















PLYMOUTH

Final Report and Feasibility Study | 2018















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Table of Contents

About RITLAND+KUIPER Landscape Architects	3
Program Overview	4
Bioregional Assessments	6
Settlement Patterns	6
Historical Vegetation	8
Change Over Time	10
Regional Watershed	12
Depth to Water Table	14
Elevation and Flow	16
Present Day Land Cover	18
Transportation Assets and Barriers Assessment	20
Overview	20
What People Said	22
Emerging Themes	24
Transportation Inventory and Analysis	26
Community Concept Plan	28
Signage and Way-finding	30
Walkability in Plymouth	32
County Road S56 Improvements	36
Old School Park Concepts	40
Strand Park Improvement Suggestions	46
Implementation Strategies	48
Appendix A	51
Appendix B	54

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About RITLAND+KUIPER Landscape Architects

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

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

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

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







RITLAND+KUIPER
LANDSCAPE ARCHITECTS

Program Overview

Plymouth is one of 10 communities selected to participate in the 2018 lowa'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 lowa 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 Plymouth visioning committee

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

- The Plymouth visioning committee identified a number of goals and priority areas during the visioning process, including:
- Strand Park: Improve river access, add picnic shelters, clear hedge to improve visibility, and create more parking
- Safety: Improve existing sidewalks, enhance pedestrian crosswalks, and update lighting within specific areas of the community
- Recreation: Enhance Old School Park walking trail and pedestrian bridge, create a trail master plan, connect Plymouth to Strand Park, and improve river access
- Identity & Signage: Establish a welcome sign at the entrances into town, use a community logo on all monument signs and way-finding signs, create a theme for the community, and enhance light poles with banners

Capturing the Plymouth Vision

Based on the needs and desires of the local residents, as well as a detailed inventory of community resources, the design team developed a conceptual transportation enhancement plan. This plan, as well as the inventory information, is illustrated in the following set of presentation boards. These boards include the Program Overview, Bioregional Assessment, Transportation Assets and Barriers Assessment, Transportation Inventory and Analysis, Concept Overview, and Community Design boards.









SUMMER 2018 1

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Program Overview

assistance along transportation corridors to small lowa communities 2018 Iowa's Living Roadways (ILR) Community Visioning Program. Plymouth is one of $10\,\mathrm{communities}$ selected to participate in the The program, which selects communities through a competitive application process, provides professional planning and design (populations of fewer than 10,000). The ILR Community Visioning Program assists community members with planning local transportation systems that are safe, accessible use patterns and needs of residents, and supports these goals by gathering research based information that guides transportation and ecologically sensitive. Planning also takes into account local goal setting and design.

mplementation and sustained action

Needs assessment and goal setting Development of a concept plan

Program initiation

RITLAND+KUIPER Landscape Architects

Landscape Architects: Craig Ritland, FASLA & Samantha Price, PLA Landscape Architecture Intern: Jerry Philbin





Bioregional Assessment

Settlement Patterns

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

Plymouth in Context

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

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

P.C.Towne

Settlement Patterns

34

37

36

63

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Settlement Patterns Plymouth

Bioregional Context

Julia Badenhope, Casey Cox, Riley Dunn, Dominick Florer, Hatvany Gomez-Concepcion, Ngoc Ho, Henry Herman, Alysse Kirkman, Giannis Koutsou, Emma Lorenz, Zoey Mauck, Carol Ustine



Historical Vegetation

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

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

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

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

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



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maps in the 1800's did not understand and record seasonal flooding or high ground water, and fire vegetation change from place to place. These types, in part because the people making the the subtleties of different plant communities. In addition, landscape conditions that effect Not all communities will show all vegetation factors include geology, exposure to wind,

The vegetationincluded in the map may include the following:

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 - 2. Savana: Scattered trees with an open canopy and prairie below. Frequent fire disturbance.
 - 3. <u>Marsh</u>: Mainly perennial non-woody plants; water dominated and frequent fires.

Savana Marsh Prairie

4. <u>Prairie</u>: Mainly perennial non-woody plants with frequent fire disturbance.

5. Field: Cultivated lands of early pioneers or Native



Historical Vegetation Plymouth

Bioregional Context

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Change Over Time

In the images to the left, you can observe how land use has changed over time from the observed landscape patterns in the 1800s Andreas Atlas to the present day. By looking at landscape development patterns over time, one can begin to understand how technology, infrastructure, economic forces, and desired lifestyles have interacted with landform, climate, and processes to create present-day development patterns.

For example, consider how agricultural land use has changed land cover patterns. In general, one can see impacts of technology in larger field sizes, the reduction in wetlands and sloughs, and the elimination of fence lines as diverse farm crops and livestock production has given way to monoculture field-crop production.

New roads have been developed, usually cutting across the landscape topography on compacted roadbeds. Highways usually have low slopes and more gentle curves to facilitate high-speed movement, while roads targeted to more localized traffic can have steeper slopes and tighter curves. The result of these differences can be seen in the earthwork used to flatten the roadbeds near highways and the creation of "borrow pits" that sometimes appear as geometric ponds alongside highways.

Other observable changes are development that responds to floodplains. In many cases, development will avoid floodplains because of the risks of property damage. Between the 1940s and 1960s, development was placed in floodplains with the protection of levees. These earthworks are less effective with today's intense summer rainfall patterns, and in the most recent image, this floodplain development may have moved as a result.



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Bioregional Context



1930s

1875 Andreas Atlas



Map Source: ISU GIS Facility, "Iowa Geographic Map Server," http://www. http://ortho.gis.iastate.edu/.

Change Over Time **Plymouth**





Regional Watershed

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

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

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



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Plymouth

Regional Watershed

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Depth to Water Table

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

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

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

SPRING 2018 2e

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Plymouth

Depth to Water Table

Bioregional Context

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Elevation and Flow

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

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

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

Flood risk is correlated to low-lying land. This map also shows your community's flood risk as defined by the Federal Emergency Management Agency (FEMA) Flood Map Service Center. If your community has these features, this map will show the two most important flood zones, the Base Flood and the Regulatory Floodway (consult legend). Base Flood is the zone having a one percent chance of being equaled or exceeded in any given year, also referred to as the "100-year floodplain." The Regulatory Floodway is the channel of a stream plus any adjacent floodplain areas that must be kept free of objects so that the floodwater can move freely, keeping the base flood elevation from rising.

SPRING 2018 2f

Elevation and Flow

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Plymouth

Elevation and Flow

Bioregional Context

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Present Day Land Cover

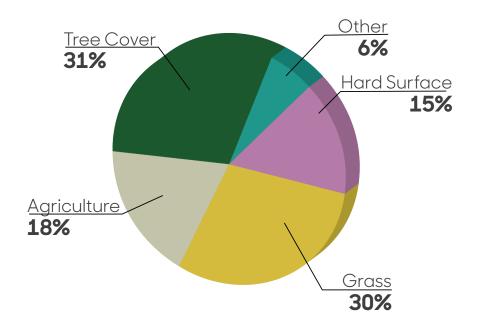
The land cover map depicts both natural and man-made land cover types with aerial imagery. The lowa DNR created 15 unique classes for this dataset to differentiate land covers. Refer to the legend for a breakdown of land cover types within your community boundaries.

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

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

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

Percent Land Cover Type



SPRING 2018 2g

Present Day Land Cover

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Water Body Water Wells

Grass 1 Grass 2

GRASS

AGRICULTURE

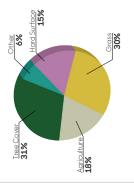
City Limits

River

Land Cover

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Roads / Impervious

HARD SURFACE

Deciduous Medium Deciduous Tall

Deciduous Short

Soybeans

Corn

TREE CANOPY

Percent Land Cover Type

Shadow / No Data

Barren / Fallow

Wetland

Water

Present Day Land Cover Plymouth

Julia Badenhope, Casey Cox, Riley Dunn, Dominick Florer, Hatvany Gomez-Concepcion, Ngoc **Bioregional Context**

Ho, Henry Herman, Alysse Kirkman, Giannis Koutsou, Emma Lorenz, Zoey Mauck, Carol Ustine





Transportation Assets and Barriers

Overview

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

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

Different Users = Different Needs

To capture insights about transportation from a variety of perspectives, we invited Plymouth residents with different transportation needs to participate in focus groups. A total of 43 residents attended Plymouth's workshop. Participants were separated into five user groups and the Plymouth steering committee.



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



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



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



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



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



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

Steering Committee

: Access to the Shell Rock River n trional activities such as tubing.





sset. The trail connects the places in Old School Park, which is a popular lestination.





Street and the lack of goo 3arrier: Fast traffic on Broad Si access the north of Plymouth.



Barrier: The closed bridge on Main Street is abarrier the creek and connect to the west part of Plymouth.



What Factors Affect Transportation in Plymouth?

SPRING 2017

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Transportation Assets and Barriers

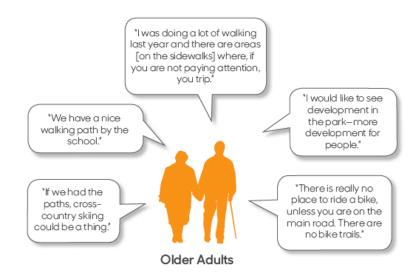
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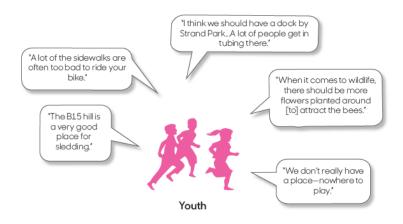


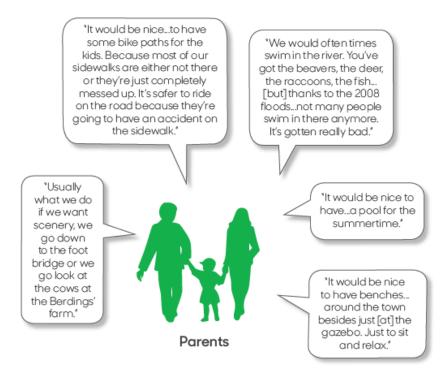


What People Said













Emerging Themes

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

Actives: Actives walk, bike, and RipStik for recreation. They are concerned about the lack of walking and biking trails in town. They would like better access to the river, improved ball courts, and ice skating facilities.

Older adults: Older adults primarily drive, bike, walk, and drive golf carts to destinations. This group is interested in having smooth, safe, and accessible sidewalks. They want better speed control in town and better maintenance of parks.

Youth: Youth mainly walk and bike to get around the community. They have trouble getting around because of the poor condition of the sidewalks. This group would like more recreational facilities and activities in town.

Parents: Parents drive, walk, and bike. They are concerned about their children's safety as they travel throughout town. Of particular concern is the lack of sidewalks and safe crossings over the railroad tracks.

Steering committee: Steering committee members walk, drive, and bike. This group is interested in improving the sidewalk network and developing a walking/biking trail system that connects with other communities. They appreciate the recreation opportunities provided by the river.

		Actives walk, bike, and RipSlik for recreation. They are concerned about the lock of walking and biking trails in town. They would like batter access to the river improved ball courts, and ice skaning facilities.	Older adults primarily drive, bile, walk, ora of the first primarily drive, bile, walk, his grad of the gold orat to desirent adults. They sare for all crosses ble sidewells. They want better speed control in town and better maintenance of parks.	Youth mathy walk and blee to get around the community. They have round the community. They have took be getting around because of the poor conditing of the adewalds. This group would like more expenditional facilities and activities in town.	Parents drive, walk, and bike. They are concerned action than drilleners safety particular concerned in the lack of adderwalk and addienced in addienced in a sidenced in a sidence	Steering committee members walk, after a construction of the residency of the sidewalk network and developers ownship to sidewalk network and developers ownship sharing nations system for command with other communities. That command will not own out multiles appoint of the river.	
Undesirable Qualities and Features Most Desired Improvements and Activities	Improved Sidewalk System	•	•	•	•	•	Company to the state of the sta
	More Recreation Facilities	•		•	•	•	100 100 100 100 100 100 100 100 100 100
	Traffic Control & Safe Crossing on 556	•	•		1 1 1 1 1		
	Trail System 6	•	•	•	•	•	Secretary and the secretary an
	No Access to Strand Park	•	•	•	 	•	An of the state of
	Lack of Services	•		•	•	l	20 10 00 00 00 00 00 00 00 00 00 00 00 00
	Poor Maintenance of Recreation Areas	•	•	•	 	•	
	County Road N S56	•	•	•		•	Copy by More and State of Stat
	Poor Sidewalk System	•	•	•		•	The state of the s
eatures	Sense of P Community	•	•	•		•	1000 100 100 100 100 100 100 100 100 10
Desirable Qualities and Features	Outdoor Recreation Areas	•	•	•		•	The state of the s
	Access to Natural Environment		•		1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1	•	South State of State
Destinations and Activities	Shell Rock River		•	•	 	•	to the winds solver the cose of
	Old School Park	•	•	•	1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1	•	Aclust Services in the river is the estimated
	The Trestle	•		•	 	•	ond sink bee
	User Types	Col Portions Actives	Older Adults	who who	Porents	TT CTIII	Attrophysical services of the



Transportation Inventory and Analysis

Plymouth, located 11 miles northeast of Mason City, is a bedroom community with a population just over 400. The community is bisected by County Road S56, a busy farm-to-market road that creates conflicts for pedestrians. Beaver Creek to the west and the Shell Rock River to the east form a street pattern characterized by short east-west segments and longer north-south streets parallel to County Road S56. This produces low residential street traffic.

Committee members at the transportation meeting and participants in previous analysis meetings pointed out the lack of sidewalks in Plymouth and that the existing ones are in poor condition (reference: What People Said, 3b). The community would like to see designated walking/biking routes eventually connecting Old School Park trail to Strand Park and improvements to the existing pedestrian bridge over Beaver Creek (reference: What People Said, 3b and Emerging Themes, 3c). Along with improving the quality of sidewalks, Plymouth would benefit from more benches along their trails. The aging population in Plymouth would like rest stops during their daily walks (reference: Overview, 3a).

Tubing and other water recreation is a common activity in the summer (reference: Overview, 3a). Members of the community feel that better access to the river would promote and improve river use. There are opportunities to connect trails to the river specifically on the west side of Strand Park.

Traffic calming measures are wanted along County Road S56, particularly where vehicles frequently disobey the stop sign at the intersection of County Road S56 and Main Street. According to the lowa Department of Transportation 2013 daily traffic count, Plymouth sees an average of 1400 cars on County Road S56. The Cerro Gordo County Engineer would like Plymouth to install stop signs outlined with LED lights at this intersection. These types of stop signs catch people's attention better than the overhead blinking light currently used at the intersection. Highly-visible crosswalks would be another safety improvement at this intersection. Members of the transportation meeting also pointed out the intersection of County Road B15 and S56 has a blind spot for people turning north.

Community members voiced that there are no sheltered bus stops for children (reference: Emerging Themes, 3c). Currently, the children wait at the post office in the winter or the gazebo area at the intersection of Country Road S56 and Main Street when the weather is nice. The bus also stops at intersections on Rock Street. A designated sheltered bus stop area would simplify the pick up and drop off process for the various school districts using Plymouth as a reloading zone.

S56, particularly where vehicles frequently disobey the stop

Traffic calming measures are wanted along County Road



Transportation Inventory & Analysis

east form a street pattern characterized by short east-west segments and longer north-south streets parallel to County bedroom community with a population just over 400. The community is bisected by County Road S56, a busy farm-Plymouth, located 11 miles northeast of Mason City, is a Beaver Creek to the west and the Shell Rock River to the to-market road that creates conflicts for pedestrians. Road S56. This produces low residential street traffic.

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promote and improve river use. There are opportunities to Tubing and other water recreation is a common activity the community feel that better access to the river would connect trails to the river specifically on the west side of in the summer (reference: Overview, 3a). Members of Strand Park.









Main school bus stop at Gazebo Pocket Park locate: at intersection of County Road S56 and Main Street

Landscape Architects: Craig Ritland, FASLA & Samantha Price, PLA, ASLA Landscape Architect Intern: Jerry Philbin

RITLAND+KUIPER Landscape Architects

lowa State University | Trees Forever | Iowa Departm

ransportation Inventory & Analysis

Plymouth section of CountyRoad B15 and S56

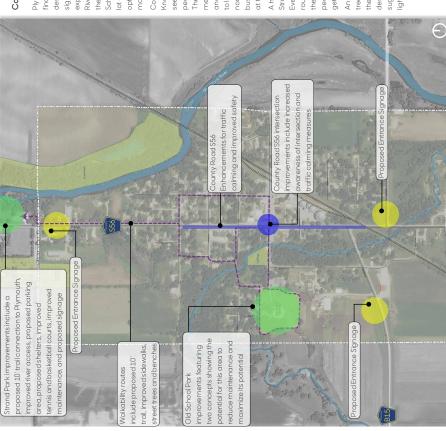
Community Concept Plan

Plymouth's visioning committee expressed a desire for way-finding and entrance signage. A town logo was developed by the design team featuring the "Plymouth Rock," which holds historical significance for the community. The visioning committee also expressed a need for way-finding signage including Shell Rock River access sites, since many recreational enthusiasts utilizing the Shell Rock River come to Plymouth to kayak and tube. Old School Park is a nice amenity for the community but requires a lot of maintenance. The visioning committee wanted to explore options for Old School Park that would be beneficial, require less maintenance, and possibly generate revenue.

County Road S56 intersects Main Street at the heart of Plymouth. Known as the community "in the middle of everywhere", Plymouth sees lots of traffic through town and frequently has issues with people not obeying the traffic signs for speeding and stopping. The visioning committee wanted to explore traffic calming measures along County Road S56 and beautifying this intersection and entrance to Main Street. The visioning committee also wanted to look at improving safety at this intersection because it is a major node for school bus traffic. "There is no real good, safe spot for our buses to come in and there's no spot for the kids. They all hang out at the Post Office for cold weather," (Re: What People Said, 3b).

A hidden gem in Plymouth located along the Shell Rock River is Strand Park, a Cerro Gordo County Park with access to the river. Even though its proximity is close, there is no pedestrian-oriented route to the park, creating a disconnect with town. "Strand Park, they have tennis courts and basketball courts, but for kids and people that aren't able to drive, there's not really a good means to get out there," (Re: What People Said, 3b).

An exercise route with improved lighting, benches and shade trees to compliment the trail in Old School Park was a goal for the committee, brought up during the analysis meetings. The design team created a walkability route for the community with suggested improvements such as improved sidewalks, benches, lighting and street trees.



Concept Overview

finding and entrance signage. A town logo was developed by the design team featuring the "Plymouth Rock," which holds historical options for Old School Park that would be beneficial, require less School Park is a nice amenity for the community but requires a lot of maintenance. The visioning committee wanted to explore expressed a need for way-finding signage including Shell Rock River access sites, since many recreational enthusiasts utilizing significance for the community. The visioning committee also the Shell Rock River come to Plymouth to kayak and tube. Old Plymouth's visioning committee expressed a desire for waymaintenance, and possibly generate revenue.

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RITLAND+KUIPER Landscape Architects
Landscape Architects: Craig Ritland, FASLA & Samantha Price, PLA, ASLA Landscape Architecture Intern: Jerry Philbin lowa State University | Trees Forever | lowa Department

Concept Overview

Plymouth

Signage & Way-finding

Plymouth's visioning committee expressed a desire for way-finding and entrance signage. A town logo was developed based on the history of the town featuring the "Plymouth Rock". The committee expressed how popular the river was for kayaking and tubing but that access points could be a challenge to locate due to lack of or poor directional signage.

Planned entrance signage will alert drivers that they are entering the community and are no longer in a rural setting where speeds are higher. The addition of native plant species adds aesthetics to the entrance sign and pollinator habitats for insects.

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

Opinion of Probable Cost

Abbreviations used in the following costs opinion include: EA = each

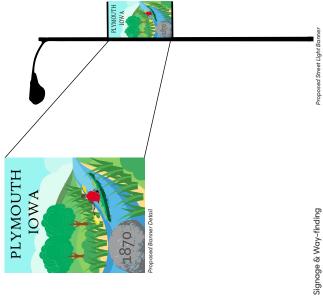
Way-finding & Signage	QTY	Unit	Unit Cost	Subtotal		
Pedestrian-scaled Directional Signage						
One Destination	TBD	EA	\$1,500.00	TBD		
Two Destinations with Decorative Cap	TBD	EA	\$2,500.00	TBD		
Three Destinations	TBD	EA	\$2,500.00	TBD		
Vehicular-scaled Directional Signage						
One Destination	TBD	EA	\$1,500.00	TBD		
Two Destinations	TBD	EA	\$2,500.00	TBD		
Three Destinations	TBD	EA	\$3,500.00	TBD		
Entrance Signage						
Monument Entrance Sign	3	EA	\$10,000.00	\$30,000.00		

Design Expertise Recommended

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



Proposed entrance sign and native species planting palette. Planting palette is an example and once a site is determined for the entrance signs, a finalized planting palette should be used that is site specific.



SUMMER 2018 6

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Welcome to Plymouth

♣ River Access
◆ Old School Park

Strand Park

Downtown

Planned entrance signage will alert dinvers that they are entering the community and are no longer in a rural setting where speeds are higher. The addition of native plant species adds aesthetics to the entrance sign and pollinator habitats for insects.





Landscape Architect: Craig Ritland, FASLA & Samantha Price, PLA, ASLA Landscape Architecture Intern; Jerry Philbin lows State University | Treas Forever Howa Department of Transportation

Signage & Way-finding

Plymouth



Walkability in Plymouth

"It would be nice...to have some bike paths for the kids, because most of our sidewalks are either not there or they're just completely messed up. It's safer to ride on the road because they're going to have an accident on the sidewalk," stated a parent during one of the assessment meetings (Re: What People Said, 3b). The visioning committee also wanted safer, more complete sidewalks, but were comfortable walking on residential roads because the traffic is minimal. The committee guided the design team on the specific routes around the community they would like to see improved. These "exercise routes", as one committee member called them, would be various lengths depending on the individual and would include benches, pedestrian lighting where needed, and additional shade tree plantings.

The community is already exploring ways to get a sidewalk or trail out to Strand Park, stating that the east side is the preferred route. This important link would allow kids to walk or bike to Strand Park, which they are not able to do now unless they use busy County Road S56. Almost all of the Shell Rock River property is private, leaving the park as the only public shoreline and river access. The design team is proposing this continue into the park at the tennis and basketball courts and continue along the tree line north to the existing parking area and west side river access.

Legend

- --- Existing Mowed Trail --- Existing Routes

 - --- Proposed Routes --- Desired Routes
- Improved Pedestrian Bridge

improved existing Proposed Route: Route could be

space allows, a sidewalks, new sidewalks or if

wider trail

"It would be nice...to have some bike paths for the kids, because they would like to see improved. These "exercise routes", as one the design team on the specific routes around the community roads because the traffic is minimal. The committee guided pedestrian lighting where needed, and additional shade tree completely messed up. It's safer to ride on the road because they're going to have an accident on the sidewalk," stated a Said, 3b). The visioning committee also wanted safer, more committee member called them, would be various lengths depending on the individual and would include benches, most of our sidewalks are either not there or they're just

The community is already exploring ways to get a sidewalk or



Proposed trail in Strand Park would continue on to Plymouth







Iron Valley Bench Manufacturer: Kay Park Recreations (800) 553-2476 **Proposed Bench**

Landscape Architects: Craig Ritland, FASLA & Samantha Price, PLA, ASLA RITLAND+KUIPER Landscape Architects

Landscape Architecture Intern: Jerry Philbin lowa State University | Trees Forever | lowa Department o

Walkability in Plymouth

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Land acquisitions wouldneed

Desired Route:

to occur in order to raise the Road S56, near the railroad steep grade along County

tracks, for a trail

perimeter of Old School Park

Granular trail around the

Existing Route:

this parcel

Any improvements would the private landowner of

need to be approved by Existing Mowed Trail:





Walkability in Plymouth **Plymouth**

Walkability plan shows existing, proposed and desire

Without a site survey, it is challenging to consider all costs that could be associated with this project. The design team has broken down the costs associated with 100 linear feet of 4' to 10' pavement, including removal costs and other associated costs. The visioning committee can use this estimate as a tool to determine what our option would be for estimated costs. Additional items to budget for include a percentage of the overall project costs and are as follows: 20% contingency, 15% mobilization and 15% design and engineering fees. The following cost opinion is based on estimated material quantities and contracted installation prices. Project costs can decrease with donated materials, reduced cost materials, and volunteer labor. All quantities are estimated, and a site survey should be conducted prior to implementation to verify quantities shown in the cost opinions.

Opinion of Probable Cost

Abbreviations used in the following costs opinion include:

SY=square yard SF = square foot LF= linear foot EA = each

QTY	Unit	Unit Cost	Subtotal				
Pavement Removal for 100 LF							
44	SY	\$15.00	\$660.00				
Sidewalk Installation per 100 LF							
400	SF	\$6.50	\$2,600.00				
600	SF	\$6.50	\$3,900.00				
800	SF	\$6.50	\$5,200.00				
1,000	SF	\$6.50	\$6,500.00				
1	EA	\$950.00	\$950.00				
1	EA	\$500.00	\$500.00				
1	EA	\$1,500.00	\$1,500.00				
1	EA	\$150.00	\$150.00				
Non-flashing Yield to Pedestrian Sign 1 EA \$150.00 \$150.00 Share the Road							
100	LF	\$1.00	\$100.00				
1	EA	\$150.00	\$150.00				
1	EA	\$2,000.00	\$2,000.00				
1	EA	\$1,500.00	\$1,500.00				
1	EA	\$400.00	\$400.00				
1	EA	\$500.00	\$500.00				
1	EA	\$50.00	\$50.00				
1	EA	\$2,000.00	\$2,000.00				
1	EA	\$750.00	\$750.00				
	100 11 11 11 11 11 11 11 11 11 11	44 SY	44 SY \$15.00 400 SF \$6.50 600 SF \$6.50 800 SF \$6.50 1,000 SF \$6.50 1 EA \$950.00 1 EA \$500.00 1 EA \$1,500.00 1 EA \$150.00 1 EA \$150.00 1 EA \$1,500.00 1 EA \$1,500.00				

Design Expertise Recommended

Projects may require help beyond the capability of the Plymouth Visioning Committee or available city staff. For this improvement project, the visioning committee should expect to engage the services of a landscape architect, civil engineer, and signage company.

Walkability Plan

Legend

- **Existing Routes**
- **---** Existing Mowed Trail
- --- Proposed Routes
- Desired Routes
- Improved Pedestrian Bridge

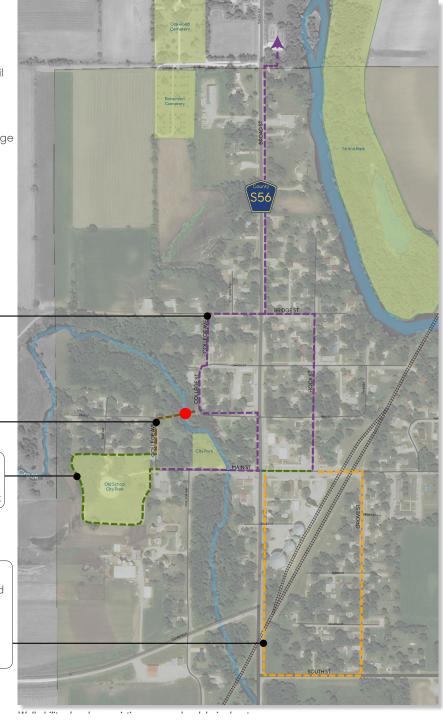
Proposed Route: Route could be improved existing sidewalks, new sidewalks or if space allows, a wider trail

Existing Mowed Trail: Any improvements would need to be approved by the private landowner of this parcel

Existing Route: Granular trail around the perimeter of Old School Park

Desired Route:

Land acquisitions would need to occur in order to raise the steep grade along County Road S56, near the railroad tracks, for a trail



County Road S56 Improvements

The community of Plymouth jokes about it being in the "middle of everywhere". Major thoroughfares to mostly other destinations divide Plymouth. An added issue is with motorists disobeying the speed limit and stop signs. The visioning committee expressed interest in the use of traffic calming measures to improve safety. The design team spoke with Mary Kelly, Cerro Gordo County Engineer, about what measures the county would allow to decrease traffic speeds and increase awareness at the intersection of County Road S56 and Main Street. She recommended the use of flashing stop signs in lieu of the overhead flashing light. She also suggested the speed limit could be painted on the pavement, highly-visible crosswalks could be used, and visual and textural enhancements to the intersection using brick or colored concrete.

The design team is suggesting a brick inlay in the middle of the intersection and additional brick on the exteriors of the crosswalks. This brick will give both a visual and textural acknowledgment to the adjacent stop signs. Highly-visible crosswalks for all four corners will also increase awareness of this intersection. Main Street is a major node for school bus pick-ups and drop offs. A bus shelter is suggested for the north side of Main Street. Additional enhancements include street tree plantings, flower pots, and streetlight banner art.

Proposed Tree Plantings on County Road S56



Existing conditions along County Road S56



Proposed ornamental tree plantings under the power lines along County Road S56



County Road S56 Improvements

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flashing light. She also suggested the speed limit could be painted on the pavement, highly-visible crosswalks could be used, and visual and textural enhancements to the intersection using brick or use of flashing stop signs in lieu of the overhead S56 and Main Street. She recommended the colored concrete. The design team is suggesting a brick inlay in the middle of the intersection and additional brick on the exteriors of the crosswalks. This brick will give

both a visual and textural acknowledgment to the adjacent stop signs. Highly-visible crosswalks for all four corners will also increase awareness of plantings, flower pots, and streetlight banner art. school bus pick-ups and drop offs. A bus shelter this intersection. Main Street is a major node for Additional enhancements include street tree is suggested for the north side of Main Street.





LA: Craig Ritland, FASLA & Samantha Price, PLA, ASLA Intern. Jerry Philbin

County Road S56 Improvements

Plymouth

RITLAND+KUIPER Landscape Architects



Opinion of Probable Cost

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

Abbreviations used in the following costs opinion include:

LS = lump sum SF = square feet CY = cubic yard EA = each

County Road S56 Intersection	QTY	Unit	Unit Cost	Subtotal
Roadway Removals				
Traffic Control	1	LS	\$10,000.00	\$10,000.00
Erosion Control	1	LS	\$1,000.00	\$1,000.00
Removals - Pavement	9,850	SF	\$3.50	\$34,475.00
Pavement				
Excavation, Class 10	304	CY	\$30.00	\$9,120.37
Asphalt Paving with Granual Base	5,130	SF	\$40.00	\$205,200.00
Concrete Bands for Decorative Brick Pavements	1,136	LF	\$10.00	\$11,360.00
Decorative Brick Pavers by Crosswalks (10'				
Band)	3,520	SF	\$16.00	\$56,320.00
Decorative Brick Pavers in Intersection	1,200	SF	\$16.00	\$19,200.00
Safety Features				
ADA Detectable Warnings at Intersections	32	SF	\$36.00	\$1,152.00
Highly-visible Crosswalks	4	EA	\$500.00	\$2,000.00
Flashing Stop Sign	4	EA	\$1,500.00	\$6,000.00
Bus Shelter				
Bus Shelter 5' x 10'	1	EA	\$8,250.00	\$8,250.00
Concrete Pad for Bus Shelter	84	SF	\$12.00	\$1,008.00
Lighting				
Street Light with Banner Poles	3	EA	\$5,000.00	\$15,000.00
Amenities				
Benches	2	EA	\$2,000.00	\$4,000.00
Trash Receptacles	1	EA	\$1,500.00	\$1,500.00
Banners for Light Poles (1 per Pole)	4	EA	\$100.00	\$400.00
Tree Plantings with Amended Soil	8	EA	\$400.00	\$3,200.00
Flower Pots with Annuals	4	EA	\$500.00	\$2,000.00
			SUBTOTAL	\$391,185.37
		Contir	ngency (20%)	\$78,237.07
		Mobil	ization (15%)	\$58,677.81
	Desig	n & Engir	eering (15%)	\$58,677.81
			TOTAL	\$586,778.06

Design Expertise Recommended

Projects may require help beyond the capability of the Plymouth Visioning Committee or available city staff. For this improvement project, the visioning committee should expect to engage the services of a landscape architect and civil engineer.



Proposed Improvements to County Road S 56 & Main Street Intersection

Old School Park Concepts

Old School Park, located at the west end of Main Street, is the location of the former Plymouth School site. The park is unusually large for a community the size of Plymouth, and with other parks to maintain as well, puts a strain on community resources. The park has several beautiful oak trees, a playground, a baseball field that shows signs of little use and broad expanses of lawn. The visioning committee was torn as to the highest and best use for the park moving forward. The design team developed two concepts, that address needs, wants, and issues associated with the park that were brought up in the analysis phase of visioning.

The first concept sections off residential lots which would hopefully generate revenue for the city and add desired community growth. The children's playground would remain, and a splash pad and park shelter could be added. An existing recreational trail encircles the perimeter of the property and would include access from the residential lots and playground. This concept addresses the issue of maintenance costs since the park requires frequent mowing, would provide lots for families to build in Plymouth, and provide for more popular things for kids to do. The downside would be the loss of the baseball field. The second concept expands the existing recreational opportunities in the park to include a disc golf course, picnic shelters, and splash pad. Native grass plantings would provide wildlife habitat and educational opportunities and significantly reduce the amount of mowing.





econd concept shows an opportunity for increased recreational oppor

the city and add desired community growth. The first concept sections off residential lots which would hopefully generate revenue for

The second concept expands the existing and significantly reduce the amount of added. An existing recreational trail encircles and a splash pad and park shelter could be include access from the residential lots and The children's playground would remain, the perimeter of the property and would





Plymouth

Old School Park Concepts

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Plymouth School site. The park is unusually of Main Street, is the location of the former

Old School Park, located at the west end

Old School Park Concepts

playground. This concept addresses the

for families to build in Plymouth, and provide

for more popular things for kids to do. The

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RITLAND+KUIPER Landscape Architects

Landscape Architects: Craig Ritland, FASLA & Samantha Price, PLA, ASLA Landscape Architecture Intern: Jerry Philbin lowa State University | Trees Forever | lowa Department





Proposed Concept: Decreased Park Size with Residential Lots



 $\textit{First concept shows an opportunity for residential lots and eliminates the baseball \textit{field} \\$



Opinion of Probable Cost

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

Abbreviations used in the following costs opinion include: EA = each

Old School Park Improvements	QTY	Unit	Unit Cost	Subtotal
Amenities				
Picnic Shelter	2	EA	\$50,000.00	\$100,000.00
Picnic Tables	4	EA	\$2,500.00	\$10,000.00
Park Bench	4	EA	\$1,500.00	\$6,000.00
Splash Pad				
Splash Pads vary in costs depending on splash features, mechanics, and size. A probable cost is				
Plantings				
Deciduous Tree Planting (2" Cal.)	7	EA	\$400.00	\$2,800.00

Design Expertise Recommended

Projects may require help beyond the capability of the Plymouth Visioning Committee or available city staff. For this improvement project, the visioning committee should expect to engage the services of a landscape architect and splash pad company.

The committee would need to discuss this idea with the City of Plymouth for possible rezoning and a surveyor would divide the area into residential parcels.



Proposed Concept: Increased Recreational Opportunities



Second concept shows an opportunity for increased recreational opportunities in the park

North Scale

Opinion of Probable Cost

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

Abbreviations used in the following costs opinion include:

EA = each AC = acre

QTY	Unit	Unit Cost	Subtotal	
2	EA	\$50,000.00	\$100,000.00	
4	EA	\$2,500.00	\$10,000.00	
4	EA	\$1,500.00	\$6,000.00	
9	EA	\$750.00	\$6,750.00	
Splash Pads vary in costs depending on splash features, mechanics, and size. A probable cost is				
		•		
4	EA	\$400.00	\$1,600.00	
1	AC	\$6,000.00	\$6,000.00	
	2 4 4	2 EA 4 EA 4 EA 9 EA ures, mechanics, c	2 EA \$50,000.00 4 EA \$2,500.00 4 EA \$1,500.00 9 EA \$750.00 ures, mechanics, and size. A pro	

Design Expertise Recommended

Projects may require help beyond the capability of the Plymouth Visioning Committee or available city staff. For this improvement project, the visioning committee should expect to engage the services of a landscape architect and splash pad company.

Strand Park Improvement Suggestions

Cerro Gordon County's Strand Park on the north end of Plymouth is a wonderful asset to the City. The Shell Rock River access in the park for tubers and paddlers is an important part of the community's identity. Two main issues keep it from reaching its full potential: lack of a pedestrian connection to town and the overgrown vegetation that screens the park from County Road S56.

A trail connection on the east side of County Road S56 and clearing the vegetation to open the view into the park would be transforming.

In addition, the existing primary river access is on the east side of the river, where the parking area can become congested, forcing vehicles to park along 340th Street. The design team is suggesting the County, perhaps with assistance from the City, make improvements to the access on the west side of the river to absorb some of this traffic. These improvements could include additional parking, clearing a more open path to the river and new park signage including better way-finding that would direct users to the additional access opportunity.

The visioning committee would also like to see the County consider new shelters for tubers, paddlers, family reunions and special events.

Opinion of Probable Cost

The Cerro Gordo County Conservation Board would have an opinion of probably costs for suggested park enhancements and may have standards they use for park shelters, picnic tables, and signage. The design team recommends meeting with the conservation board and beginning the conversation about enhancements for Strand Park.



SUMMER 2018 10

Parking Enhancements

Proposed expanded parking suitable for water recreation activities

- . Clear out overgrown vegetation to existing river access
 - · Proposed trail connection to parking area
 - Improved signage to river access
- Proposed sidewalk/trailextension along east side of
- Proposed 10' recreation trail connecting park features

Strand Park Improvement Suggestions

asset to the City. The Shell Rock River access in the park for tubers and paddlers is an important part of the community's identity. Two main issues keep it from reaching its full potential: lack of a pedestrian connection to town and the overgrown vegetation Cerro Gordon County's Strand Park on the north end of Plymouth is a wonderful that screens the park from County Road S56. A trail connection on the east side of County Road S56 and clearing the vegetation to open the view into the park would be transforming.

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The visioning committee would also like to see the County consider new shelters for tubers, paddlers, family reunions and special events.

'Iymouth

Proposed entrance signs at each of the access drives Proposed way-finding signage directing to the Shell Rock River access poi

Strand Park

Nay-finding & Signage 🗕

Cerro Gordo County is pursuing funding to level and resurface the basketball and tennis courts

Strand Park Improvement Suggestions

RITLAND+KUIPER Landscape Architects

Landscape Architects: Craig Ritland, FASLA & Samantha Price, PLA, ASLA Landscape Architecture Intern. Jerry Philibin lowa State University | Trees Forever | lowa Department of Transportation



Implementation Strategies

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

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

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

Where to start: The design team is recommending pedestrian and vehicular way-finding signage be implemented throughout the community. This project was chosen because Plymouth is a destination for tubers and paddlers and locating access has been a challenge. Only a few signs would be needed making this a very cost-effective project. Implementing way-finding would be highly visible, aid in momentum towards other visioning projects and give credibility to the visioning committee.

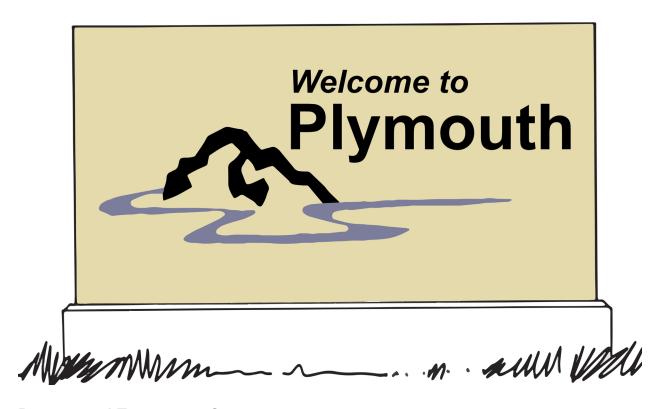
Signage and Way-finding: The design team recommends beginning the conversations with private land owners to locate areas for entrance signs if no locations within the right-ofway can be found.

Walkability in Plymouth: The walkability plan for Plymouth is a long-range project, but fundraising should begin immediately. A review of existing conditions along the exercise routes will need to be conducted. Plymouth will need to work with Cerro Gordo County engineers to ensure the best route to Strand Park. The design team recommends Plymouth initiates a sidewalk project to complete important disconnects and repairs where needed especially along the designated exercise routes.

County Road S56 Improvements: The visioning committee should share the concepts with the Cerro Gordo County engineer and discuss a potential project timeline for County Road S56 and Main Street intersection. The Cerro Gordo County engineer has already started discussing potential safety enhancements for this intersection and steps can be taken to implement her suggestions immediately.

Old School Park Concepts: The design team recommends the committee keep discussing the potential in Old School Park and understands the park is a special place in Plymouth. These concepts have started important conversations about the future of the park and issues related to its current use.

Strand Park Improvement Suggestions: Strand Park is under county jurisdiction and will require meeting with Cerro Gordo County Conservation Board to discuss the improvement suggestions for Strand Park. These improvements may be a joint effort between the County and the City of Plymouth.



Proposed Entrance Sign



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
- · lowa Department of Economic Development
- · Utility companies
- · Trees Forever

Grant Programs

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

Appendix A

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

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

COMMUNITY PROJECT FUNDING GUIDE



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

Online at: http://www.treesforever.org/Community Project Funding Guide

October 2017

Table of Contents

Downtown Streetscape

- Build with Bags Grant (p. 5-6)
- Community Attraction and Tourism Program (p. 7-8)
- Derelict Building Grant Program (p. 9-10)
- ♦ Iowa Arts Council Project Grant (p. 12-13)
- lowa Great Places (p. 16-17)
- ♦ Iowa Tourism Grant Program (p. 22)
- ♦ Iowa's Statewide Transportation Alternatives Program (p. 23-25)
- Main Street Iowa (p. 28-30)
- ♦ Paint Iowa Beautiful (p. 31-32)
- Pedestrian Curb Ramp Construction (p. 33)
- People for Bikes Community Grant Program (p. 34-35)
- ♦ Revitalize Iowa's Sound Economy (46-47)
- Scotts Miracle-Gro: GRO1000 Grassroots Grant (p. 48)
- Solid Waste Alternatives Program (p. 51-52)
- ♦ Stormwater Best Management Practices Loans (p. 53-54)
- ♦ Surface Transportation Programs Highway, Bridge & Transit (p. 55-56)

Historic Preservation

- ♦ Community Attraction and Tourism Program (p. 7-8)
- ♦ Derelict Building Grant Program (p. 9-10)
- ♦ Iowa Great Places (p. 16-17)
- ♦ Iowa Native Plant Society Small Grants Program (p. 20-21)
- ♦ Iowa Tourism Grant Program (p. 22)
- Iowa's Statewide Transportation Alternatives Program (p. 23-25)
- Restore Iowa! Grant Program (p. 44-45)
- Silos & Smokestacks National Heritage Area General Grant (p. 49-50)

Park/Open Space Acquisition

- ♦ Iowa Great Places (p.16-17)
- ♦ Iowa Native Plant Society Small Grants Program (p. 20-21)
- ♦ Land and Water Conservation Fund (p. 26-27)
- ♦ REAP City Parks and Open Spaces (p. 40-41)
- REAP DNR Open Spaces Protection: Acquisition and Development (p. 42-43)
- Water Recreation Access Cost-Share Program (p. 60-61)

Plant Materials

- Alliant Energy Branching Out (p. 1-2)
- ♦ Black Hills Energy Power of Trees (p. 3-4)
- ♦ Community Attraction and Tourism program (p. 7-8)
- ♦ DOT/DNR Fund (p. 11)
- ♦ Iowa Living Roadway Trust Fund (p. 18-19)
- ♦ Iowa Native Plant Society Small Grants Program (p. 20-21)

- ♦ lowa's Statewide Transportation Alternatives Program (p. 23-25)
- ♦ Land and Water Conservation Fund (p. 26-27)
- Restore Iowa! Grant Program (p. 44-45)
- Scotts Miracle Gro: GRO1000 Grassroots Grant (p. 48)
- ♦ Stormwater Best Management Practices Loans (p. 53-54)
- Trees For Kids/Trees For Teens (p. 57-58)
- ♦ Trees Please! (p. 59)
- ♦ Water Recreation Access Cost-Share Program (p. 60-61)

Trails

- ♦ Build with Bags Grant (p. 5-6)
- Community Attraction and Tourism program (p. 7-8)
- ♦ Iowa Clean Air Attainment Program (p. 14-15)
- ♦ Iowa Great Places (p.16-17)
- ♦ Iowa Tourism Grant Program (p. 22)
- ♦ lowa's Statewide Transportation Alternatives Program (p. 23-25)
- ♦ Land and Water Conservation Fund (p. 26-27)
- People for Bikes Community Grant Program (p. 34-35)
- ♦ Recreational Trails Program Federal (p. 36-37)
- ♦ Recreational Trails Program State (p. 38-39)
- ♦ REAP City Parks and Open Spaces (p. 40-41)
- ♦ Stormwater Best Management Practices Loans (p. 53-54)
- ◆ Surface Transportation Programs Highway, Bridge & Transit (p. 55-56)

APPENDIX I: Iowa Department of Transportation District Planners, and MPOs and RPAs APPENDIX II: Iowa Department of Transportation District Engineers



Appendix B

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

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

Guide to Transportation Funding Programs

of interest to local governments and others

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

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

February 2018



Economic Development Programs	
Revitalize Iowa's Sound Economy (RISE)	4
Railroad Revolving Loan and Grant Program	5
Aviation Programs	
Federal Airport Improvement Program (AIP)	6
State Airport Improvement Program	7
Airport Vertical Infrastructure Program	8
Rail Programs	
Railroad Revolving Loan and Grant Program	9
Highway-Railroad Crossing Safety Program	10
Highway-Railroad Crossing Surface Repair Fund	11
Railroad Rehabilitation and Improvement Financing Program	12
lowa Clean Air Attainment Program (ICAAP)	13
Road, Street and Bridge Programs	
Revitalize Iowa's Sound Economy (RISE)	15
<u>Highway Bridge Program</u>	16
lowa Clean Air Attainment Program (ICAAP)	18
Surface Transportation Block Grant Program	20
County and City Bridge Construction Fund	22
Federal Lands Access Program	23
Traffic Safety and Engineering Programs	
County-State Traffic Engineering Program (C-STEP)	24
lowa Traffic Engineering Assistance Program (TEAP)	25
Traffic Safety Improvement Program (TSIP)	26
<u>Urban-State Traffic Engineering Program (U-STEP)</u>	27
<u>Highway Safety Improvement Program – Secondary</u>	28
Pedestrian Curb Ramp Construction	30

Trails, Enhancement and Youth Programs	
DOT/DNR Fund	31
<u>Living Roadway Trust Fund</u>	32
Recreational Trails Program (Federal)	34
Recreational Trails Program (State)	35
State Scenic Byway Program	36
lowa Clean Air Attainment Program (ICAAP)	37
lowa's Transportation Alternatives Program	39
<u>Urban Youth Corps</u>	42
Transit Programs	
State Transit Assistance	43
Public Transit Infrastructure Grant (PTIG) Program	44
<u>Urbanized Area Formula Program (Sec. 5307)</u>	45
Fixed Guideway Capital Investment Program (Sec. 5309)	47
Enhanced Mobility of Seniors and Individuals with Disabilities (Sec. 5310)	48
Formula Grants for Rural Areas (Sec. 5311)	50
Intercity Bus Assistance (Sec. 5311(f))	52
Bus and Bus Facilities (Sec. 5339)	54
Congestion Mitigation/Air Quality (CMAQ)	55
State of Good Repair (Sec. 5337)	56
lowa Clean Air Attainment Program (ICAAP)	57
<u>Surface Transportation Block Grant Program – transit</u>	59
<u>Submittal Requirements</u>	60
<u>Transit System Regions (map)</u>	61
<u>Transportation Acronyms</u>	62
District Engineers (map)	66
RPAs and MPOs/District Planners (map)	67

