants who run do so most often on the Chichaqua Valley Trail. People also run the trail around Lake Petocka. Like the cyclists, runners go north or south on NE 80th St, as well as on Grant St to connect to NE 70 Ave or NE 72 St. Participants also run in the various neighborhoods in Bondurant. Some runners go south on NE 72nd St to connect with the Wolf Creek neighborhood.



Preferred types of exercise (139 responses)



More than 25% of participants who answered this question indicated that they run for exercise. The percentages for each activity are shown in the graph. Please note that some respondents indicated that they engage in more than one form of exercise; therefore the percentages do not equal 100.

Preferred Running Routes

Thirty-three survey participants provided information about the running routes they use, which are identified on the map. The frequency that the routes are used is depicted by their thickness, with the most frequently used routes being thickest. As with walkers and cyclists, survey participants who run do so most often on the Chichaqua Valley Trail. People also run the trail around Lake Petocka. Like the cyclists, runners go north or south on NE 80th St. as well as on Grant St. to connect to NE 70 Ave or NE 72 St. Participants also run in the various neighborhoods in Bondurant. Some runners go south on NE 72nd St. to connect with the Wolf Creek neighborhood.

Bondurant

Transportation Behavior and Needs | 4. Preferred Running Routes

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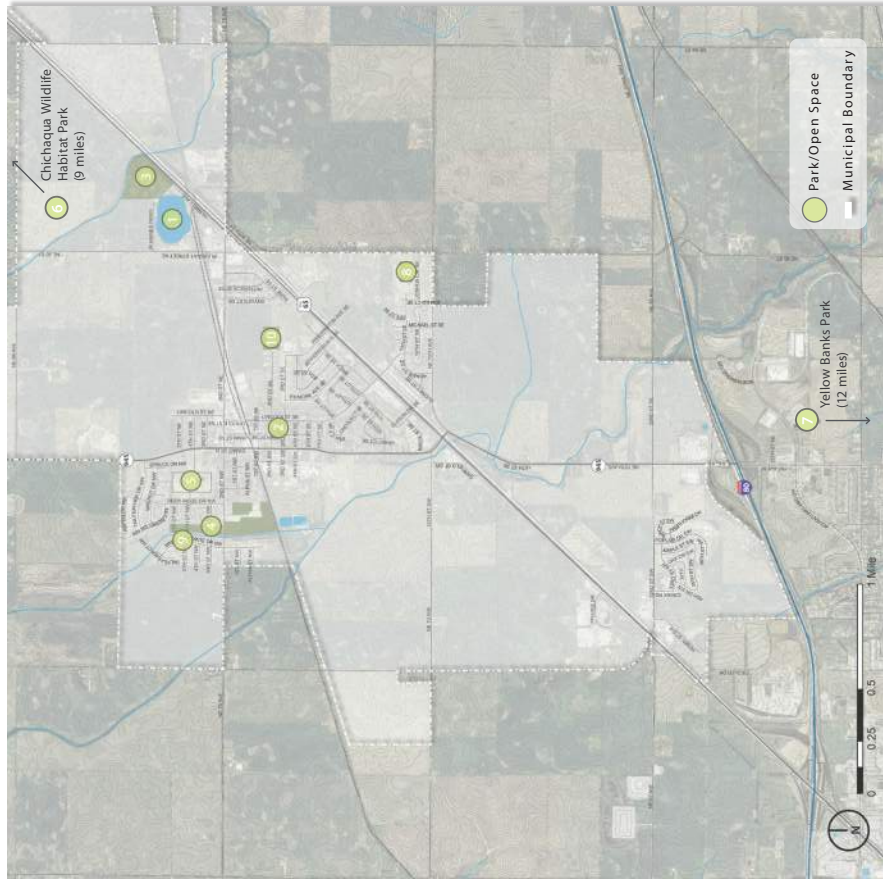
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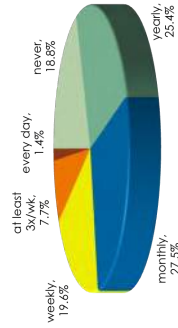
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Transportation Behavior and Needs - Preferred Parks

Lake Petocka is the most popular open space among respondents, followed by City Park. Ten respondents indicated that they go to the Bondurant Regional Sports Complex, 9 named Eagle Park, and 8 people named Renaud Ridge Park. Other parks in town that respondents visit include Wisteria Heights, Mallard Pointe, and the cemetery. Some people identified parks outside city limits. Of those, five people named Chichaqua Wildlife Habitat to the northeast and two named Yellow Banks Park to the south. Other parks outside Bondurant that people visit are The Ledges State Park, Thomas Mitchell State Park, Gray's Lake in Des Moines, Saylorville Lake, and parks in Altoona.



Frequency of Park Visits (138 responses)



Just over 80% of respondents who answered this question indicated that they visited a park during the past year. More than 27% of respondents visited a park at least once a month. Nearly 20% of survey participants visit a park weekly.



Preferred Parks

Park Name	Number of respondents
1. Lake Petocka	51
2. City Park	37
3. Sports Complex	10
4. Eagle Park	9
5. Renaud Ridge Park	8
6. Chichaqua Wildlife Habitat Park	5
7. Yellow Banks Park	2
8. Wisteria Heights Park	2
9. Mallard Pointe Park	1
10. Cemetery	1
11. Other regional parks	7

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Transportation Behavior and Needs | 5. Preferred Parks

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Transportation Behavior and Needs - Enhancement Priorities

Importance of transportation enhancement by type

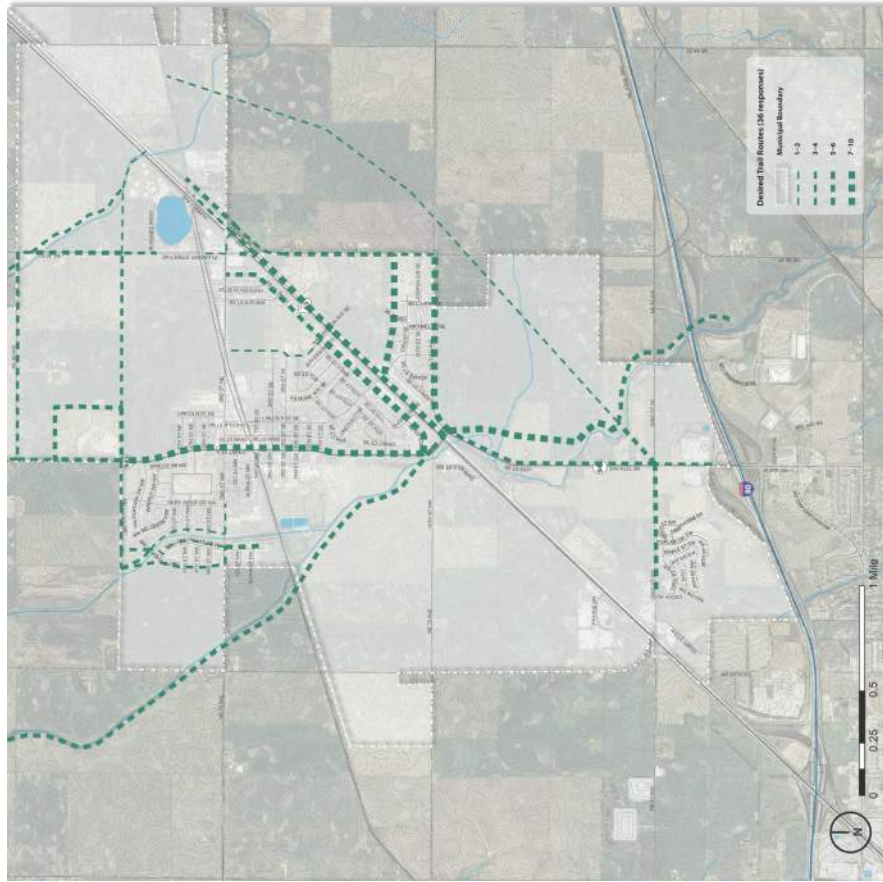
On a scale of 1 to 5, with 5 being the most important, participants in Bondurant ranked making routes to school safer at most important, with a mean value of 4.07. Other transportation enhancements that address pedestrian mobility, health, and safety are also considered important. Environmental and aesthetic issues are significantly less important among respondents, with mean values all below 3.0. These findings are consistent with the views expressed by focus group participants during the Transportation Assets and Barriers workshop held in April 2015.

Willingness to implement change (76 responses)

Most participants are willing to contribute their time and talent (73.7%), while just over 22% would contribute both time and talent and financial help.

Desired Trail Routes

Thirty-six respondents mapped their desired trail routes, which are identified on the map. The frequency that the routes are used is depicted by their thickness, with the most frequently used routes being thickest. The most popular route among those who answered this question would be a trail along Grant St, particularly south of downtown connecting to NE 70 Ave or NE 72 St, and north of the Arbor Ridge development. Some respondents would also like a trail along US 65 between 2nd St NE and Grant St. A few people also suggested a trail on N# 80th St going north from Jr Haines Pkwy.



Map Source: Iowa Department of Natural Resources, "Natural Resources Geographic Information Systems Library," accessed May 2015, <http://www.igdl.iowa.edu/igdl/loc/>. Route data derived from the 2012 Designing Livable Communities Survey conducted by Iowa State University.

Bondurant

Transportation Behavior and Needs | 6. Enhancement Priorities

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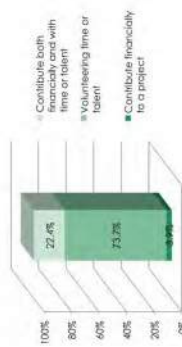
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Transportation Inventory and Analysis

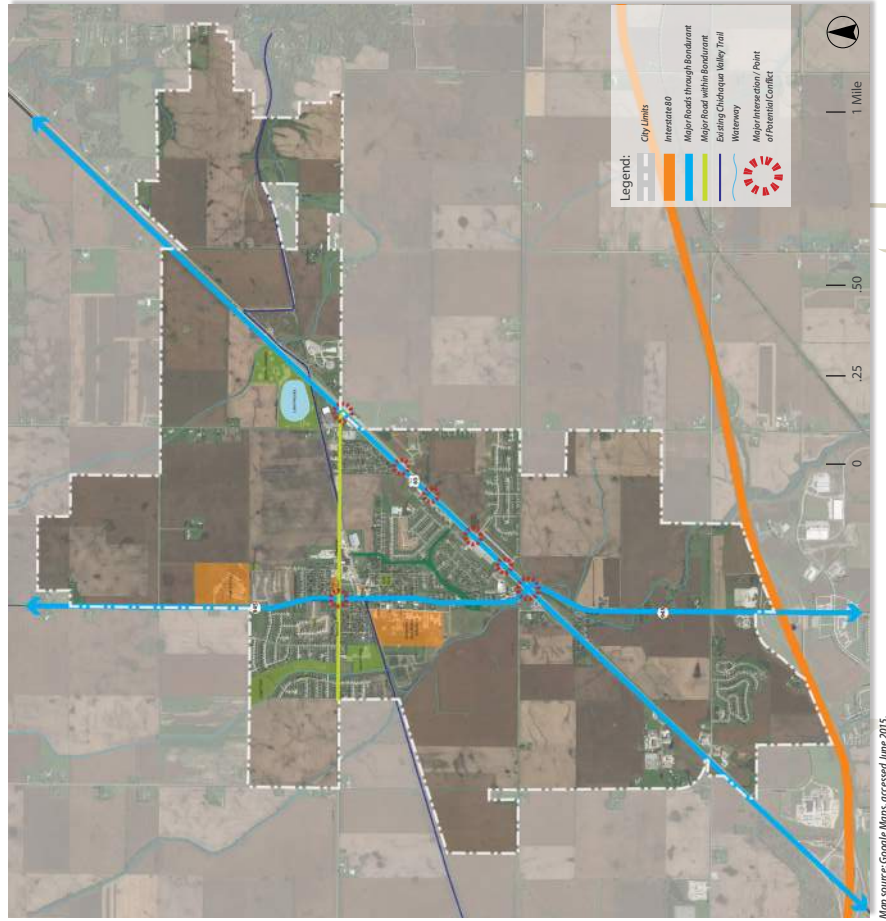
Knowledge of the transportation systems in and around the community of Bondurant is critical for sustainable transportation enhancement planning. Transportation systems include paved and unpaved roadways, pedestrian and bike trails, waterways, and railroad lines.

The Bondurant visioning design team worked with Iowa Department of Transportation (IDOT) personnel and local officials to identify past, present, and future transportation related restraints and opportunities that could potentially affect project areas.

The vast majority of travelers who either pass through or enter Bondurant do so in personal vehicles on Highway 65, which connects to Interstate 80. This 4-lane highway has one major intersection for entering Bondurant at Grant Street, which is also County Road 945. There are multiple secondary intersections that can be quite dangerous for vehicles and pedestrians alike, especially when semi traffic is involved. A plan exists to create a pedestrian tunnel below Highway 65 at the intersection of Lincoln Street and studies are underway to investigate how best to cross the highway at Grant Street with the proposed Gay Lea Wilson Trail. Both of these crossings will be tremendous resources to residents living east of Highway 65 who are currently segregated from the rest of town by this busy, high-speed roadway.

Plans for changes to roadways in and around Bondurant are minimal. There have been conversations within Polk County Engineering about the alignment of County Road 945 south of Highway 65. The current layout of this roadway creates a congested intersection at the highway that is often overwhelmed by traffic. The realignment would push this roadway further southeast and allow for more space between the county road and Highway 65. Nothing is scheduled for this work at this time, but as discussed in the visioning transportation analysis meeting, coordinating this effort with bridge/culvert rehabilitation efforts along Mud Creek is of the utmost importance. The city is also looking at reconfiguring its busiest internal intersection, which is the crossing of Grant Street and 2nd Street. This is still years down the road, but this intersection already gets very congested at peak hours and will only get worse as Bondurant continues to grow. This intersection not only serves vehicles, but a high number of pedestrians as well. Balancing the safety of these two user groups when developing this intersection in the future is key.

The Chicago Great Western Railway line previously cut through the center of Bondurant. The railway bed has since been converted to the Chichaqua Valley Trail, which is a wildly popular trail system that connects Bondurant to other communities both northeast and southwest of town. The Bondurant Trailhead, which is also called The Depot, is located just north of Bondurant's downtown area and provides a great connection for pedestrians interested in using the trail. A number of other side streets and neighborhoods provide walking, biking, and running opportunities for community members, but the connectivity of these areas to the trail system is inconsistent. Some areas are missing sidewalk connections and others are located so far from other portions of the community, they become islands. The city's trails master plan proposes multiple new segments of trail that will greatly improve connections between these areas and provide a safer pedestrian experience for all users.



Map source: Google Maps, accessed June 2015.

Bondurant

Transportation Inventory and Analysis

Landscape Architect and Intern: RDG Planning & Design - Bruce Niedermeyer, ASLA and Sara Davids
Iowa Department of Transportation - Trees Forever - ISU Landscape Architecture Extension - ISU Extension Community and Economic Development

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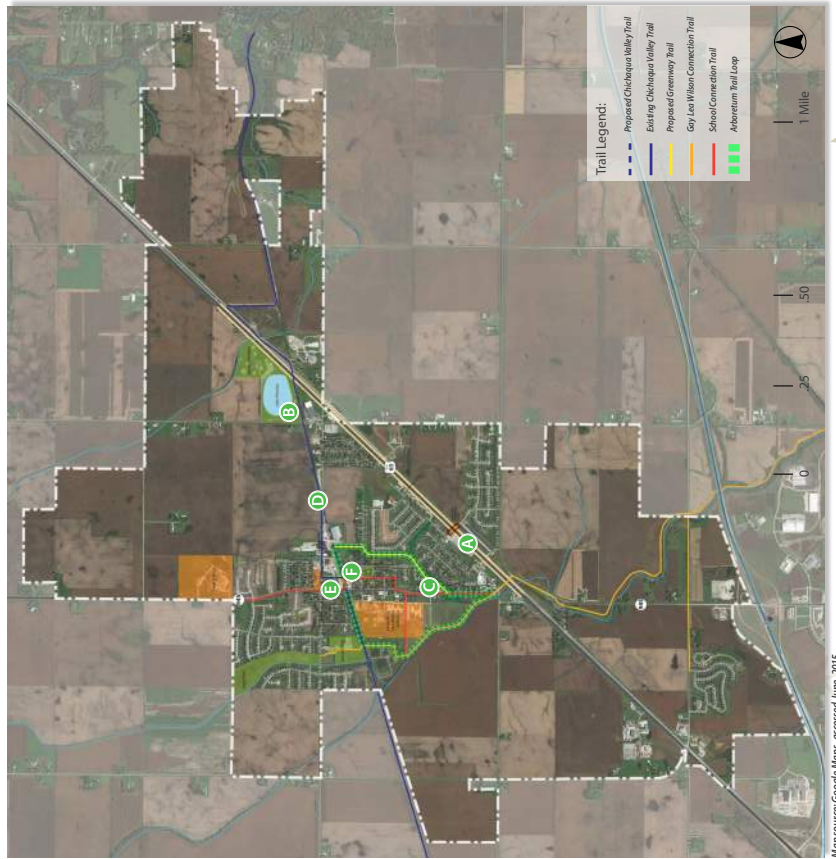


Concept Overview

The community concept plan merges the different ideas, goals and visions for improving Bondurant. The enhancements illustrated on this plan, and in more detail on the following boards, are intended to recognize and reinforce important community features and make Bondurant more enjoyable for all residents and visitors. Steering committee members and others in the community outlined potential ideas, objectives and projects for the community. The goals that the committee ranked as the highest priority and that the design team has addressed in this plan include:

- Iowa Highway 65 Beautification
- Improvements to Lake Petocka
- Increased connectivity throughout Bondurant
- Implementation of consistent community landscaping
- Creation of way-finding signage
- Enhancements to Bondurant's Downtown District

These ideas, which are illustrated in the plan and perspective drawings, work together to strengthen local economy, provide additional recreational opportunities, improve water quality for the community and elevate aesthetics throughout Bondurant. When implemented, these concepts will work to reinforce each other. For instance, creating a cohesive way-finding signage system increases community connectivity, and installing landscaping along the trail connects visually to improvements in the downtown district and at Lake Petocka. These projects are great opportunities for building a strong, vibrant future for Bondurant.



Map source: Google Maps, accessed June, 2015.

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Bondurant

Concept Overview

Landscape Architect and Intern: RDG Planning & Design - Bruce Niedermeyer, ASLA and Sara Davids

Iowa Department of Transportation - Trees Forever

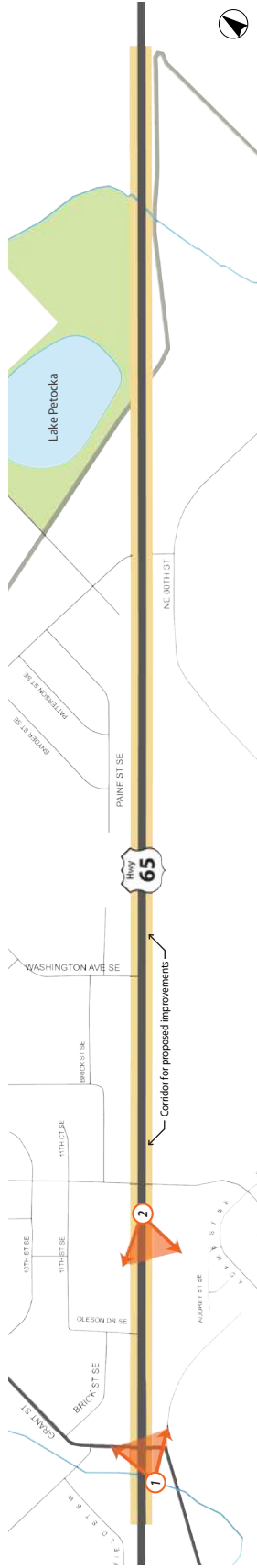
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Iowa Highway 65 Enhancements

Highway 65 is the most heavily traveled roadway through Bondurant. This is a space where first impressions are created for visitors and passersby and should be improved in a manner that reflects the community. Planting native grasses and wildflowers that are approved by the IDOT will provide a dynamic and beautiful entry portal that will also attract wildlife – especially native pollinators such as bees and butterflies. Providing a mix of native deciduous and coniferous trees outside the highway right-of-way will allow for screening of selected properties and will alleviate “highway hypnosis,” which occurs when drivers are lulled to sleep by an unchanging landscape adjacent to roadways. Initial improvements should be focused around busy intersections where travelers frequently stop. This will allow actions to be recognized and hopefully inspire other residents to become involved with community improvements.

This project area is also adjacent to the planned new entrance feature with the ‘Porch Swings and Fireflies’ theme. This close proximity allows these two separate projects to capitalize on support produced by one another and visually become one set of improvements that benefits the entire community. The costs associated with this project make it a very feasible first step in the implementation process. Potential partnership with Polk County should also be investigated to help with the planting and maintenance of vegetation.



Highway 65 Corridor

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Highway 65 and Grant Street intersection looking northeast



Before



Native planting and screening along Highway 65 looking southwest



Before

Bondurant

Iowa Highway 65 Enhancements

Landscape Architect and Intern: RDG Planning & Design - Bruce Niedermeyer, ASLA and Sara Davids

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Iowa Highway 65 Enhancements - Opinion of Probable Cost

Description	Quantity	Unit	Unit Cost	Extended Amount
GENERAL REQUIREMENTS				
Traffic Control	1	LS	\$5,000.00	\$ 5,000.00
LANDSCAPE				
Soil Preparation	21	AC	\$950.00	\$ 19,950.00
Wildflower/Native Grass Seeding	21	AC	\$1,600.00	\$ 33,600.00
Deciduous Shade Trees - 2" Caliper	150	EA	\$350.00	\$ 52,500.00
Deciduous Ornamental Trees	80	EA	\$250.00	\$ 20,000.00
Coniferous Tree	100	EA	\$300.00	\$ 30,000.00
3 Yr. Maintenance	1	LS	\$10,000.00	\$ 10,000.00
SUB-TOTAL - Base Bid				\$ 171,050.00
MOBILIZATION/GENERAL CONDITIONS - 5%				\$ 8,552.50
CONTINGENCY - 15%				\$ 25,657.50
DESIGN AND ENGINEERING - 10%				\$ 17,105.00
Inflation - 3%				\$ 5,131.50
CONSTRUCTION COST				\$ 227,496.50

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Lake Petocka Park Improvements

Lake Petocka is a gem of a park for Bondurant and is home to many attractions, including the lake itself, the trail, shelters, a playground, sand volleyball courts and multiple ball fields. Even with these amenities, there is still room for improvement and the visioning committee saw this opportunity as one of the highest priorities. The southwest corner of the site is currently home to a ball field. The design team proposes relocating this field to be adjacent to the other fields on site and creating an amphitheater/performance space. This facility, paired with improvements to parking and other park access would allow Lake Petocka to be a regional destination for entertainment events and also serve as the new home for events that already occur in Bondurant. Other proposed improvements include creating a beach and canoe launch at the lake's western shore, constructing a fishing dock, altering vehicular access for the playground/shelter in order to focus on pedestrian safety, installation of sculptures along the trail, and implementation of the master plan for the sports complex. This work has great potential to provide positive impacts for Bondurant's local economy and will be a valuable resource for not only Bondurant citizens, but people/organizations across the state, especially frequent users of the Chichaqua Valley Trail.

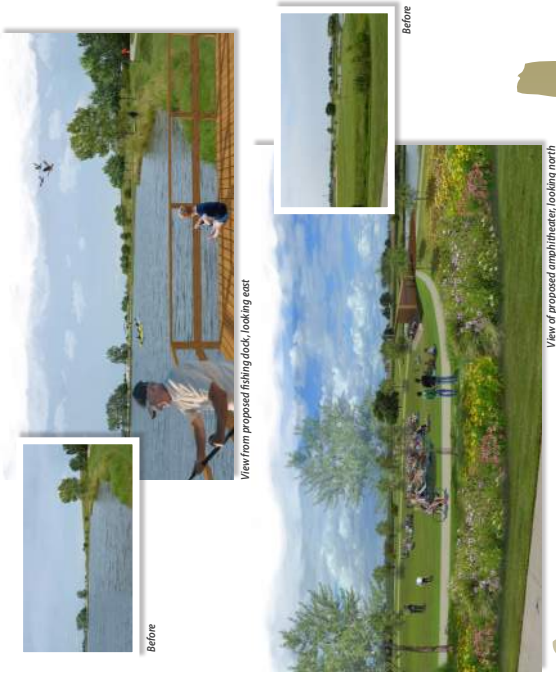
The largest unknown factor regarding what is shown on the plan is whether land will be able to be acquired for the expansion of the sports complex to the northwest. Availability and financial implications need to be studied to further understand the potential of this. Whether that land is acquired or not, this project can easily be completed in phases. One of the first tasks would have to be relocating the ball field to make way for the community amphitheater. Once that's completed, the rest of the work could be phased in in a number of different ways. The exact order would need to be decided by project leaders and a professional design team.

The pricing provided for the sports fields is for simple park-style athletic fields. If this space is desired to be a top-of-the-line sports complex, the budget would need to be increased.



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Bondurant

Lake Petocka Park Improvements

Landscape Architect and Intern: RDG Planning & Design - Bruce Niedermeyer, ASLA and Sara Davids

Iowa Department of Transportation

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Lake Petocka Park Improvements - Opinion of Probable Cost

Description	Quantity	Unit	Unit Cost	Extended Amount
UNKNOWN				
Property Acquisitions/Easements	NA			
Sculptures along art-walk	NA			
DEMOLITION				
Remove existing SW ball field, dugouts and bleachers	1	LS	\$10,000.00	\$ 10,000.00
HARDSCAPE				
H.M.A. Trail + Base Prep	40,850	SF	\$2.75	\$ 112,337.50
H.M.A. Road/Parking + Base Prep	224,280	SF	\$3.00	\$ 672,840.00
STRUCTURES				
Stage & Overlook at Amphitheater	1	LS	\$500,000.00	\$ 500,000.00
Shelter w/ restrooms	1	LS	\$225,000.00	\$ 225,000.00
Shelter w/o restrooms	1	LS	\$75,000.00	\$ 75,000.00
Concessions building w/ restrooms	1	LS	\$250,000.00	\$ 250,000.00
Canoe Launch	1	LS	\$25,000.00	\$ 25,000.00
Fishing Dock	1	LS	\$30,000.00	\$ 30,000.00
Playground	1	LS	\$50,000.00	\$ 50,000.00
LANDSCAPE				
Amphitheater Grading	1	LS	\$10,000.00	\$ 10,000.00
Lawn/Seed Mix & Prep	50,000	SY	\$0.65	\$ 32,500.00
Deciduous Shade Trees - 2" Caliper	45	EA	\$350.00	\$ 15,750.00
Coniferous trees	20	EA	\$300.00	\$ 6,000.00
Soil Preparation	1.5	AC	\$950.00	\$ 1,425.00
Wildflower/Native Grass Seeding	2	AC	\$1,600.00	\$ 2,400.00
SPORTS FIELDS				
Baseball/Softball (no dugouts)	5	EA	\$30,000.00	\$ 150,000.00
Soccer	4	EA	\$15,000.00	\$ 60,000.00
Sand volleyball court	2	EA	\$5,000.00	\$ 10,000.00
SUB-TOTAL - Base Bid				\$ 2,238,252.50
MOBILIZATION/GENERAL CONDITIONS - 5%				\$ 111,912.63
CONTINGENCY - 15%				\$ 335,737.88
DESIGN AND ENGINEERING - 10%				\$ 223,825.25
Inflation - 3%				\$ 67,147.58
CONSTRUCTION COST				\$ 2,976,875.83

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Community Connectivity

Bondurant's existing trail system paired with the enhancements shown here provide great opportunities for creating pedestrian access to sites in and around town. The already proposed Gay Lea Wilson Trail and School Connection Trail have potential to link to what the design team is proposing as the Greenway Trail. This 0.75-mile trail would be located in a drainage district already owned by the city. Within this drainage district, there is currently a concrete flume conveying storm water to Mud Creek, which then continues south of town. This style of water conveyance can be a problem and the design team recommends retrofitting this scenario to become a bioswale with native plantings, as illustrated in the section-cut provided. This proposed condition, which is recommended by the IDNR, conveys water, but also allows it to infiltrate through vegetation and amended soil, which reduces algae growth, bacteria hazards, and mosquito reproduction, while providing a beautiful habitat for native creatures. This bioswale would also reduce erosion, both at the swale and downstream.

Since the lagoons west of Bondurant's elementary and middle schools are no longer serving a purpose, there is an opportunity to change the topography in this area to provide flexible floodwater storage along Mud Creek. Excess soil could be used to create a sledding hill - a highly sought after amenity during winter months. Other future plans include the addition of a much-needed pedestrian tunnel under Highway 65 along Lincoln Street and a trail connection from the Wolfe Creek Development to the proposed Gay Lea Wilson Trail.

Development of these projects should take into consideration the schedules of other projects as well. For instance, the underpass slated to be built under Highway 65 should be constructed before new vegetation is planted in this area. There are many funding opportunities related to the treatment of stormwater as is being proposed in these plans, especially when there are benefits to downstream properties and communities. State and federal funding should be deeply investigated for this type of work. When preparing to build the Greenway Trail, a professional landscape architect/engineer should be involved in order to best-propose the exact elevations of the trail to ensure proper flood water storage and minimal maintenance concerns.



Community Connectivity

Bondurant's existing trail system paired with the enhancements shown here provide great opportunities for creating pedestrian access to sites in and around town. The already proposed Gay Lee Wilson Trail and School Connection Trail have potential to link to what the design team is proposing as the Greenway Trail. This 0.75-mile trail would be located in a drainage district already owned by the city. Within this drainage district, there is currently a concrete flume conveying storm water to Mud Creek, which then continues south of town. This style of water conveyance can be a problem and the design team recommends retrofitting this scenario to become a bioswale with native plantings, as illustrated in the section-cut provided. This proposed condition, which is recommended by the IDNR, conveys water, but also allows it to infiltrate through vegetation and amended soil, which reduces algae growth, bacteria hazards, and mosquito reproduction, while providing a beautiful habitat for native creatures. This bioswale would also reduce erosion, both at the swale and downstream.

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Bondurant

Community Connectivity

Landscape Architect and Intern: RDG Planning & Design - Bruce Niedermeyer, ASLA and Sara Davids

Iowa Department of Transportation Trees Forever

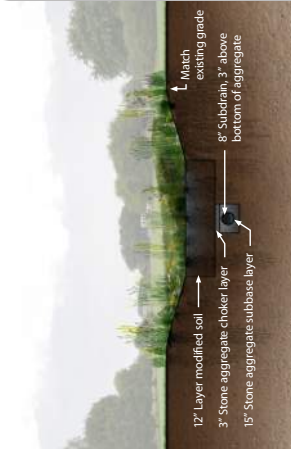
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Summer 2015



Before



Bioswale section with native plantings, design concept from the Iowa Stormwater Manual (IDNR)



Before



Proposed sledding hill and trail, looking northeast



Bioswale with native plantings and adjacent trail, looking northeast

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Summer 2015

Community Connectivity - Opinion of Probable Cost

Description	Quantity	Unit	Unit Cost	Extended Amount
UNKNOWN				
Property Acquisitions/Easements	NA			
DEMOLITION				
Remove existing drainage flumes at Greenway Trail	1	LS	\$60,000.00	\$ 60,000.00
HARDSCAPE				
H.M.A. Trail + Base (Greenway Trail)	40,000	SF	\$3.75	\$ 150,000.00
H.M.A. Trail + Base (Gay Lea Wilson Trl; Eagle Park to Hwy 65)	70,000	SF	\$3.75	\$ 262,500.00
H.M.A. Trail + Base (School Connection Trail)	55,000	SF	\$3.75	\$ 206,250.00
H.M.A. Trail + Base (Prop. Chichaqua Valley Trail)	23,700	SF	\$3.75	\$ 88,875.00
LANDSCAPE				
Bioswale(drainage system + planting) at Greenway Trail	4,000	LF	\$75.00	\$ 300,000.00
Lawn/Seed Mix & Prep along trails	40,000	SF	\$0.65	\$ 26,000.00
Earthwork at lagoon/sledding hill	1	LS	\$150,000.00	\$ 150,000.00
Lawn/Seed Mix & Prep at sledding hill	75,000	SY	\$0.65	\$ 48,750.00
SUB-TOTAL - Base Bid				\$ 1,243,625.00
MOBILIZATION/GENERAL CONDITIONS - 5%				\$ 62,181.25
CONTINGENCY - 15%				\$ 186,543.75
DESIGN AND ENGINEERING - 10%				\$ 124,362.50
Inflation - 3%				\$ 37,308.75
CONSTRUCTION COST				\$ 1,654,021.25

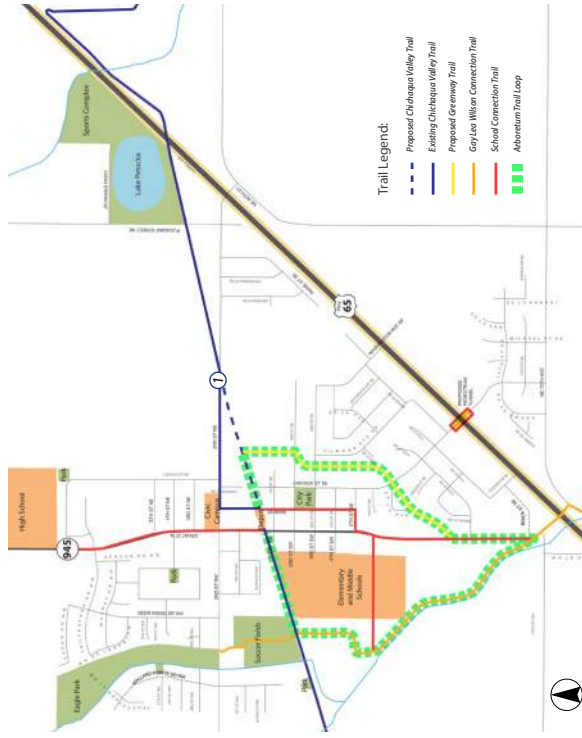
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Community Landscaping

Creating a cohesive community image was brought up multiple times in the planning process. One way to do this is to provide a consistent landscaping pallet in order to deliver visual connectedness. This can be done by planting vegetation that has already been established in areas of town such as the Bondurant Trailhead. Another important aspect of planting design that was emphasized by community members is choosing native pollinators that encourage habitat diversity; multiple options are shown here.

Steering committee members also talked about creating a community arboretum to help educate people about tree diversity. The design team proposes doing so by creating a mobile phone application that can be used by anyone in town to identify specific trees planted along the 2.5-mile trail loop shown on the map provided. This concept allows the app to grow and change as the community does. A simplified map and description could be created at the Bondurant Trailhead to inform visitors of the arboretum's existence and simple QR codes can be utilized as tree markers in order to learn more about each specimen. As Bondurant grows to the east of the high school, another arboretum loop could potentially be created in connection with Lake Petocka, which would reinforce the educational opportunities associated with this type of system.

Additional canopy trees would be positive additions along much of the existing trail as well, even if not included in the arboretum. Continuing to focus on diversity of trees is important in order to avoid mass tree-loss similar to what's currently happening due to the emerald ash borer.



Community Landscaping

Creating a cohesive community image was brought up multiple times in the planning process. One way to do this is to provide a consistent landscaping pallet in order to deliver visual connectedness. This can be done by planting vegetation that has already been established in areas of town such as the Bondurant Trailhead. Another important aspect of planting design that was emphasized by community members is choosing native pollinators that encourage habitat diversity; multiple options are shown here.

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Bondurant

Community Landscaping

Landscape Architect and Intern: RDG Planning & Design - Bruce Niedermeyer, ASLA and Sara Davids

Iowa Department of Transportation Trees Forever

ISU Landscape Architecture Extension

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Summer 2015



Before



Trail landscaping using pollinator-friendly native species, looking northeast from existing trail along 2nd St. NE



Generating a mobile phone application paired with QR-coded tags on trees creates a community arboretum that can be enjoyed by the public.

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Community Landscaping - Opinion of Probable Cost

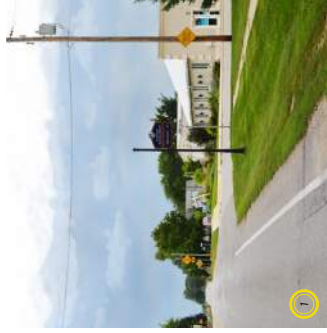
Description	Quantity	Unit	Unit Cost	Extended Amount
UNKNOWN				
Property Acquisitions/Easements	NA			
Software Development (Mobile Phone Application)	NA			
LANDSCAPE				
Deciduous Shade Trees - 2" Caliper	200	EA	\$350.00	\$ 70,000.00
Coniferous Trees	75	EA	\$300.00	\$ 22,500.00
Ornamental Trees	50	EA	\$250.00	\$ 12,500.00
Planting Nodes along trail (perennials + grasses + mulch)	20	EA	\$1,200.00	\$ 24,000.00
Arboretum tags/signs	60	EA	\$40.00	\$ 2,400.00
SUB-TOTAL - Base Bid				\$ 129,000.00
MOBILIZATION/GENERAL CONDITIONS - 5%				\$ 6,450.00
CONTINGENCY - 15%				\$ 19,350.00
DESIGN AND ENGINEERING - 10%				\$ 12,900.00
Inflation - 3%				\$ 3,870.00
CONSTRUCTION COST				\$ 171,570.00

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Signage Overview

Bondurant currently lacks a consistent way-finding signage system. Visitors to the city find it hard to navigate to common destinations, which can negatively impact the local economy. The proposed signage family provides a variety of signage scales to suit vehicular and pedestrian uses. The signs are created in a way that allow them to visually connect with one another, making it simple for visitors to understand what they are viewing. The design of these signs is uniquely Bondurant and focuses on history and regional landmarks to provide a consistent theme. Along with the pole-mounted signs shown here, informational trail maps could be added to the existing trailhead to show local and regional trail options. In addition to directional signage, banners could be displayed downtown in order to call attention to its importance for the community. The signs and banners would be an immediate benefit to Bondurant and could potentially inspire other community members to support the larger visioning effort.

The pricing information provided includes a new pole for each sign or banner. However, some existing light poles in Bondurant's downtown can be utilized, which will save money. Also, frequency of banners desired could increase or decrease the amount budgeted.



Grant and 1st Street Intersection sign directing to Downtown

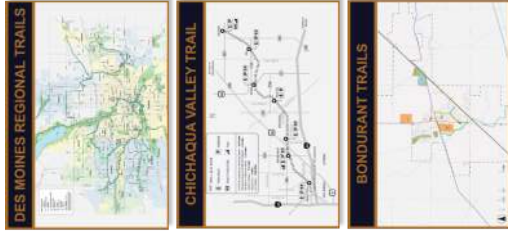


Grant and 2nd Street Intersection



2nd and Pleasant Street Intersection directing to Lake Petroska

Proposed trail maps are shown. Trailheads are designed to match the existing informational panels



See map for proposed signage locations

Community Signage

Bondurant currently lacks a consistent way-finding signage system. Visitors to the city find it hard to navigate to common destinations, which can negatively impact the local economy. The proposed signage family provides a variety of signage scales to suit vehicular and pedestrian uses. The signs are created in a way that allow them to visually connect with one another, making it simple for visitors to understand what they are viewing. The design of these signs is uniquely Bondurant and focuses on history and regional landmarks to provide a consistent theme. Along with the pole-mounted signs shown here, informational trail maps could be added to the existing trailhead to show local and regional trail options. In addition to directional signage, banners could be displayed downtown in order to call attention to its importance for the community. The signs and banners would be an immediate benefit to Bondurant and could potentially inspire other community members to support the larger visioning effort.

Bondurant

Signage Overview

Landscape Architect and Intern: RDG Planning & Design - Bruce Niedermeyer, ASLA and Sara Davids

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Summer 2015

Signage Overview - Opinion of Probable Cost

Description	Quantity	Unit	Unit Cost	Extended Amount
UNKNOWN				
Property Acquisitions/Easements	NA			
UTILITIES				
Sign Lighting (if desired)*	9	EA	\$1,000.00	\$ 9,000.00
SIGNAGE ELEMENTS				
Pole-Mounted Vehicular Directional Sign*	4	EA	\$3,000.00	\$ 12,000.00
Pole-Mounted City Amenity Sign*	2	EA	\$2,000.00	\$ 4,000.00
Pole-Mounted Banner	20	EA	\$1,000.00	\$ 20,000.00
Pole-Mounted Parking Sign	4	EA	\$1,200.00	\$ 4,800.00
Pole-Mounted Business District Sign*	3	EA	\$1,500.00	\$ 4,500.00
Interpretive Trail Signage	3	EA	\$500.00	\$ 1,500.00
SUB-TOTAL - Base Bid				\$ 55,800.00
MOBILIZATION/GENERAL CONDITIONS - 5%				\$ 2,790.00
CONTINGENCY - 15%				\$ 8,370.00
DESIGN AND ENGINEERING - 10%				\$ 5,580.00
Inflation - 3%				\$ 1,674.00
CONSTRUCTION COST				\$ 74,214.00

*Savings could be realized by using existing light poles for mounting signage

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Downtown Enhancements

Bondurant currently lacks a core or heart of the community. Improvements to the downtown district have great potential to create this highly desired space. There are currently a few historic buildings of quality along Main Street. Those buildings should continue to be embraced and maintained in order to show the heritage of the city. There are other areas near these buildings that are either open lots or residential or commercial properties, some of which are occupied and some of which are vacant. Suitability studies should be conducted to identify which buildings in this area could be renovated to house commercial properties. Available open spaces should be taken advantage of by infilling new buildings with architectural styles that maintain historic qualities currently present in the district. Two-story, mixed-use buildings are highly recommended for this area. Offering retail/commercial space on the first floor directly adjacent to the street and pedestrian traffic with housing above provides an environment that is highly sought after in today's real estate market. Materiality on this style of architecture is also very important. A majority of construction should consist of brick and architectural proportions of the more historic buildings in town should be studied to provide consistency.

In addition to architectural improvements, any parking should be created behind new buildings in this area. Locating parking in the rear allows Main Street to feel activated as a cohesive space that has been present for years. It also reduces the potential for vehicular and pedestrian conflict in a corridor that needs to be focused on pedestrians. When choosing planting design and other site elements, consistency is key. The city has already made a tremendous effort to rehabilitate roads and sidewalks in this area and replicating those efforts while implementing other ideas shown in the visioning documents, such as way-finding signage, will provide a more cohesive environment.

The proximity of this downtown district to the existing Bondurant Trailhead and Civic Campus is another great opportunity. In the future, when bicyclists ride through Bondurant on the trail, or when someone visits City Hall or the library, they will have immediate access to any and all resources along Main Street. Plans currently exist to create a shared bicycle lane from the Trailhead (Depot) south to 5th Street SE and west to Grant Street S, where it will connect back with the School Connection Trail (see Community Connectivity board). This plan, paired with potential for a Des Moines Area Regional Transit (DART) bus stop and future electric vehicle charging stations, creates a pedestrian-focused transportation hub encouraging growth for this vibrant community.

Implementation of these proposed enhancements will have to happen over a series of years. Much of the proposed improvements are architectural and therefore will require investors who are willing to develop in this area. Incentives for development in this district should be investigated while maintaining the aesthetic qualities outlined above.

Downtown Enhancements

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View from Main Street looking northwest at proposed mixed-use infill



Before

Bondurant

Downtown Enhancements

Landscape Architect and Intern: RDG Planning & Design - Bruce Niedermeyer, ASLA and Sara Davids

Iowa Department of Transportation

Trees Forever

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Summer 2015

Downtown Enhancements - Opinion of Probable Cost

Description	Quantity	Unit	Unit Cost	Extended Amount
UNKNOWN				
Property Acquisitions/Easements*	NA			
GENERAL REQUIREMENTS				
Traffic Control	1	LS	\$10,000.00	\$ 10,000.00
DEMOLITION				
REMOVAL				
Temporary Erosion Control	1	LS	\$5,000.00	\$ 5,000.00
Asphalt Roadway	14,400	SF	\$3.00	\$ 43,200.00
HARDSCAPE (WITHIN R.O.W.)				
Concrete Paving- Roadway	35,680	SF	\$7.00	\$ 249,760.00
Concrete Paving - Walks	6,540	SF	\$5.00	\$ 32,700.00
Pavement Markings	4,009	LF	\$1.00	\$ 4,009.00
UTILITIES				
Site Lighting	8	EA	\$5,000.00	\$ 40,000.00
Storm sewer improvements	1	LS	\$125,000.00	\$ 125,000.00
Utility and Structure Adjustments	1	LS	\$30,000.00	\$ 30,000.00
LANDSCAPE				
Mulch - Shredded Hardwood	4.6	CY	\$40.00	\$ 185.19
Amended Soil	18.5	CY	\$45.00	\$ 833.33
Deciduous Shade Trees - 2" Caliper	35	EA	\$350.00	\$ 12,250.00
Deciduous Ornamental Trees	10	EA	\$250.00	\$ 2,500.00
Shrubs & Perennials	500	SF	\$30.00	\$ 15,000.00
SITE IMPROVEMENTS				
Site Furniture	1	LS	\$20,000.00	\$ 20,000.00
Bicycle Sharing Program	1	LS	\$50,000.00	\$ 50,000.00
SUB-TOTAL - Base Bid				\$ 640,437.52
MOBILIZATION/GENERAL CONDITIONS - 5%				\$ 32,021.88
CONTINGENCY - 15%				\$ 96,065.63
DESIGN AND ENGINEERING - 10%				\$ 64,043.75
Inflation - 3%				\$ 19,213.13
CONSTRUCTION COST				\$ 851,781.90

*This is a significant part of the proposed downtown improvements. If the city can begin buying properties and preparing sites for potential developers, these improvements would become more 'shovel ready'.

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Implementation Strategies

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

Key Recommendations

Based on economic return and increased quality of life, it is recommended that projects be approached individually, keeping in mind that some may run concurrently and others may require phasing.

Highway 65 Enhancements

The improvements proposed for Highway 65 not only provide a beautification plan for this corridor, but also introduce habitat for pollinators, strategic screening of properties and an opportunity to connect with other projects already being built within Bondurant. Capitalizing on this projects close proximity to the new community gateway park could inspire other community members to participate physically and/or financially with this work. A major funding opportunity for this type of project is the Iowa DOT. With the limited size of this planting area, other partners, such as Polk County, should be investigated as well.

Improvements to Lake Petocka

Lake Petocka has the opportunity to become a very popular regional attraction if the proposed conditions are adopted. The local tourism created by this park would do great things for Bondurant's economy and would bring many potential future residents to the community. The expansion of the athletics complex is a large unknown due to property acquisitions, but the other park improvements, such as the amphitheater, would have great benefits for the community as well. Funding associated with the Iowa Arts Council, community health-related grants, and private donors should be investigated for this work.

Community Connectivity

There has been a lot of work in Bondurant recently in planning new trail systems and connections to existing trails. This movement should continue with the additional proposed routes shown in these drawings. These trails provide safe routes to school, opportunities for exercise, and when paired with other elements, like a community arboretum, provide great educational opportunities. A large portion of the cost opinion for this work is related to the removal of the existing storm water drainage system through town and replacement with a bioswale adjacent to the proposed Greenway Trail. This best management practice improves storm water treatment, benefiting those downstream and provides a safer more beautiful environment for Bondurant residents. Grants for storm water management and low-interest loans associated with other utility projects should be investigated for this work.



Community Landscaping

The landscaping improvements proposed not only provide beautification and branding of the community, but also an educational opportunity, with the implementation of the arboretum phone application. The landscaping projects can easily be done in phases as funding becomes available and are often the type of projects that attract community members who are willing to donate physical labor to better their hometown. A planting event could even be planned to occur adjacent to another community activity or celebration in order to increase awareness and participation. If paired with educational funding associated with Bondurant schools, there may be funding opportunities for creating the mobile arboretum application as well.

Way-finding Signage

Implementation of the signage packages will make community members and visitors more aware of resources and businesses that already exist within Bondurant. This has potential of boosting local economy and when done in a cohesive manner can increase pedestrian safety by clearly providing direction to drivers. These signs could easily be implemented in phases with the most beneficial signs being constructed first and others following to provide the full suite of designs and holistically brand transportation routes of town.

Downtown District Development

Cost opinion information for the Downtown District only includes major work within the street right-of-way. There are too many variables present to accurately estimate the cost of acquiring properties and building the proposed mixed-use facilities that are proposed. This work would need to be completed in phases over a series of years. If funding is available, properties can begin to be acquired in preparation for future development. Also, street improvements and new sidewalks could be completed from the Bondurant Trailhead north to 2nd Street. Much of the future downtown development relies on business owners and developers wanting to locate in this area. The city should make it a priority to provide incentives for these potential property owners in order to create a thriving downtown district that grows local economy and provides an area where people can live, work, and play.

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 Transportation Enhancement Act (TEA-21)
- 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

Appendix A

Common Contacts for Community Visioning

Signing

- General questions: District 1 Planner – Mike Clayton
515-239-1202 or mike.clayton@dot.iowa.gov
- Specific types of signing: Office of Traffic & Safety at
<http://www.iowadot.gov/iowaroadsigns/index.aspx>

Funding

- General questions: District 1 Planner – Mike Clayton
515-239-1202 or mike.clayton@dot.iowa.gov
- Federal and State Rec Trails Program:
http://www.iowadot.gov/systems_planning/fedstate_rectrails.htm
Yvonne Diller (Office of Systems Planning)
515-239-1252 or yvonne.diller@dot.iowa.gov
- Statewide Transportation Alternatives Program:
http://www.iowadot.gov/systems_planning/trans_enhance.htm
Pam Lee (Office of Systems Planning)
515-239-1810 or pamella.lee@dot.iowa.gov
- Safe Routes to Schools: <http://www.iowadot.gov/saferoutes>
Deb Arp (Office of Systems Planning)
515-239-1681 or debra.arp@dot.iowa.gov
- Regional Transportation Enhancement Program: Shirley Helgevold (MIDAS Council of Governments) 515-576-7183, ext. 212 or shelgevold@midascog.net

Roadside Vegetation

- Mark Masteller (Office of Design)
515-239-1424 or mark.masteller@dot.iowa.gov
or
Evelyn O'Loughlin (Office of Design)
515-239-1078 or evelyn.oloughlin@dot.iowa.gov

Guide to Transportation Funding Programs

of interest to local governments and others



In this document you will find information regarding state and federal programs that provide transportation project funding of interest to local governments and other entities. This information is intended to serve as a guide for preliminary funding searches. For more detail, we encourage you to contact the Iowa Department of Transportation (DOT) office listed for each program. (In some cases, the DOT district office or a Regional Planning Affiliation/Metropolitan Planning Organization is the recommended contact – maps and information for your area can be found beginning on page 79.)

Updated information includes:

- **Programs discontinued or restructured under MAP-21** (many projects formerly eligible under discontinued programs are now eligible under new programs)
- **Miscellaneous changes to other programs**, such as funding amounts, telephone numbers and webpage links

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

Information is current as of January 2014.



Recreational Trails Program (Federal)

Intent of program

Provide and maintain motorized and non-motorized recreational trails and trail-related projects.

Who is eligible to request funding?

Public agencies, and non-profit or private organizations are eligible to sponsor – non-profit and private sponsorship will require a public agency co-sponsor.

Qualifications for funding

- A minimum 20 percent match is required.
- Trails resulting from successful applications must be maintained as a public facility for a minimum of 20 years.

Types of submittal required

Program information is available at www.iowadot.gov/systems_planning/fedstate_rectrails.htm.

Application forms are available from the DOT, and at www.iowadot.gov/forms/index.htm.

Type of approval required

- DOT staff recommendation and Iowa Transportation Commission approval
- FHWA environmental concurrence
- conformance with federal funding requirements

Program's annual funding level

\$1.3 million

Application deadline

October 1

Inquiries should be directed to:

Iowa Department of Transportation

Office of Systems Planning

800 Lincoln Way

Ames, Iowa 50010

515-239-1252

www.iowadot.gov/systems_planning/fedstate_rectrails.htm

Recreational Trails Program (State)

Intent of program

Established to fund public recreational trails.

Who is eligible to request funding?

State agencies, counties, cities and non-profit organizations may sponsor applications.

Qualifications for funding

- Minimum 25 percent local match is required (volunteer services and other state grants are not eligible as matching funds).
- Proposed projects must be part of a local, area-wide, regional, or statewide trail plan.
- Trails resulting from successful applications must be maintained as a public facility for a minimum of 20 years.

Type of submittal required

Program information is available at www.iowadot.gov/systems_planning/fedstate_rectrails.htm.

Application forms are available from the DOT and at www.iowadot.gov/forms/index.htm.

Application deadline

January 2 and July 1 (In most years there is no January 2 round - please contact the DOT to confirm.)

Special project requirements

- The design must be approved by the DOT.
- The applicant must have an approved permit from the DOT maintenance engineer to perform any work within the state right-of-way.

Type of approval required

- DOT staff recommendations with Iowa Transportation Commission approval
- environmental concurrence

Program's annual funding level

\$3 million (funding varies by year depending on allocation by the state legislature)

More information/applications

Iowa Department of Transportation

Office of Systems Planning

800 Lincoln Way

Ames, Iowa 50010

515-239-1252

www.iowadot.gov/systems_planning/fedstate_rectrails.htm

State Scenic Byway Program

Intent of program

This program was established to identify, protect and enhance roadways in Iowa which exemplify the state's scenic and historic resources. This effort is carried out through volunteer work and cooperation between interested citizens, organizations, local governments, and the DOT. **This is not a funding program.** The DOT designates a route as a State Scenic Byway on the basis of scenic and historic qualities, using established criteria. Applicants are then responsible for funding tourism and promotional plans. Federal grant opportunities may be available for scenic byways for certain infrastructure projects (see Federal Transportation Alternatives Program).

Who is eligible to request designation?

While no funds are distributed through the state program, *designation* as a state scenic byway may be applied for by any group or individual having the support and concurrence of their local government entity (i.e. a County Board of Supervisors, City Council, Resource Conservation and Development Board, or County Conservation Board).

Type of submittal required

Applications are available from the DOT. See also: www.iowadot.gov/iowasbyways/index.aspx.

Application process/deadline

Applications are due October 1, and are accepted in even-numbered years only. This begins a two-year process. Following review of the applications by the Scenic Byway Advisory Council, field inventories are conducted in the following spring, summer and fall. The next step is evaluation of the inventory data and preparation of the final reports, including ratings for each route. The evaluations are reviewed by the Council, which selects routes for designation. The process is complete in the spring of the second year with the installation of Iowa Scenic Byway signs.

More information/applications

Iowa Department of Transportation
Office of Systems Planning
800 Lincoln Way
Ames, Iowa 50010
515-239-1369

Safe Routes to School (now part of Federal Transportation Alternatives Program)

Intent of program

To promote infrastructure and noninfrastructure improvements which will result in more students walking or bicycling to school.

Who is eligible to request funding?

State, local and regional agencies, schools (public or private), parent-teacher associations, etc. Non-eligible organizations (such as a non-profit) may partner with an eligible applicant.

Qualifications for funding

A local match of at least 20 percent is required. Infrastructure improvements resulting from successful applications must be maintained as a public facility for a minimum of 10 years.

Type of submittal required

See Federal Transportation Alternatives Program

More information/applications

Iowa Department of Transportation
Office of Systems Planning
800 Lincoln Way
Ames, Iowa 50010
515-239-1713
www.iowadot.gov/saferoutes

Federal Transportation Alternatives Program

Intent of program

The Federal Transportation Alternatives Program (TAP) funds programs and projects defined as transportation alternatives, including:

- on- and off-road pedestrian and bicycle facilities, infrastructure projects for improving non-driver access to public transportation and enhanced mobility, community improvement activities, and environmental mitigation;
- recreational trail projects;
- safe routes to school projects; and
- projects for planning, designing, or constructing boulevards and other roadways largely in the right-of-way of former divided highways.

The TAP replaced funding from pre-MAP-21 programs including the Transportation Enhancement Program, Safe Routes to School Program, and National Scenic Byways Program.

Who is eligible to request funding?

MAP-21 allows the following entities to apply for Transportation Alternatives Program funding:

- Local governments.
- Regional Transportation Authorities.
- Transit Agencies.
- Natural Resource or public lands agencies.
- School Districts, local education agencies or schools.
- Tribal governments.
- Any other local or regional governmental entity with responsibility for oversight of transportation or recreational trails (other than a metropolitan planning organization or a State agency that the State determines to be eligible).

A non-eligible project sponsor (such as a non-profit) may partner with an eligible co-sponsor in applying for funds.

Qualifications for funding

- A local match of 20 percent or more is required.
- Projects must have a direct relationship to existing or planned surface transportation facilities.
- Projects must fit into one or more of the following categories:
 - Construction, planning, and design of on-road and off-road trail facilities for pedestrians, bicyclists, and other non-motorized forms of transportation, including sidewalks, bicycle infrastructure, pedestrian and bicycle signals, traffic calming techniques, lighting and other safety-related infrastructure, and transportation projects to achieve compliance with the Americans with Disabilities Act of 1990.
 - Construction, planning, and design of infrastructure-related projects and systems that will provide safe routes for non-drivers, including children, older adults, and individuals with disabilities to access daily needs.
 - Conversion and use of abandoned railroad corridors for trails for pedestrians, bicyclists, or other non-motorized transportation users.
 - Construction of turnouts, overlooks, and viewing areas.
 - Community improvement activities, which include but are not limited to:
 - Inventory, control, or removal of outdoor advertising.
 - Historic preservation and rehabilitation of historic transportation facilities.
 - Vegetation management practices in transportation rights-of-way to improve roadway safety, prevent against invasive species, and provide erosion control.
 - Archaeological activities relating to impacts from implementation of a transportation project eligible under this title.

- Streetscaping and corridor landscaping.
- Any environmental mitigation activity, including pollution prevention and pollution abatement activities and mitigation to:
- Address stormwater management, control, and water pollution prevention or abatement related to highway construction or due to highway runoff, including activities described in sections 133(b)(11), 328(a), and 329; or
- Reduce vehicle-caused wildlife mortality or to restore and maintain connectivity among terrestrial or aquatic habitats.
- Infrastructure-Related Safe Routes to School Projects
 - The planning, design, and construction of infrastructure-related projects that will substantially improve the ability of students to walk and bicycle to school, including:
 - Sidewalk improvements,
 - Traffic calming and speed reduction improvements,
 - Pedestrian and bicycle crossing improvements,
 - On-street bicycle facilities,
 - Off-street bicycle and pedestrian facilities,
 - Secure bicycle parking facilities, and
 - Traffic diversion improvements in the vicinity of schools. (section 1404(f)(1)(a))
- Non-Infrastructure Related Safe Routes to School Projects
 - Activities to encourage walking and bicycling to school, including:
 - Public awareness campaigns and outreach to media and community leaders,
 - Traffic education and enforcement in the vicinity of K-8 schools,
 - Student sessions on bicycle and pedestrian safety, health, and environment, and
 - Funding for training, volunteers, and managers of safe routes to school programs. (section 1404(f)(2)(a))
- Recreational Trails Program Projects
 - Eligible Recreational Trails Program projects include:
 - Maintenance and restoration of existing recreational trails;
 - Development and rehabilitation of trailside and trailhead facilities and trail linkages;
 - Purchase and lease of recreational trail construction and maintenance equipment;
 - Construction of new recreational trails (with some restrictions for new trails on Federal lands);
 - Acquisition of easements and fee simple title to property for recreational trails or recreational trail corridors;
 - Assessment of trail conditions for accessibility and maintenance;
 - Development and dissemination of publications and operation of educational programs to promote safety and environmental protection, (as those objectives relate to one or more of the use of recreational trails, supporting non-law enforcement trail safety and trail use monitoring patrol programs, and providing trail-related training), but in an amount not to exceed 5 percent of the apportionment made to the State for the fiscal year; and
 - Payment of costs to the State incurred in administering the program, but in an amount not to exceed 7 percent of the apportionment made to the State for the fiscal year.

Note: this list is all-inclusive; a project must fit into one or more of the above categories to be eligible for funding.

Type of submittal required

Depending on the impact of the project (*regional or statewide*), applications can be submitted to either the DOT or the appropriate RPA/MPO.

- Projects considered *statewide* are only those with a truly statewide or multi-regional significance. Applications for projects that are primarily local impact projects (such as trails) will not be scored

favorably. Statewide projects require filing an application on a form provided by the DOT. Applications are available from the DOT and at <https://forms.iowadot.gov/Default.aspx>; and program information is available at www.iowadot.gov/systems_planning/trans_enhance.htm.

- For application requirements regarding *regional* (non-statewide) projects – contact the appropriate RPA/MPO. (see www.iowadot.gov/systems_planning/distplannercontact.htm)

Application deadline

October 1 for *statewide* project applications (RPAs and MPOs may have different deadlines for regional/metropolitan applications).

Special project requirements

- Federal Highway Administration environmental concurrence is required.
- Right-of-way activities must comply with applicable federal and state laws.
- Plans and specifications must be prepared by an Iowa licensed professional engineer/architect/landscape architect.
- If federal-aid dollars are used for a consulting engineer/architect/landscape architect, the Federal-Aid Consultant Selection Process must be used.
- Approval by DOT for plans and specifications is required.
- Davis-Bacon wage requirements must be met.
- Competitive bids or quotes are required.

Type of approval required

RPAs/MPOs select regional (*non-statewide*) projects for funding. DOT staff makes recommendations to the Iowa Transportation Commission for funding of *statewide* projects. The Commission makes final awards for funding.

Program's annual funding level

- approximately \$1.0 million for *statewide* projects
- approximately \$7.8 million for *regional* projects

More information/applications

Iowa Department of Transportation

Office of Systems Planning

800 Lincoln Way

Ames, Iowa 50010

515-239-1810

http://www.iowadot.gov/systems_planning/trans_enhance.htm