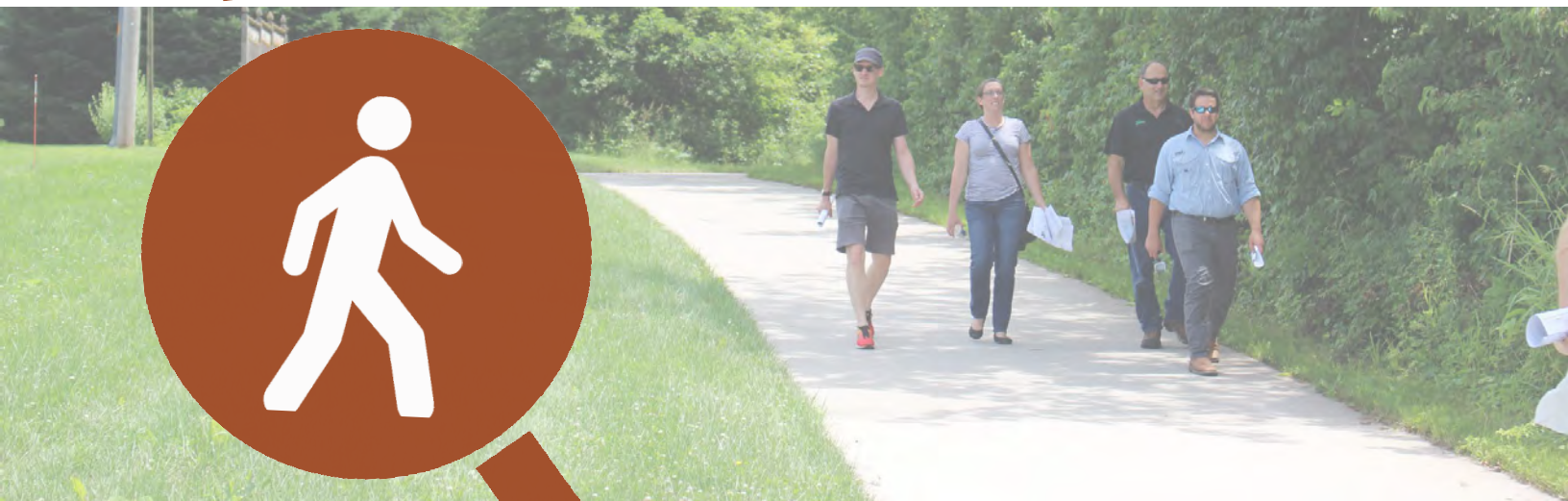




JOHNSTON WALKABILITY STUDY



Johnston, Iowa
November 2018



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INTRODUCTION

Background and Planning Process

What is Walkability?

BACKGROUND

The Johnston Walkability Study addresses the community-wide connectivity of sidewalks, trails, and supporting facilities between neighborhoods, schools, parks, and business locations in Johnston, Iowa.

The project kicked off in April 2018 with the signing of Resolution No. 18-82.

RESOLUTION NO. 18-82

A RESOLUTION ACCEPTING THE AGREEMENT WITH SNYDER & ASSOCIATES FOR SERVICES PROVIDED FOR THE CITY OF JOHNSTON'S WALKABILITY STUDY

WHEREAS, The City of Johnston would like to fully explore opportunities to get its residents walking and biking more often; and

WHEREAS, a full study must happen to review the best practices moving forward in creating a safe environment for those users; and

WHEREAS, Snyder & Associates have a strong background in studying crosswalks, roadways, trails and other areas where pedestrians and bicyclists may encounter motorized vehicles; and

WHEREAS, Snyder & Associates has already worked with the Johnston Public Schools on their safety zones project; therefore

BE IT RESOLVED BY THE CITY COUNCIL OF THE CITY OF JOHNSTON, IOWA, that:

The Agreement with Snyder & Associates be PASSED AND APPROVED this 4th day of April, 2018.

PLANNING PROCESS

The study began by gathering input from various city departments, stakeholder groups representative of the community, community engagement events, and a map-based outreach website, Map.social. A Steering Committee, composed of a diverse group of Johnston Stakeholders, met three times to discuss the outcomes of these input methods, and ensure that the project was fulfilling the city's goals. Using both community and steering committee input, network recommendations, policy recommendations, and an implementation plan have been established in line with the following goals:

PROJECT GOALS

1. Identify necessary infrastructure improvements and priorities.
2. Establish best practices for pedestrian facilities in existing and new development areas.
3. Ensure that pedestrian crossing treatments maximize pedestrian safety.
4. Consider maintenance needs and abilities with recommendations.

With these goals and gathered input in mind, Snyder has conducted a network analysis by reviewing current conditions, existing analyses of school walk zones, Iowa DOT crash records, and stakeholder input to identify gaps and deficiencies in the existing pedestrian environment. This analysis has produced a proposed future network map that the City of Johnston can use to program future infrastructure improvements.

Snyder has looked at policies and best practices regarding traffic calming, traffic engineering, subdivisions and commercial site plan ordinances, complete streets, and sidewalk programs. This research provides

both an overview of current policies and recommendations for amendments to support a more pedestrian-friendly community.

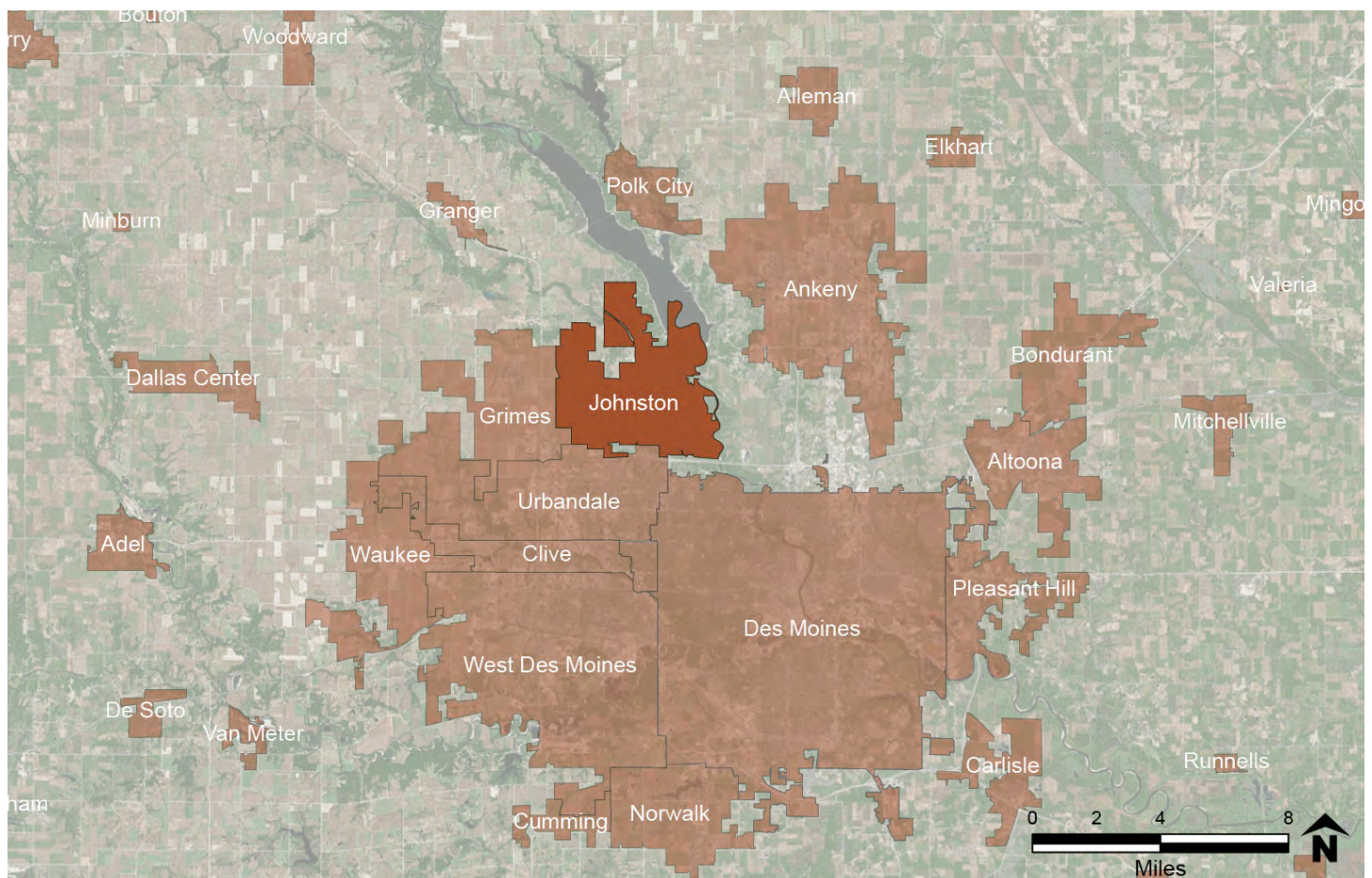
Additionally, Snyder met with the Park Board, Tree Board, Planning and Zoning Commission, Johnston Community School Board, Johnston Trails Committee, and City Council to gain an understanding of how this walkability study can make a positive impact for each of these organizations. Meeting presentations and notes can be found in the appendices of this document.

Finally, an implementation plan has been established, laying out short- and long-term prioritization recommendations.

This document is a compilation of the processes and final outcome of this study, and concludes with a summary of likely costs that will be incurred with each type of project in addition to a description of potential funding opportunities through both private and public grant programs.

STUDY AREA

Johnston, Iowa is a city located just northwest of Des Moines with a current population of around 21,000 people. The population nearly doubled between 2000 and 2010, and is expected to grow by close to 6,000 people by 2030. With this predicted future growth in population, an extensive network of parks, a leading school district, major employment centers like Corteva Agriscience, and nearby access to regional trails, creating a comfortable and safe network for biking and walking is essential to maintaining a high quality of life for Johnston residents.



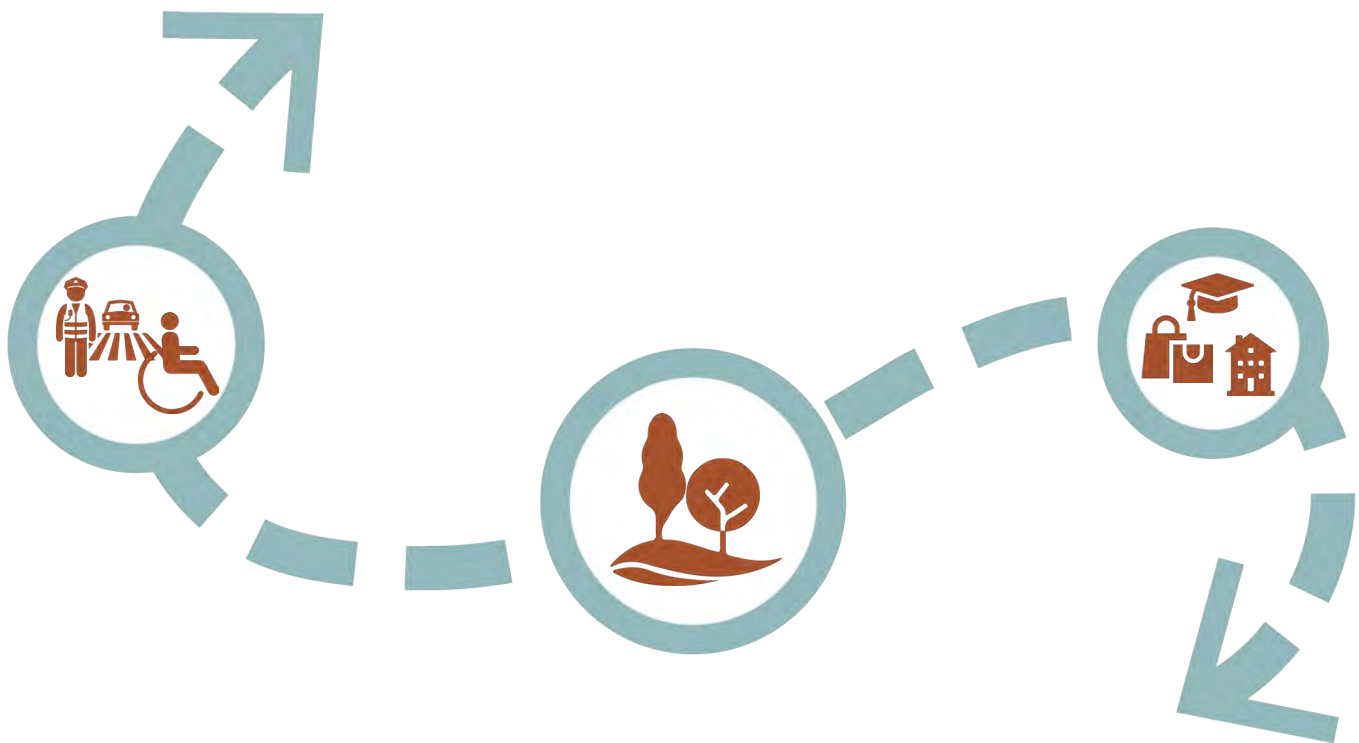
INTRODUCTION TO WALKABILITY

Walkability is a measure of the pedestrian friendliness of a neighborhood or community; this is based upon how easy it is to safely and efficiently walk from one place to another and how far destinations are from origins. Several factors need to be in place to create a walkable community.

First, there must be safe, connected, and ADA-compliant pedestrian infrastructure. This is the most essential factor necessary to promote walkability. For example, roadways must have sidewalks or sidepaths, signalized intersections should have pedestrian signals and push buttons, and businesses should have a path from the street sidewalk to the main entrance. The pedestrian facilities should enable multiple routes to reach the same destination, preferably exceeding motorized route options by providing trails and sidewalks on independent rights-of-way, cutting through cul-de-sacs, crossing creeks, and meandering through parks to provide vehicular-free shortcuts.

Second, the walking route must be comfortable and interesting. To make pedestrian routes more pleasurable, communities can implement street trees, public art, benches, and wayfinding signage. Even building facades factor in to interest and comfort since windows, retail displays, and sidewalk cafes are more interesting than blank walls or parking lots. To improve confidence in places of conflict with vehicle traffic, pedestrian countdown timers, refuge islands in streets, and traffic calming features assist.

Finally, there must be a purpose for the walk and the land use to support it. People who walk for transportation purposes need origins and destinations in close proximity to each other. Mixed land uses, denser housing and jobs, and neighborhood-oriented commercial and retail uses enable walking transportation trips. Children need safe walking routes to schools, parks, homes of friends and relatives, and even to groceries or convenience stores. People who walk for health and fitness purposes rely on infrastructure, comfort and interest to create a suitable walk, but they will further benefit from



parks and open spaces along their preferred routes as resting points or to incorporate additional types of exercise. Someone walking their dog may want to stop at a dog park or open space to throw a ball or Frisbee.

The Johnston Walkability Study Steering Committee brainstormed ideas of what makes a community walkable and identified the following factors:



PEDESTRIAN INFRASTRUCTURE

- Connections to destinations
- Facilities need to be well maintained, free of cracks and hazards
- Signals and signs located in appropriate spots
- Safe design
- Separation of cars and bicycles, appropriate
- Facilities for each corridor or crossing
- Ample facility/path width
- Limiting conflict points between bicycles and walkers
- Wayfinding signage



COMFORT AND INTEREST

- Pleasant, attractive, shady, interesting, and comforting vibe
- Seasonal maintenance such as snow and ice removal, tree trimming, weed control
- Access to amenities along trail such as restrooms, benches, and water
- A variety of facility types (natural trails for runners, walkers, and bikes)
- Tree lined paths provide comfort and safety, and slow traffic
- A variety of trees for aesthetics, using approved street trees



PURPOSE AND LAND USE

- Destinations and attractions - need to have a reason to go somewhere
- Housing density
- Location of employment and job density
- Transportation walking trips and connections to transit (including lack of access to a vehicle)
- Recreational and fitness trips

Recognizing that this is not an exhaustive list of walkability factors, this study builds upon and refines these ideas through the evaluation of Johnston's pedestrian network and recommendations for improvements.

One way to initially assess Johnston's level of walkability is to use its walkability index determined by Walk Score. Walk Score is an organization founded in 2007 and dedicated to promoting walkable neighborhoods. Using a patented algorithm, the WalkScore.com website "analyzes hundreds of walking routes to nearby communities." Each community or specific address receives the highest points for connected amenities within ¼-mile (about 5 minutes), with no points given after a 30-minute walk. Population density and infrastructure density are also considered and given a score. One critique of WalkScore is that it does not consider the condition of the sidewalk in the analysis. The points fall on a scale of 0-100, with 0-24 considered "Car-Dependent" and 90-100 considered a "Walker's Paradise." Since the Walk Score is heavily based upon whether or not "errands" require a car, it is primarily assessing the ability to walk for transportation purposes, and is not assessing the level of walkability solely for fitness or recreation purposes.

According to Walk Score, Johnston has an average Walk Score® of 21 on a 1-100 scale. Johnston's score indicates that it is a heavily vehicle-dependent city. Within the Des Moines Metro, only Pleasant Hill has a lower Walk Score.

The scoring system updates every six months



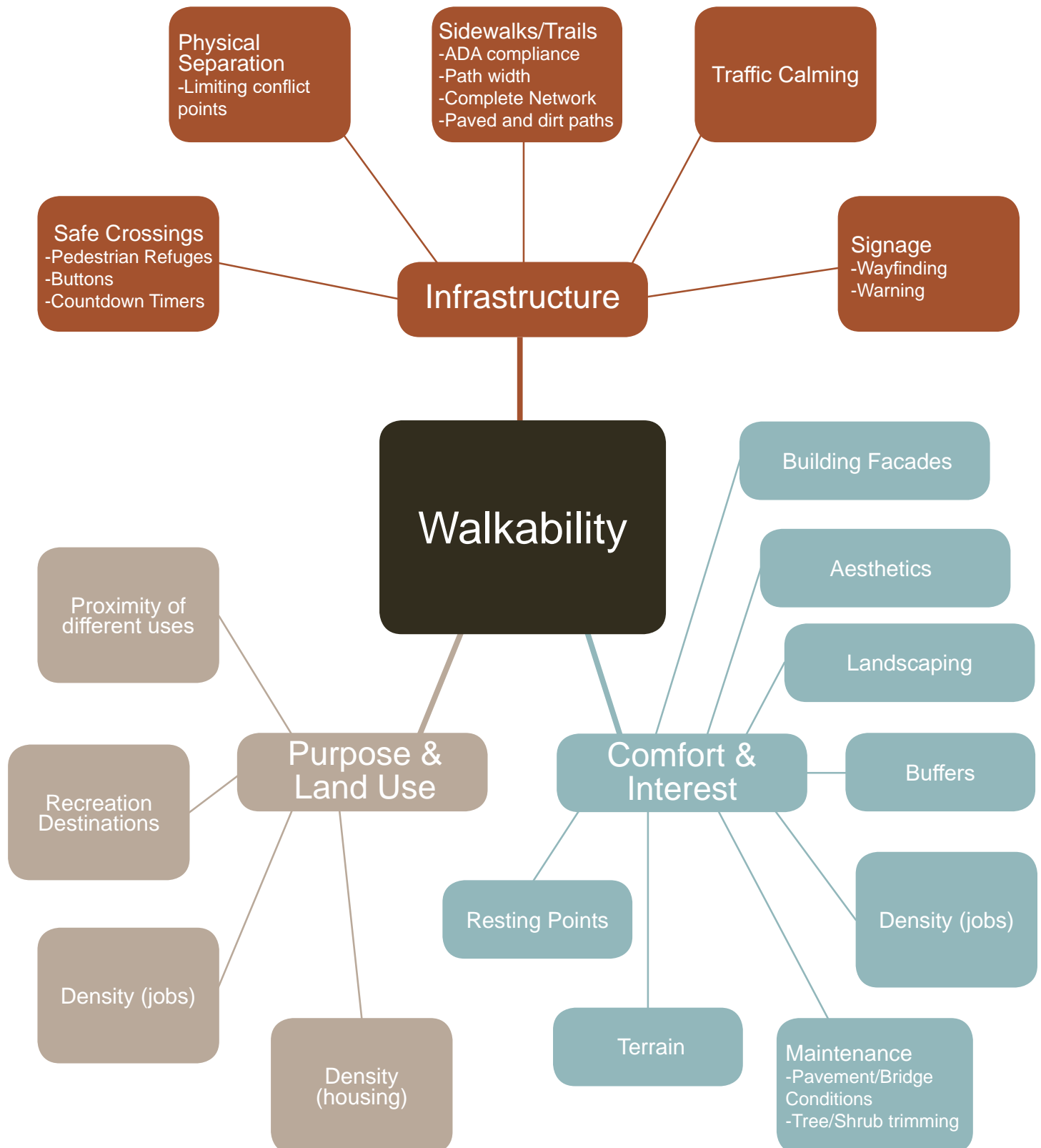
using data sources such as Google, Education.com, Open Street Map, the U.S. Census, Localeze, and places added by the Walk Score community.

Challenges to improving walkability for transportation purposes in Johnston include the network of minor arterial and collector roads, which are fed by neighborhood cul-de-sacs and looped local roads, and lower density residential development and vehicle-oriented commercial land uses.

City	Walk Score®
Johnston	21
Windsor Heights	56
Des Moines	45
Waukee	40
Grimes	39
Altoona	35
Urbandale	32
West Des Moines	31
Ankeny	30
Pleasant Hill	17

Walk Score Index

Elements of Walkability



EXISTING CONDITIONS

Johnston 2030 Comprehensive Plan

Geographic Information Systems (GIS) Data

Existing and Proposed Network

Destinations

Johnston Community Schools - Walk Zones

Crash Data

JOHNSTON 2030

The 2030 Comprehensive Plan places significant emphasis on multimodal transportation and walkability. The introduction states that “roads, sidewalks, trails, and mass transit will be the basis of a system that provides safe, convenient connections throughout the community and the surrounding area” (p. 10). Sidewalk expansion for mobility and trail connectivity was called out as an action step specifically in the High Density Residential, Mixed Use, Office Areas, East of Merle Hay, and Parks and Recreation sections of the plan.

As of the adoption of the comprehensive plan in 2010, roughly 70 miles of sidewalks existed within the city, with significant gaps identified east of Merle Hay from Beaver Creek to the Saylorville Dam, and smaller areas on the west side of town. As much of the East District (east of Merle Hay, south and west of NW Beaver Drive, and north of the southern corporate limits) lacks city utilities,





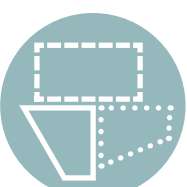
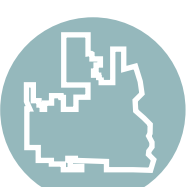
the comprehensive plan determined that the best time to add sidewalk would be in coordination with CIP projects in that area.

Resident input placed a heavy emphasis on active living in Johnston, specifically saying that Johnston:

- Truly needs to be a multi-modal community that includes trails, sidewalks, and a transit station
- Needs to be pedestrian friendly
- Needs to add bike and walking trails throughout the community
- Should provide better connections to parks
- Should have a healthy lifestyle—be a community that supports walking
- Should be a gateway to regional trails
- Should preserve natural areas (p. 96).



<https://www.cityofjohnston.com/DocumentCenter/View/40/2030-Comprehensive-Plan?bidId=>

	Shapefile	Attributes
	Street Center Lines	<ul style="list-style-type: none"> -Public or private -Directional prefix -Street name -Street type -Directional suffix -Full name
	Destinations: Walkable Locations	<ul style="list-style-type: none"> -Points only -Includes daycares, nursing homes, and ChildServe
	Places of Worship	<ul style="list-style-type: none"> -Points only
	Grocery Stores	<ul style="list-style-type: none"> -Points only
	Zoning Districts	<ul style="list-style-type: none"> -Zone -Ordinance references -Planning and Zoning case number, if any
	City Boundary	



Shapefile

Future and Existing Trails and Sidewalks

Attributes

- Status: existing, future
- Materials: asphalt, concrete
- Length in feet
- Name
- Year built
- Facility type - trail, sidewalk
- Facility Width in Feet
- Owner (Jurisdiction)
- SnowMain: 0, 2, 3
- Future Status: 0-5
 - null: Existing sidewalks in service.
 - 0: Existing trails in service.
 - 1: Gap in sidewalks, slated to be completed as subdivisions are built out.
 - 2: Gaps in sidewalks or trails, planned as future CIP alone or in conjunction with CIP street work
 - 3: Gaps with no future plans due to location or other issue.
 - 4: Gap that City Council has deferred construction, may require sidewalk or trail installation at will per site plan requirement.
 - 5: Random gaps due to either unbuildable lot with no sidewalk currently or other situation.

GEOGRAPHIC INFORMATION SYSTEMS (GIS) DATA

To facilitate an accurate analysis of the pedestrian infrastructure, the City of Johnston provided GIS-compatible shapefiles with the following attributes:

Parks information was sourced from the City of Des Moines GIS database, which includes parks throughout the metro area.

Des Moines Area Regional Transit Authority data was used to identify the location of bus routes number 5 and number 93, along with bus stop locations for each route in Johnston.

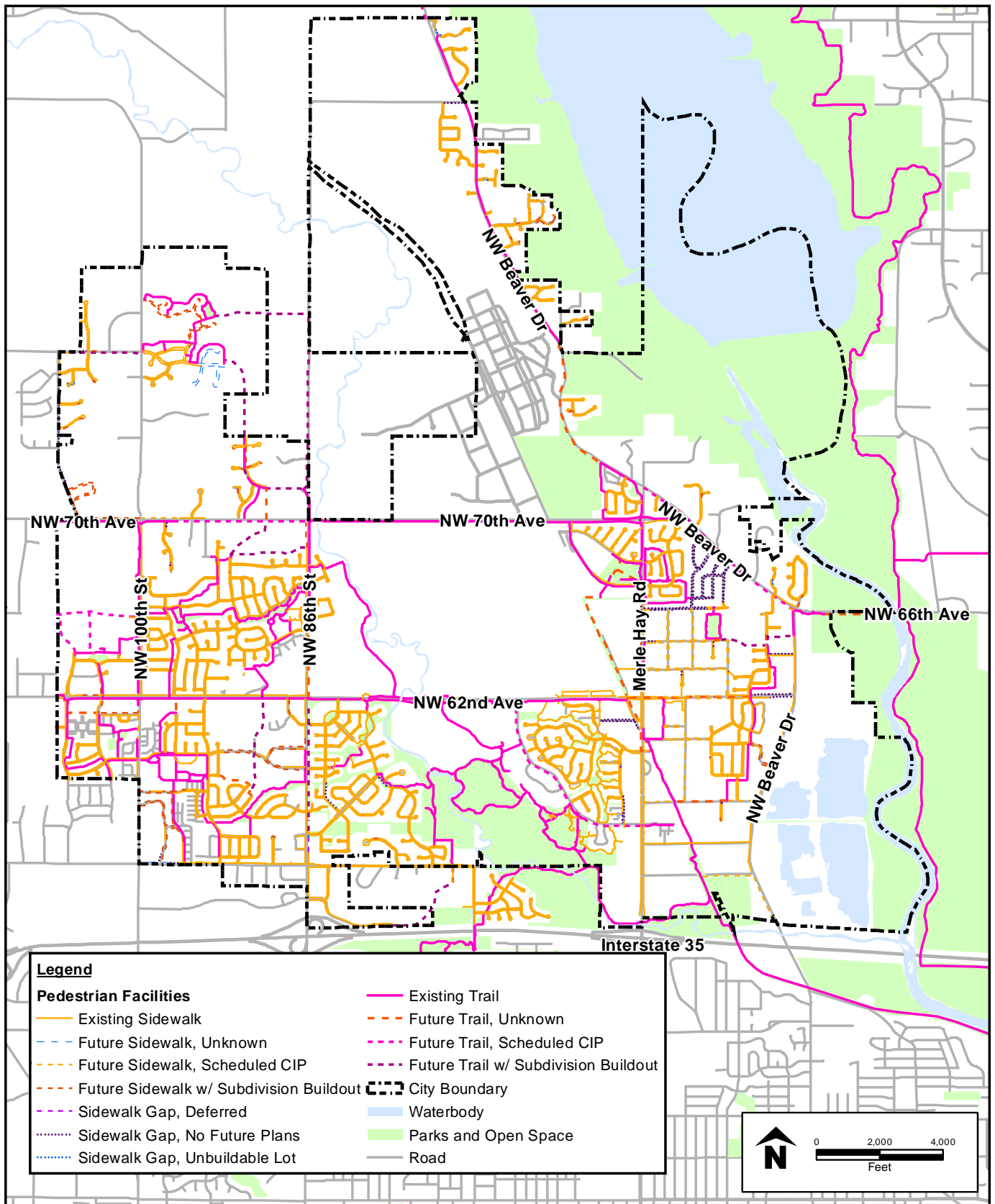


Exhibit 1 - Existing Conditions

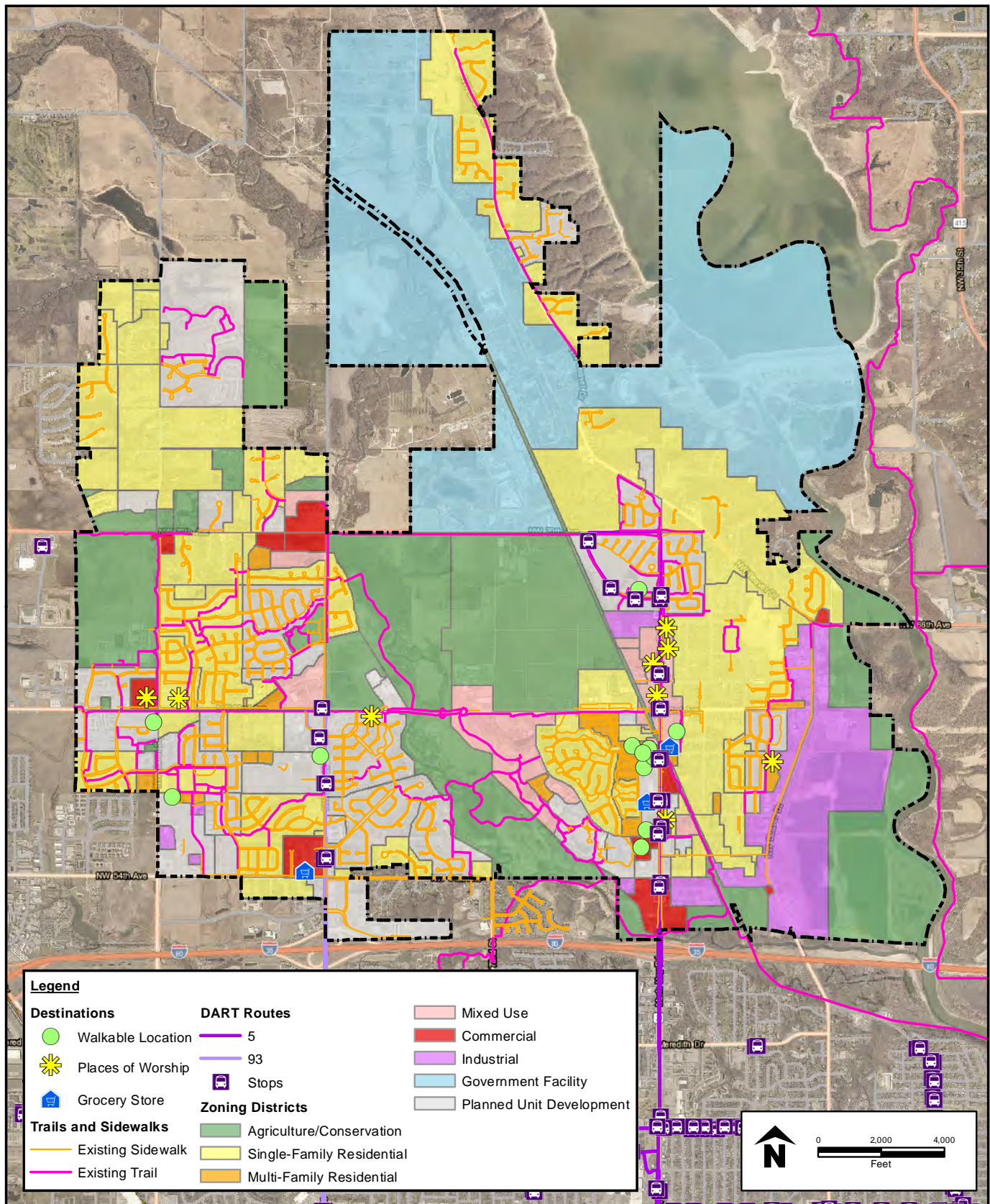


Exhibit 2.1 - Destinations

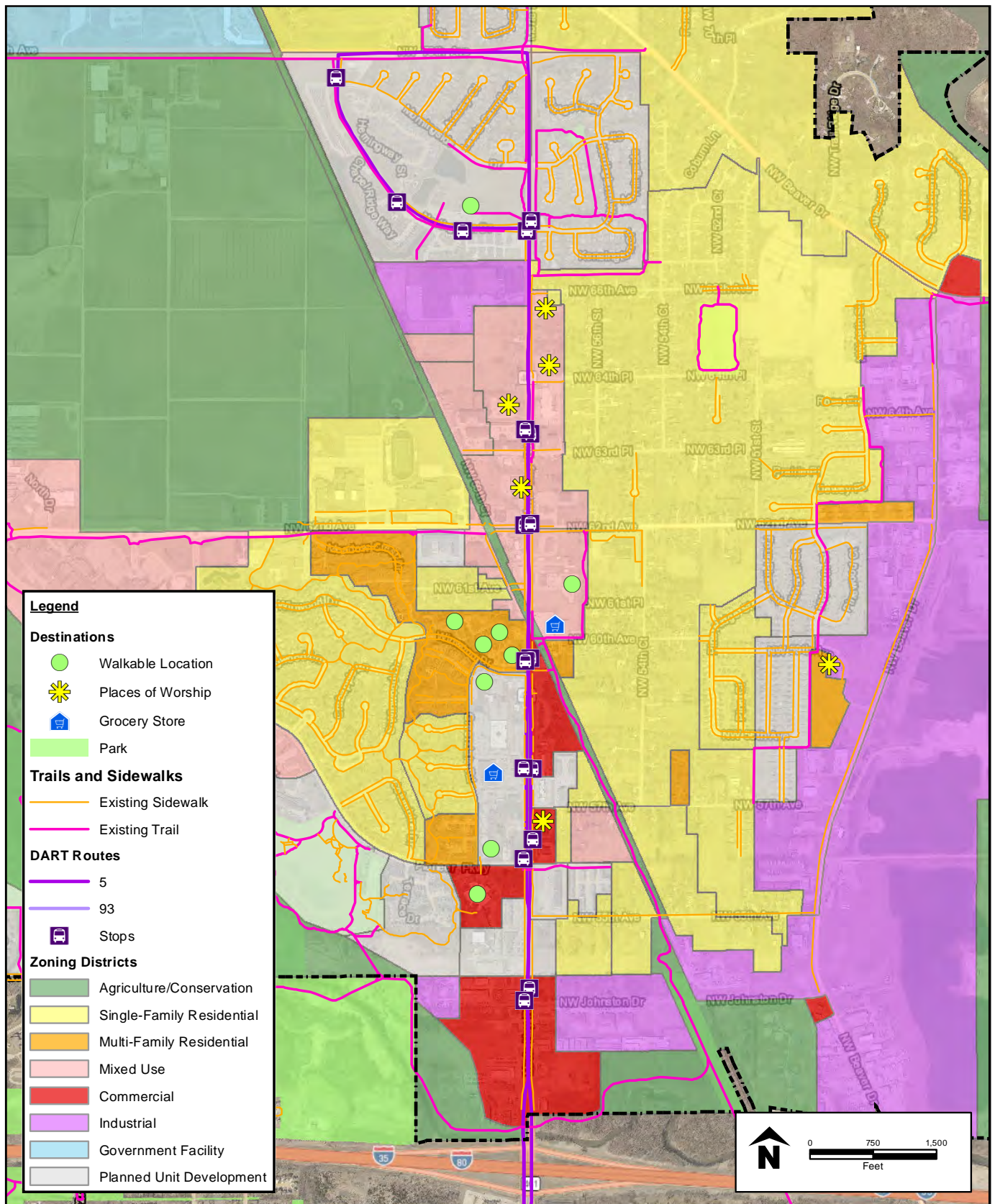


Exhibit 2.2 - Destinations (Merle Hay Road)

A 2015 mapping effort Snyder & Associates completed for the Johnston Community School District identified school walkshed boundaries and hazards defined by the school board.

The following maps of Existing Conditions and

Elementary Schools – Grades K-5, approximately 3,000 students

Beaver Creek
Horizon
Timber Ridge
Wallace
Lawson

Middle Schools – approximately 2,200 students

Summit Middle - Grades 6-7
Johnston Middle - Grades 8-9

High School – approximately 1,600 students

Johnston High - Grades 10-12

Destinations display the data collected.

JOHNSTON COMMUNITY SCHOOLS - WALK ZONES

Johnston has five elementary schools, two middle schools, and one high school, which together accommodate an estimated 7,000 students.

The Johnston Community School District has a Walk Zone policy that identifies a 1-mile-radius walk zone for students in grades K-9, and a 2-mile-radius walk zone for high school students. To determine safe walk zones, factors considered included safety hazards such as lack of designated road crossings, lack of sidewalks, inadequate signage, inadequate signal push-button placement, and the age of students within those walk zones.

For students outside their designated walk zone for their respective schools, the school district provides bus transportation at no additional cost to the student. Paid bus ridership is available



Johnston High School

<http://www.snyder-associates.com/projects/johnston-high-school-stadium-complex>

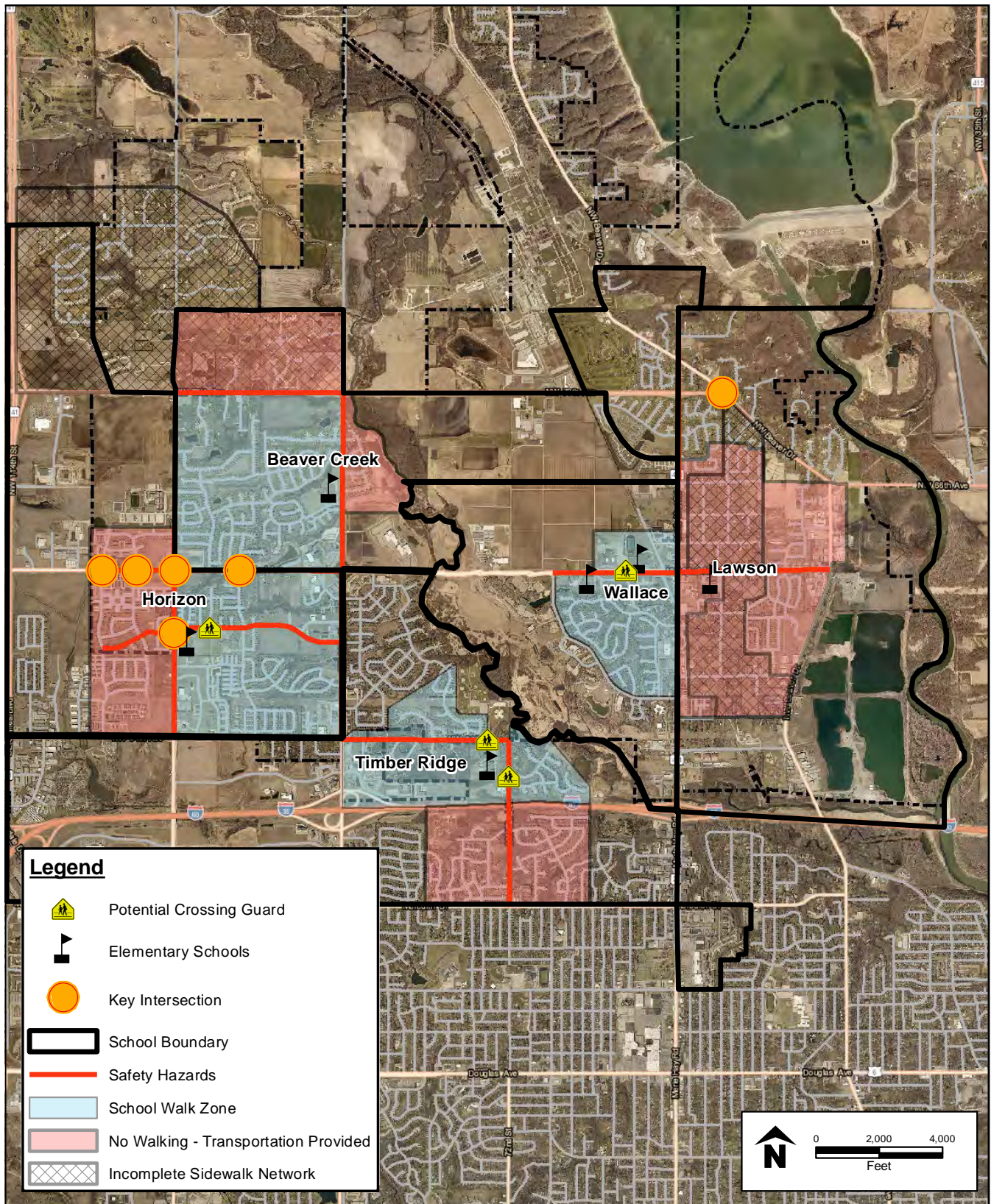


Exhibit 3.1- Elementary School Walk Zones

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 SOURCES: Esri, HERE, Garmin, © OpenStreetMap contributors

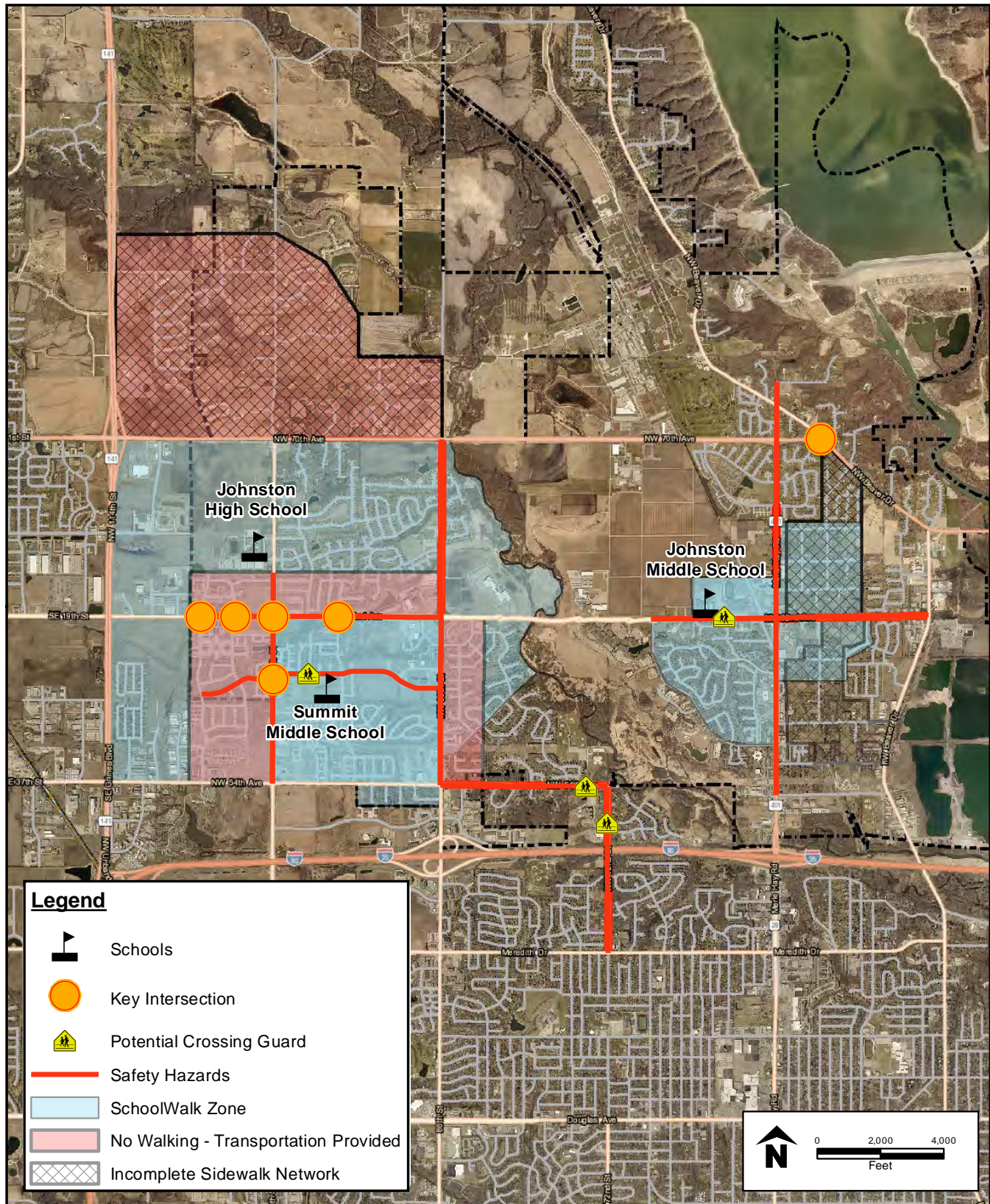


Exhibit 3.2 - Middle School and High School Walk Zones

Johnston Walkability Study | Johnston, Iowa | 5/8/2018

on a space-available, distance rubric basis for families within the walk zone who prefer bus transportation.

The following maps show the general walk zones used for elementary, middle, and high schools within the Johnston Community School District.

CRASH DATA

City-specific data for pedestrian-involved and



Johnston Bicycle and Pedestrian Crash Data

No.	Case Number	Date	Time	Address	Type	Severity	Injured Age	Injured Gender
1	2008447837	6/23/2008	9:38	5100 Block Of Merle Hay Road	Bike	Major Injury	47	F
2	2008450877	7/15/2008	17:29	Sb/Wb Nw 86Th St And Nw 54Th Ave	Ped	Minor Injury	30	F
3	2009506394	5/1/2009	17:44	6104 Four Pine St	Bike	Major Injury	8	M
4	2009518350	7/16/2009	17:05	62Nd/Crescent Chase	Bike	Possible Injury	71	M
5	2009545503	12/27/2009	13:00	6200 Block Nw 94Th St	Ped	Minor Injury	10	F
6	2010563783	3/23/2010	16:28	Merle Hay Road And Northglenn Dr	Bike	Major Injury	33	F
7	2010565715	4/8/2010	15:04	Merle Hay Rd And Pioneer Pkwy	Ped	Possible Injury	38	F
8	2010579584	6/15/2010	15:47	Merle Hay Rd	Bike	Minor Injury	11	F
9	2010577677	6/15/2010	13:40	N Winwood Dr & Merle Hay Rd	Bike	Minor Injury	20	M
10	2011640696	7/23/2011	14:40	Merle Hay Rd And Nw 62Nd Ave	Bike	Possible Injury	16	M
11	2013739308	5/12/2013	18:07	4700 Block Nw 62Nd Ave	Bike	Possible Injury	18	M
12	2013752854	7/12/2013	17:07	5100 Blk Merle Hay Rd	Ped	PDO	-	-
13	2014809881	6/5/2014	17:10	6055 Nw 49Th St	Ped	Minor Injury	8	F
14	2014810469	7/29/2014	16:20	5000-B Merle Hay Rd	Bike	Possible Injury	60	M
15	2015874009	8/14/2014	16:53	Pioneer Pkwy And Merle Hay Rd	Bike	Minor Injury	17	F
16	2015886156	10/25/2015	0:35	7600-B Nw Beaver Dr	Ped	Major Injury	33	M
17	20170981564	5/2/2017	7:21	Nw 63Rd Pl And Merle Hay Rd	Ped	Possible Injury	16	M
18	20171001946	8/29/2017	17:58	Nw 66Th Ave And Merle Hay Rd	Bike	Fatal	13	M

bicycle-involved crashes was analyzed utilizing the Iowa DOT's Saver web application and ArcGIS. The following table and map display the bicycle and pedestrian crash data, including their locations

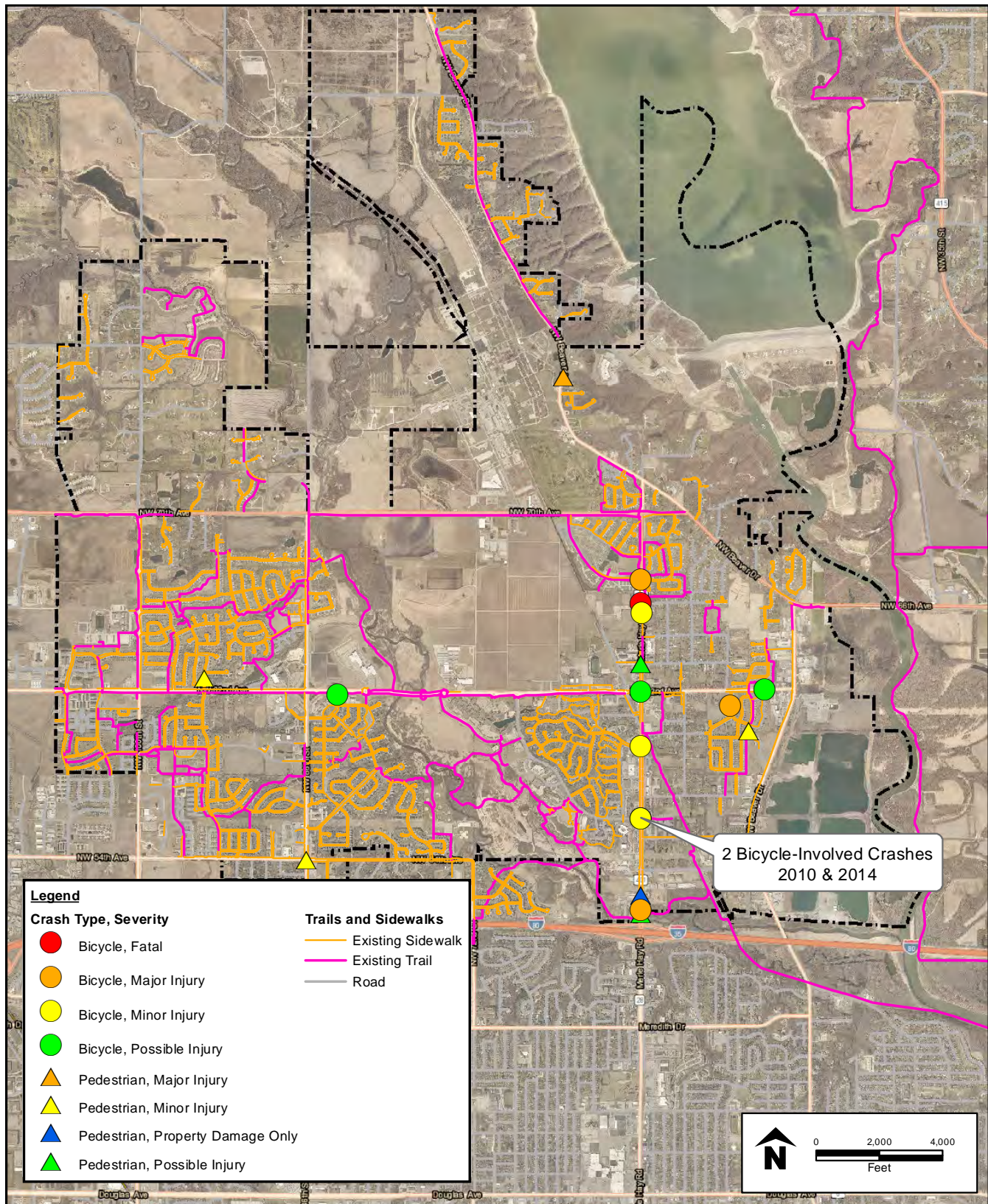
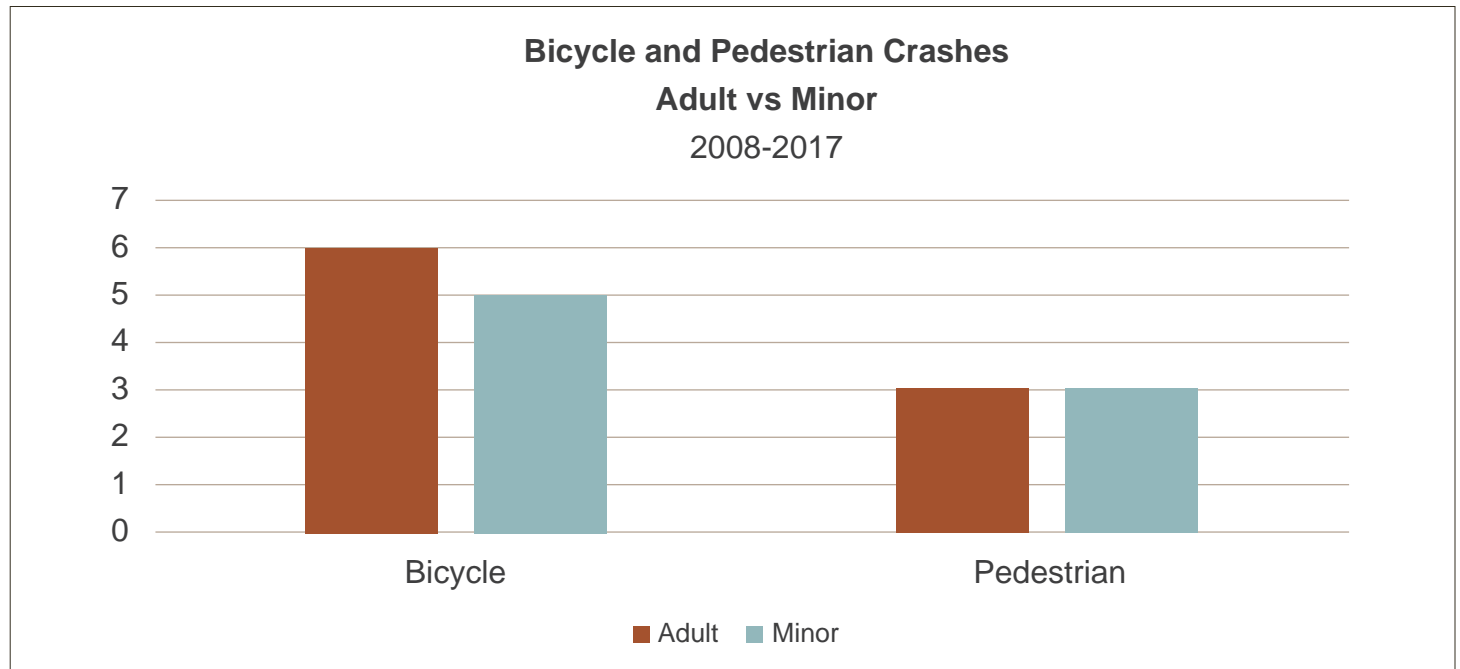


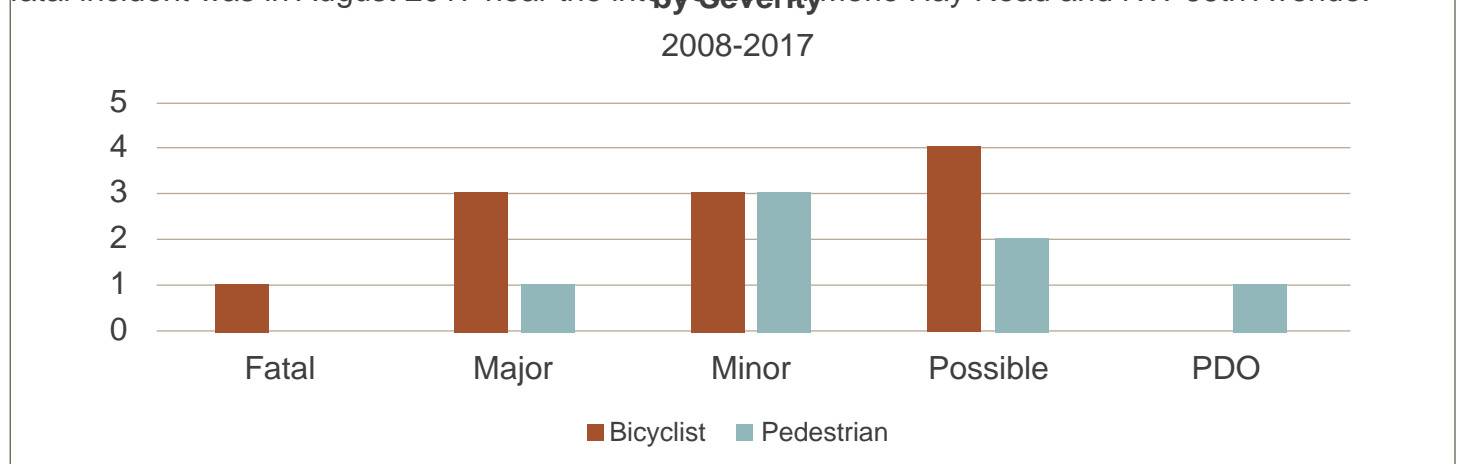
Exhibit 4 - Crash Data: 2008-2017

within Johnston for the time period 2008-2017.



Between 2008 and 2017, 11 of 17 crashes occurred along Merle Hay Road. A small cluster of three crashes occurred in the neighborhood east of Lawson Elementary School. There were six adult-involved bicycle crashes, versus five involving minors. Pedestrian crashes involving adults equaled those involving minors, with three of each during the identified time period. Most bicycle accidents were classified as Major, Minor, or Possible Injury. The majority of pedestrian crashes were classified as Minor or Possible Injury. The only Property Damage Only (PDO) crash involved a pedestrian. It is possible that other PDO crashes occurred but were not reported due to no injury or the minor nature of the damage. The Iowa DOT standards generally require \$1,500 or more in damages to be identified to constitute a PDO report in their database.

The intersection of Merle Hay Road and Pioneer Parkway experienced two bicycle-involved crashes with minor injuries in 2010 and 2014. At the intersection of Merle Hay Road and NW 66th Avenue, there were two incidents overlapped. The fatal incident was in August 2017 near the intersection of Merle Hay Road and NW 66th Avenue.



WALKABILITY ASSESSMENT

Map.social - Data Gathered

Map.social - Analysis and Recommendations

MAP.SOCIAL - DATA GATHERED









The map.social online mapping platform was used for public engagement related to walkability in Johnston. A summary of the data and comments received through this engagement activity are provided in the appendix. The comments have been copied verbatim from the input received, and are formatted in tables by category.

The map.social site allowed registered users to drop selected icons or draw lines onto an interactive base map and describe the issue

associated with each location noted. The base map included the locations of existing trails and sidewalks, schools, parks, and planned sidewalk construction. Users could also upload small (less than 2MB) photos depicting the issue. Registered and unregistered users can view others' input and vote up or down to indicate agreement or disagreement on others' comments. The following table shows the icons included for use on the website and the description of each.

The following table shows the icons included for use on the website and the description of each.

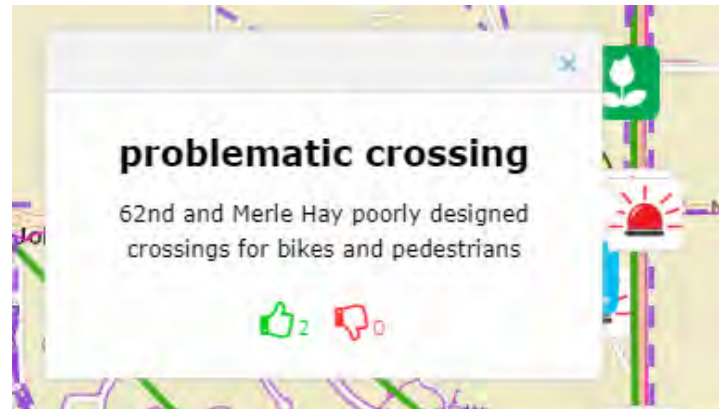
Map.social Icons

Icon	Name	Description
	Pedestrian Destination	Places I would like to walk to
	Favorite Pedestrian Routes	Places I like to walk
	Gaps in Pedestrian Routes	Areas needing a sidewalk or trail to complete a connection
	Problematic Intersection or Crossing	Intersections or mid-block crossings that are difficult for pedestrians
	Pedestrian Safety Hazard	Areas that pose a safety concern to people walking
	DART Stops Needing Improvements	DART stops that need a better waiting area or route to/from
	Beautification Needed	Areas that are aesthetically unappealing to walk by/through
	Other	All other points

The link for the website was added to the City's website on May 11, 2018, and was open until June 18, 2018 for comment. The City advertised the engagement period by distributing 500 small business-sized cards, via community email newsletters, and on sandwich board signs at parks and special events including the Mayor's Ride, Coffee with a Cop, the Farmer's Market and Johnston Green Days Festival. Volunteers at the Green Days Festival from June 15-16 passed out business cards with the website and took feedback in person. Eight new comments were received from 7 individuals and input into the "Admin" map on the website.

Articles were written in the *Johnston Living* magazine, the *Johnston Register*, and the *Business Record*. Notice was also distributed via Facebook and Twitter, with Facebook attracting 838 views, 5 shares, 3 comments, and 16 reactions; and Twitter receiving 5 retweets and 6 likes.

Initially, some users had difficulty navigating the website. The City and Snyder & Associates created a short instructional video to walk users through each step of registering, adding information to a map, and viewing and voting on others' comments.

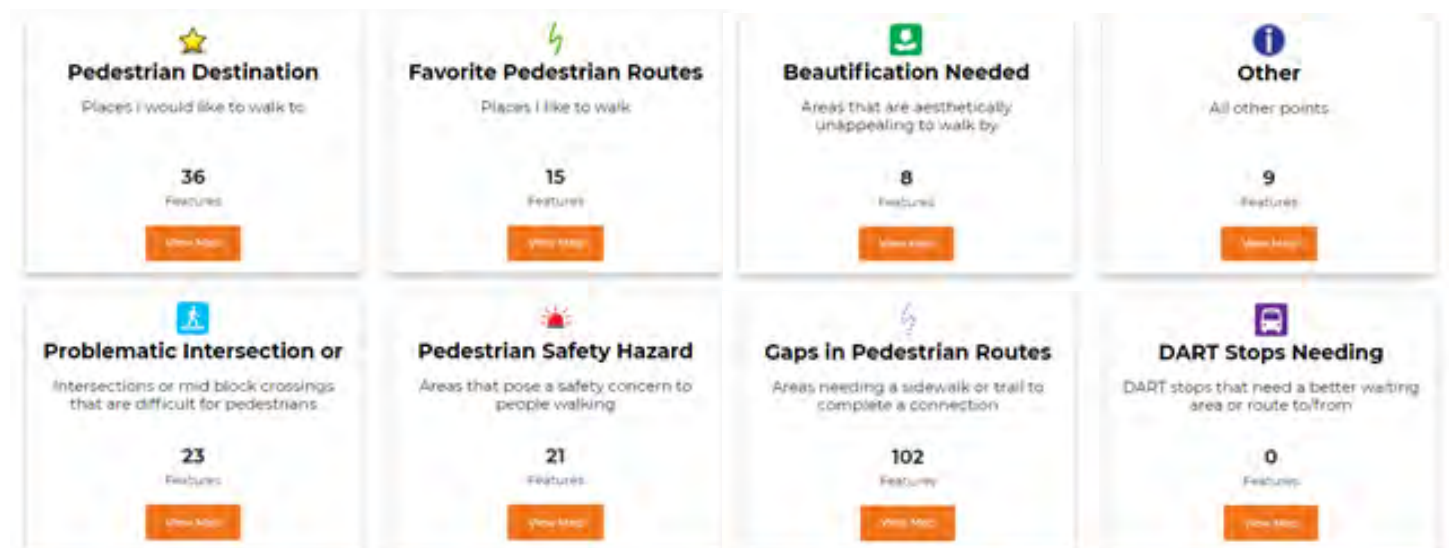


Example of a user's description of a Pedestrian Safety Hazard

The resulting YouTube video had 37 views. Some people preferred to email in their comments rather than use the website. When this happened, Snyder & Associates added their comments to an "Admin" map on the map social site on their behalf. Comments from 15 individuals were input onto the Admin map.

In total, there were 66 individual contributors and 214 features added through the website. The types of features were broken down as show here.

Number and Type of Features Added



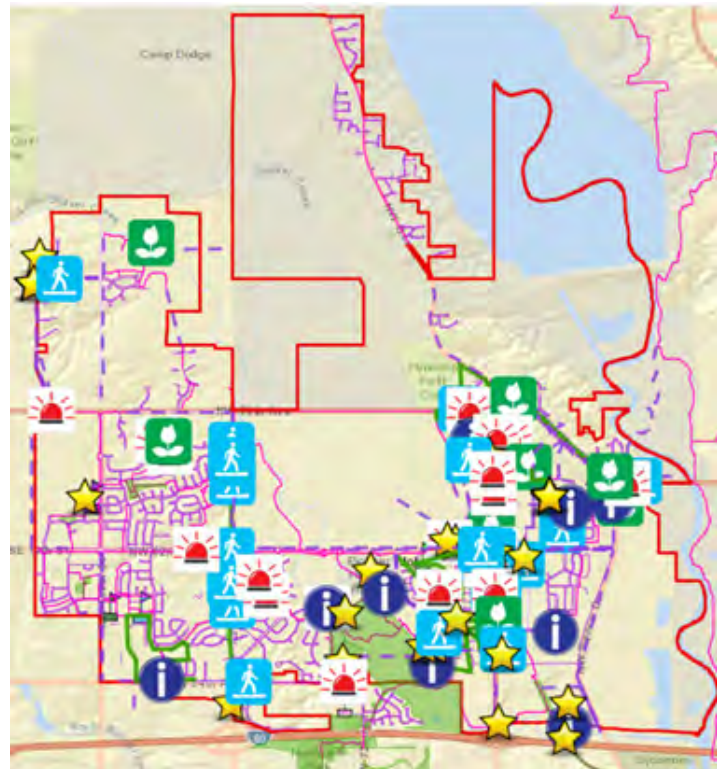


Word cloud generated from Map.social comments

The resulting map image shows a variety of icons representing each type of issue. When viewed online, users can zoom in and out to see the details related to each icon. To assess the data received, we have downloaded the input into GIS shapefiles and have included each in the appendix.

In addition to the locations and specific comments collected, the Map.social platform creates a word cloud that compiles the most commonly-used words from the comments added to the website. The image (shown above) shows the word cloud generated from this engagement activity. Unsurprisingly, sidewalks, trails, and parks are among the most popular words included in public comments.

The specific locations and associated comments from this engagement activity are included in both map and table form located in the appendix of this document, pages X-X.



Map.social map resulting from community input

MAP.SOCIAL - ANALYSIS AND RECOMMENDATIONS

To analyze the data gathered online, first we consolidated similar/identical lines and points into single features in the GIS database.

Next, we assigned various additional attributes to the table, such that it contains the following:

- **Project Type** – Each line feature is classified as a Corridor, Favorite Route, Sidewalk Gap, Trail Gap, or Other. Each point feature is classified as Crossing, Hazard, Beatification, Destination, or Other.
- **Work Category** – These include Education/ Enforcement, Infrastructure, Maintenance, or Other.
- **Votes** – This the sum of the “like” votes and the number of individual contributions of the same issue.
- **Urgency** – This is a Low, Medium, or High rating based upon city staff assessment of the need for the project and the number of votes. Anything that was not in compliance with the Americans with Disabilities Act (ADA) was given a “high” urgency rating.
- **Difficulty** – This is a Low, Medium, or High rating based upon a general assessment of obstacles such as terrain, right-of-way availability, existing or future development, and constructability.
- **Justification** – This represents the justification for moving forward with the project, including ADA Compliance, Safety, Connectivity, or Aesthetics.
- **Description** – This is a summary description of the issue, initially based upon the public comments and modified through the review process.
- **CIP** – This indicates whether or not the feature is currently addressed in the Capital Improvement.
- **Recommendation** – This is the recommendation of how to address the issue.

We presented the results of the online engagement to the Steering Committee and added a few more features based upon their feedback. We then met with City staff to review each feature, and also to add some missing features (e.g. missing sidewalks). We ended up with 170 unique features consisting of 101 line features and 69 point features.

LINE FEATURES – TRAILS AND SIDEWALKS

There are 34 trail gaps and 50 sidewalk gaps, additional line features are for Favorite Route, Corridor, or Other. Please refer to the Trail and Sidewalk Gaps – Urgency & Justification exhibit for more details.

Of the 34 trail gaps, there were 3 that were already existing and 6 that were not recommended to be constructed due to safety concerns or infeasibility (2 of these had alternative routes). Of the remaining, 14 were already noted in the CIP. That leaves 10 trail gaps that need to be addressed, 4 of these would be constructed upon development of the adjacent site.

Of the 50 sidewalk gaps, there were 2 that were already existing, 5 that were not recommended to be constructed, and 1 was outside the City’s boundary. Of the remaining, 31 were already noted in the CIP or to be constructed through the City’s Sidewalk Program. That leaves 11 sidewalk gaps that need to be addressed, 5 of which would be addressed in conjunction with development of the adjacent site.

Please refer to the Trail and Sidewalk Gaps – CIP Status exhibit for details on locations and recommendations.

POINT FEATURES – CROSSINGS AND HAZARDS

There are 26 crossing locations and 12 hazard locations identified in the study, additional point features are identifying Destinations, Beatification, and Other. Please refer to

the Crossing and Hazards – Urgency and Justification exhibit for more details.

Of the 26 crossing locations, 2 were not recommended to be constructed and 1 was recommended to be addressed through educational efforts (trail crossing of NW 60th Street by Van Dees Ice Cream). Of the remaining, 12 were already noted in the CIP to be improved. That leaves 11 crossings that need to be reviewed for improvements and potentially added to the CIP.

Of the 12 hazard locations, 1 was recommended to be addressed through educational efforts (mopeds on trail). Of the remaining, 3 were already in the CIP to be repaired. That leaves 8 hazards that need to be reviewed for improvements and potentially added to the CIP.

Please refer to the Crossings and Hazards – CIP Status exhibit for details on locations and recommendations.

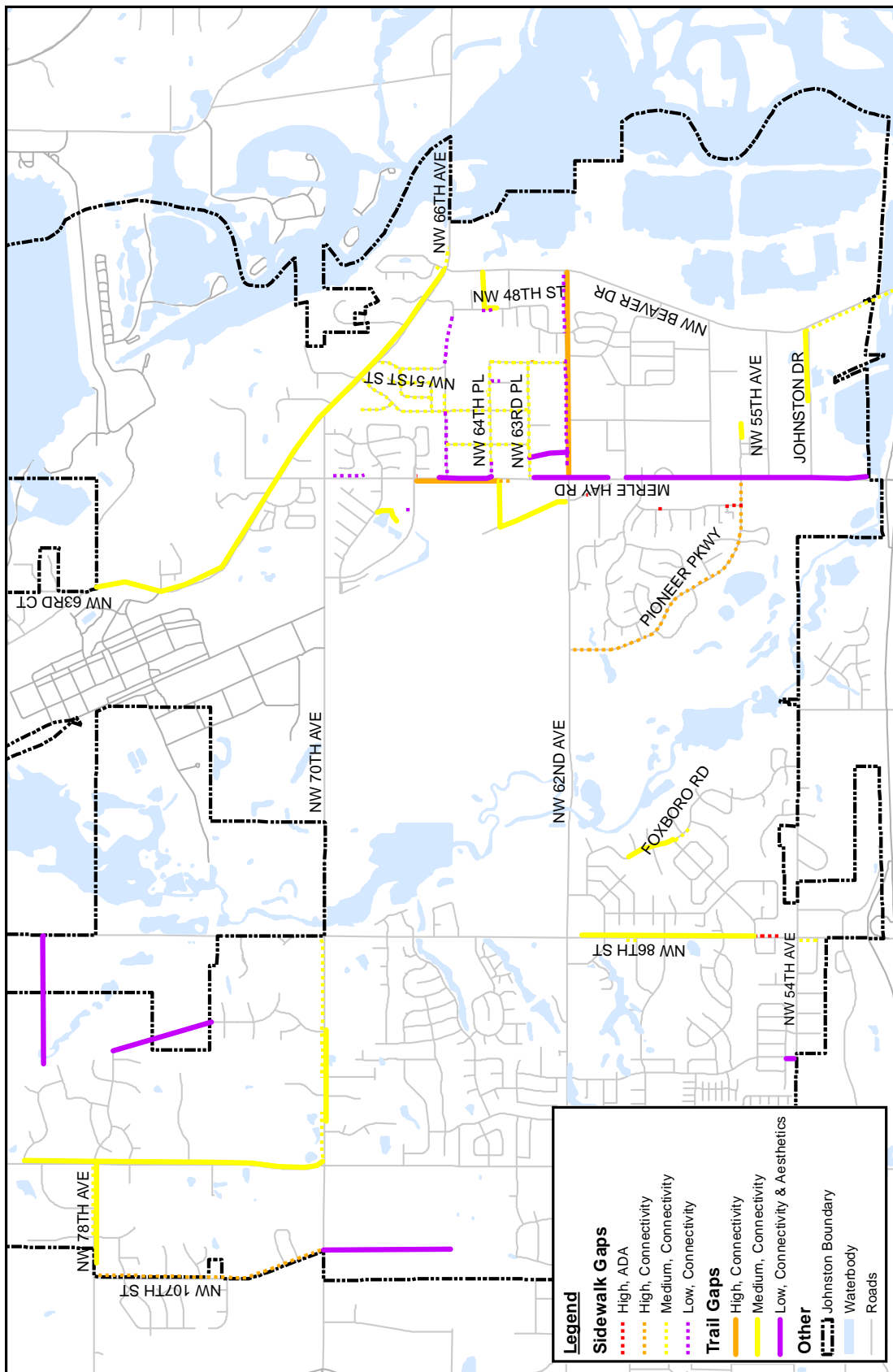
SCHOOL ZONES

In addition to the city-wide analysis, we compared each school's walk zone and crash data to the trails and sidewalk gaps and the crossings and hazards, which was presented to the school district in August 2018. Please refer to the exhibits for each school's walking zones.

OVERALL RECOMMENDATIONS

The Recommendations exhibits include the entire city split into quadrants (northwest, northeast, southeast, and southwest), with all recommendations for trail and sidewalk gaps, crossings and hazards. It also includes crashes, and school walk zones for comparison of data.

FILE PATH: \\vofion.snyder-associates.com\volume\Projects\2018\1180337\GIS\Map.d_2018-07-27_TrailSidewalkGap_UrgencyJustification.mxd
 SOURCES: Iowa Geodata, Iowa DNR, Iowa DOT, and the City of Johnston



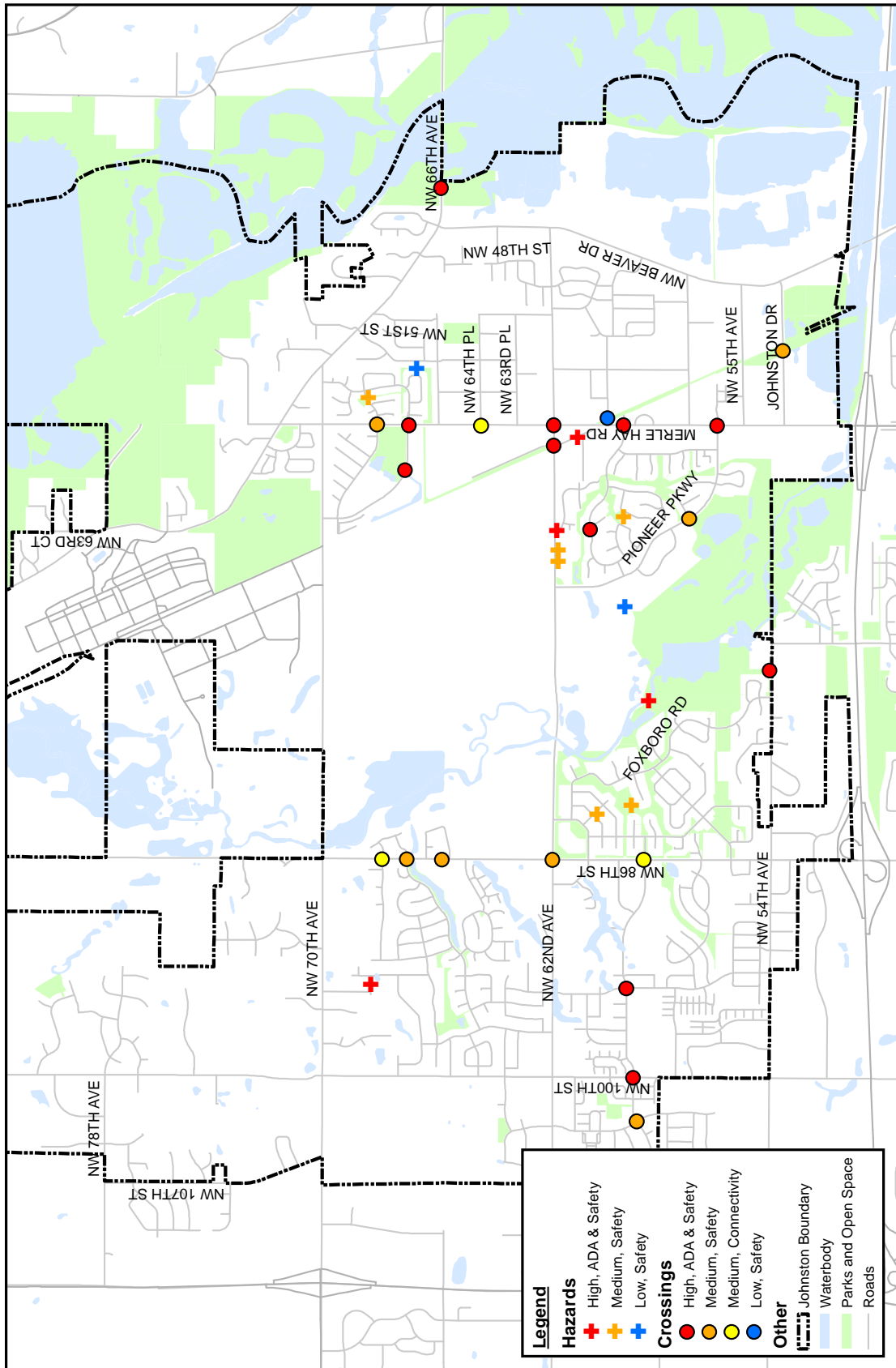
Trail and Sidewalk Gaps - Urgency & Justification

Johnston Walkability Study | Johnston, Iowa | 10/25/2018





FILE PATH: V:\Projects\2018\18.0337.01\GIS\Mxd_2018-07-27_Crossings_UrgencyJustification.mxd
 SOURCES: Iowa Geodata, Iowa DNR, Iowa DOT, and the City of Johnston



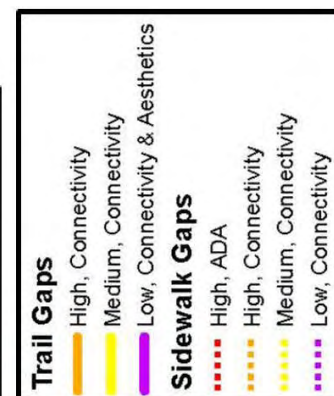
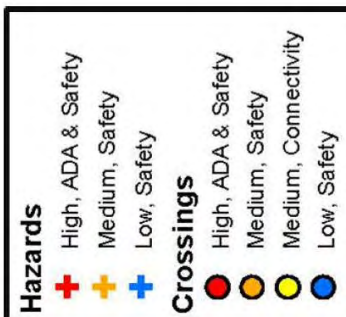
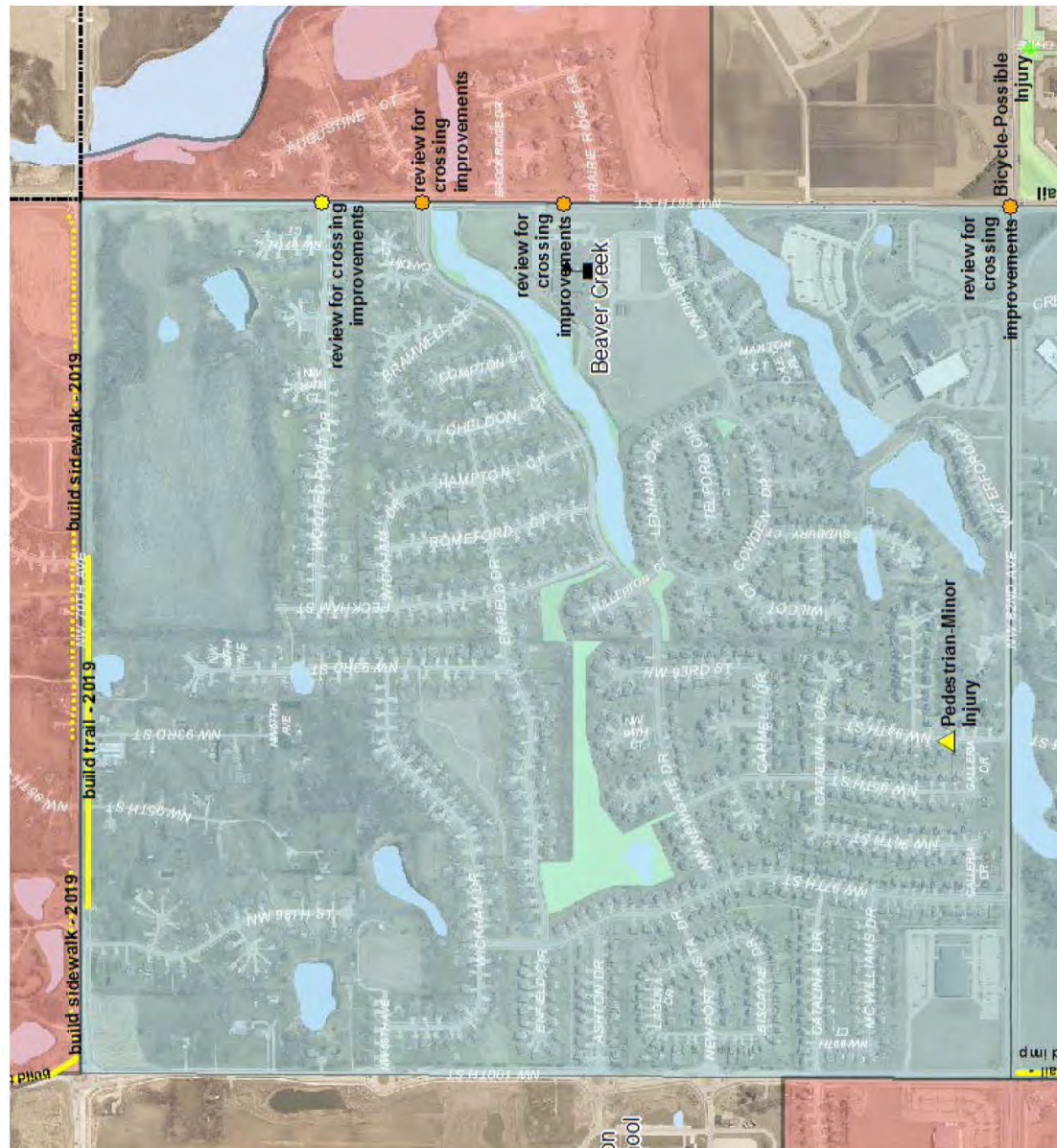
Crossings and Hazards - Urgency & Justification

Johnston Walkability Study | Johnston, Iowa | 9/12/2018





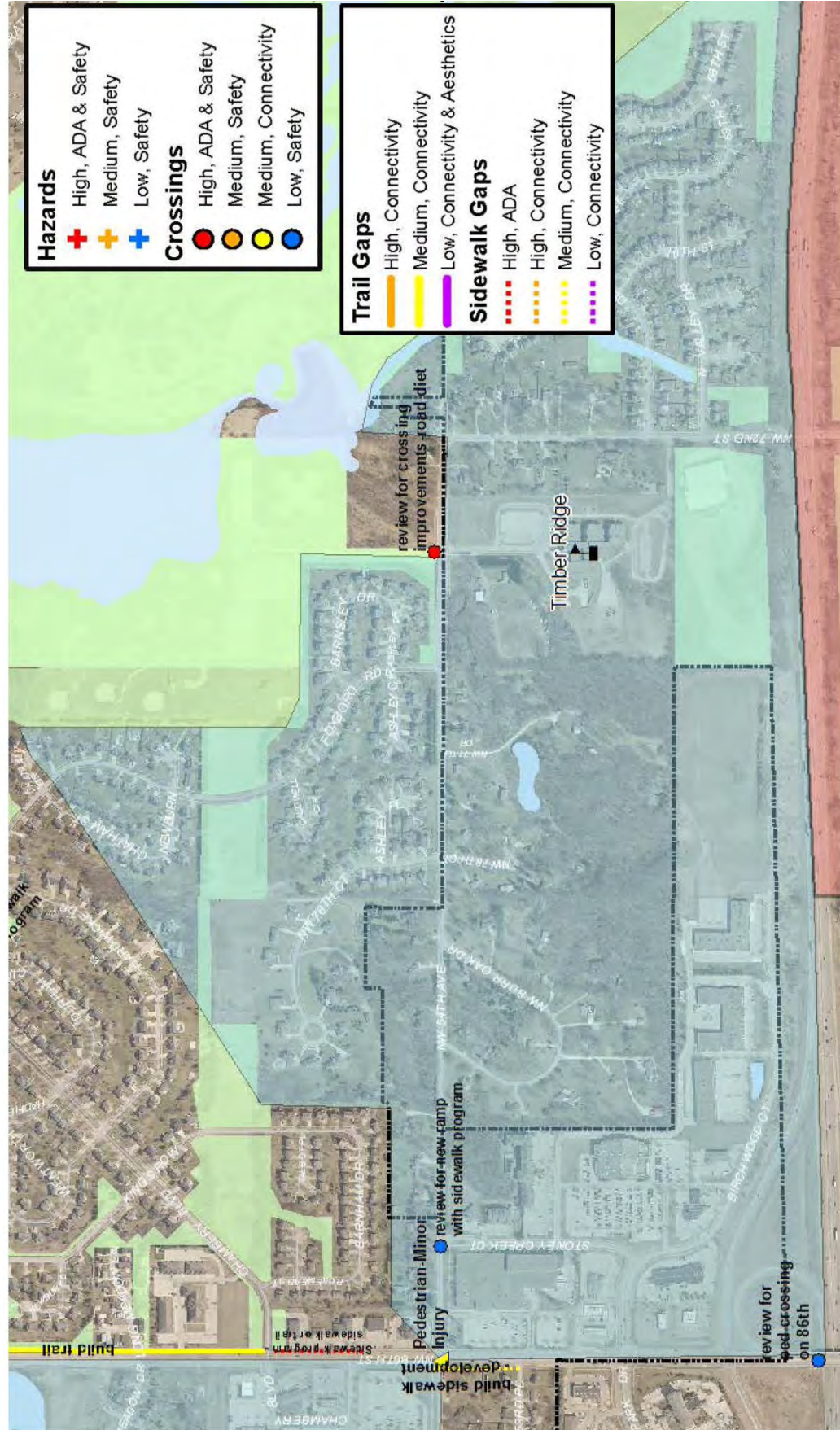
Beaver Creek Walk Zone

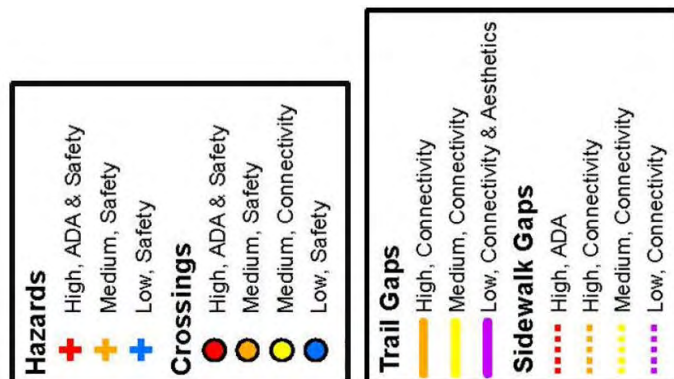


Horizon Elementary and Summit Middle Walk Zone



Timber Ridge Elementary Walk Zone





Hazards

- High, ADA & Safety
- Medium, Safety
- Low, Safety

Crossings

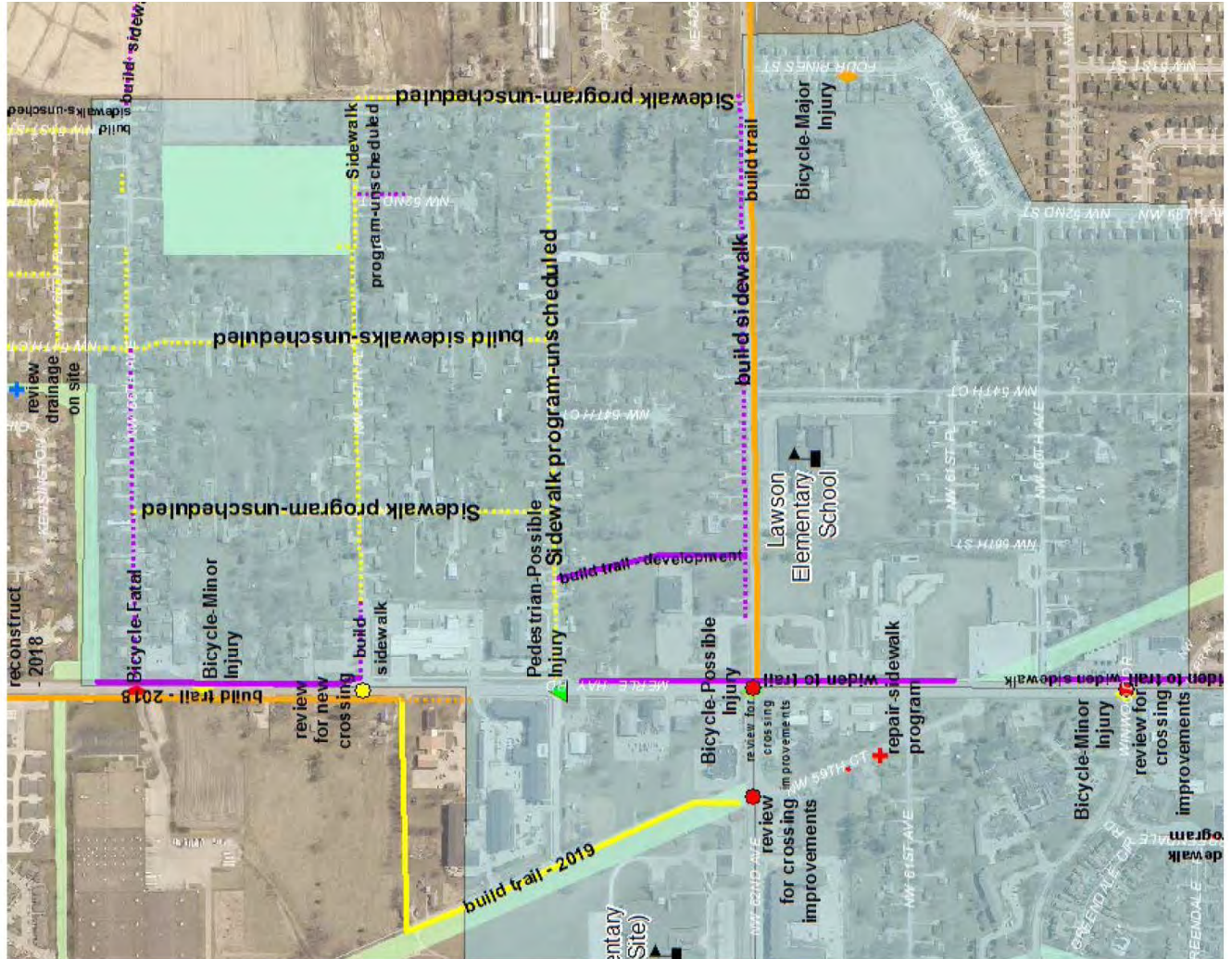
- High, ADA & Safety
- Medium, Safety
- Medium, Connectivity
- Low, Safety

Trail Gaps

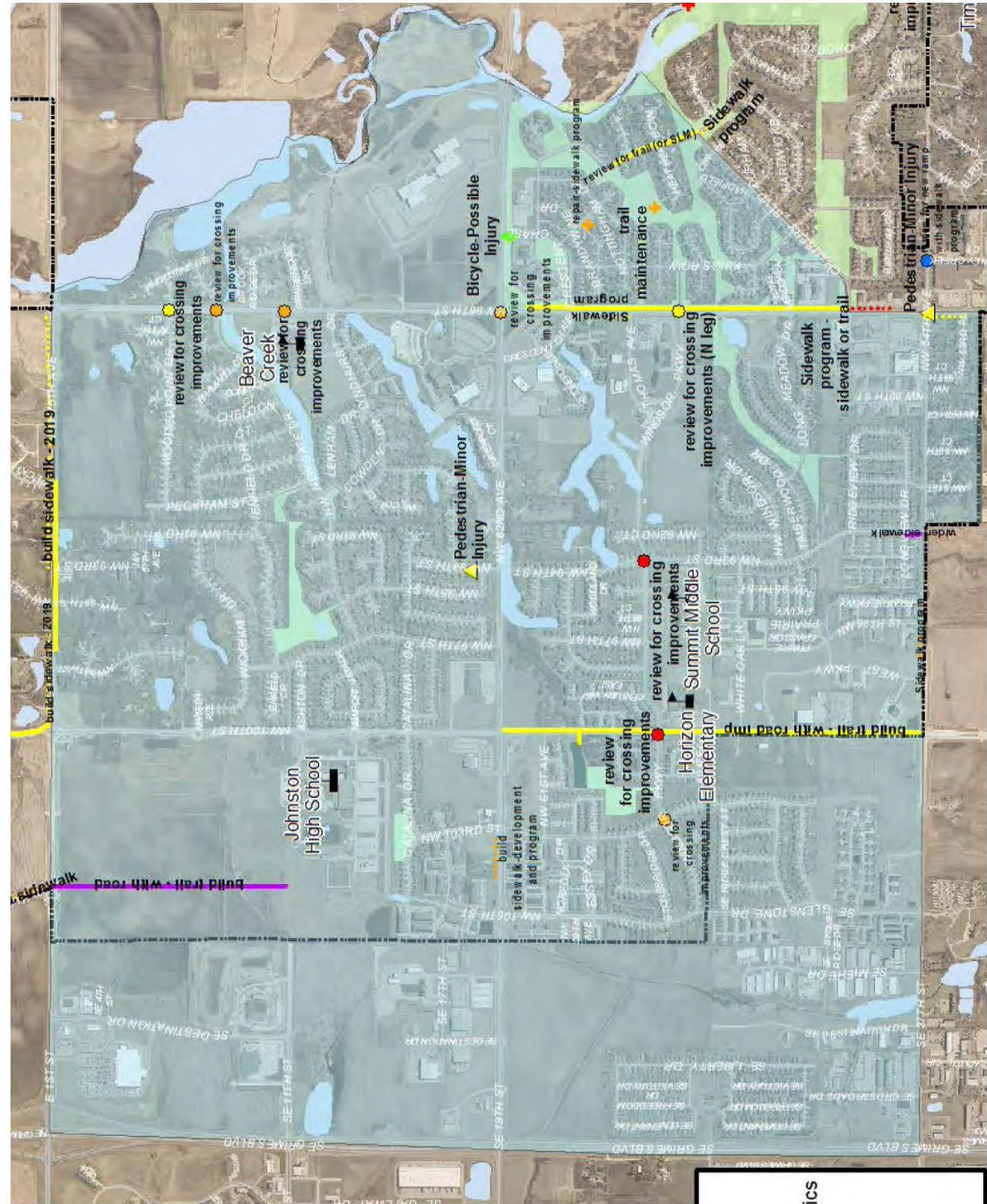
- High, Connectivity
- Medium, Connectivity
- Low, Connectivity & Aesthetics

Sidewalk Gaps

- High, ADA
- High, Connectivity
- Medium, Connectivity
- Low, Connectivity



High School Walk Zone



Hazards

- High, ADA & Safety
- Medium, Safety
- Low, Safety

Crossings

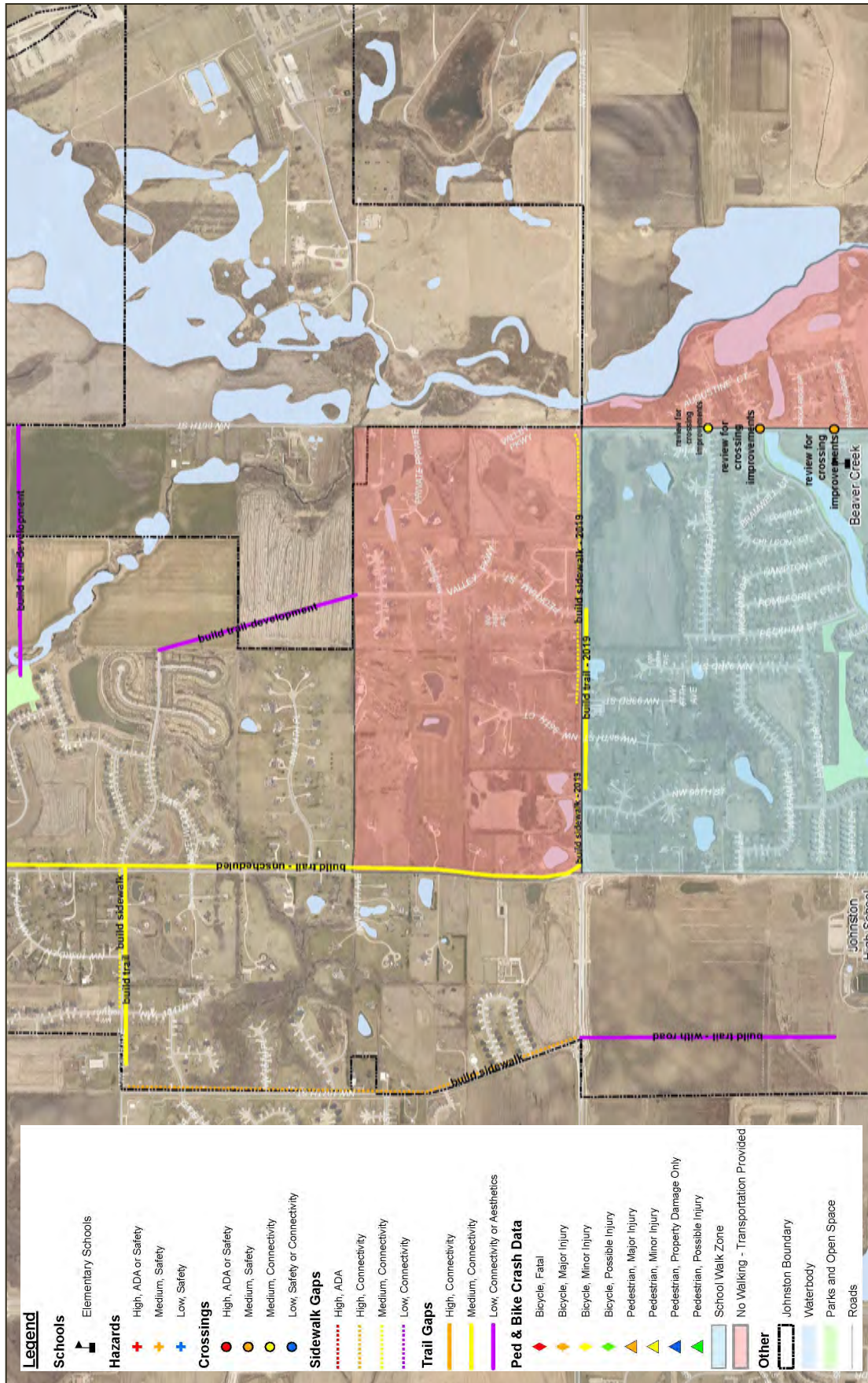
- High, ADA & Safety
- Medium, Safety
- Medium, Connectivity
- Low, Safety

Trail Gaps

- High, Connectivity
- Medium, Connectivity
- Low, Connectivity & Aesthetics

Sidewalk Gaps

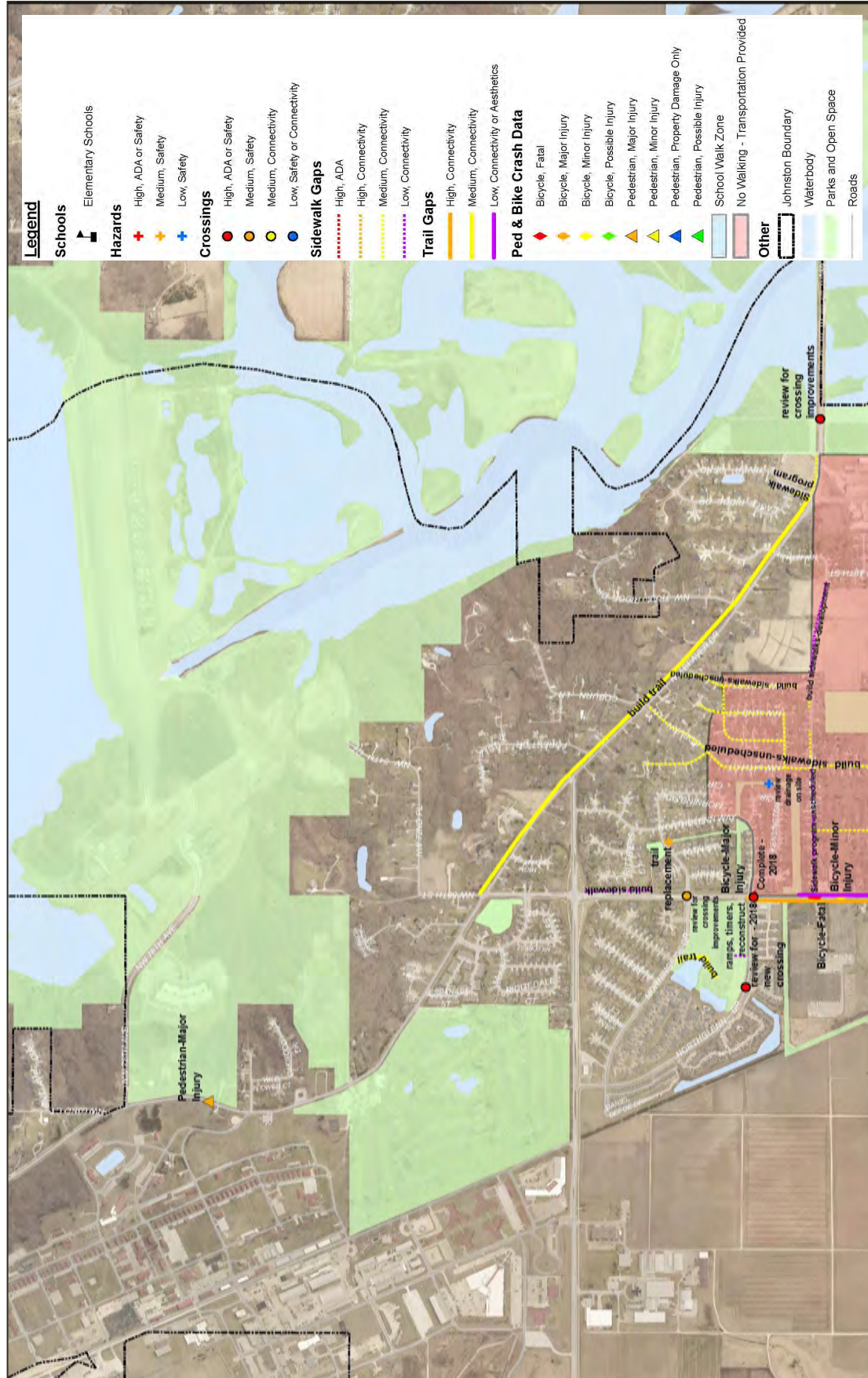
- High, ADA
- High, Connectivity
- Medium, Connectivity
- Low, Connectivity



Hazard, Crossing, and Gap Recommendations

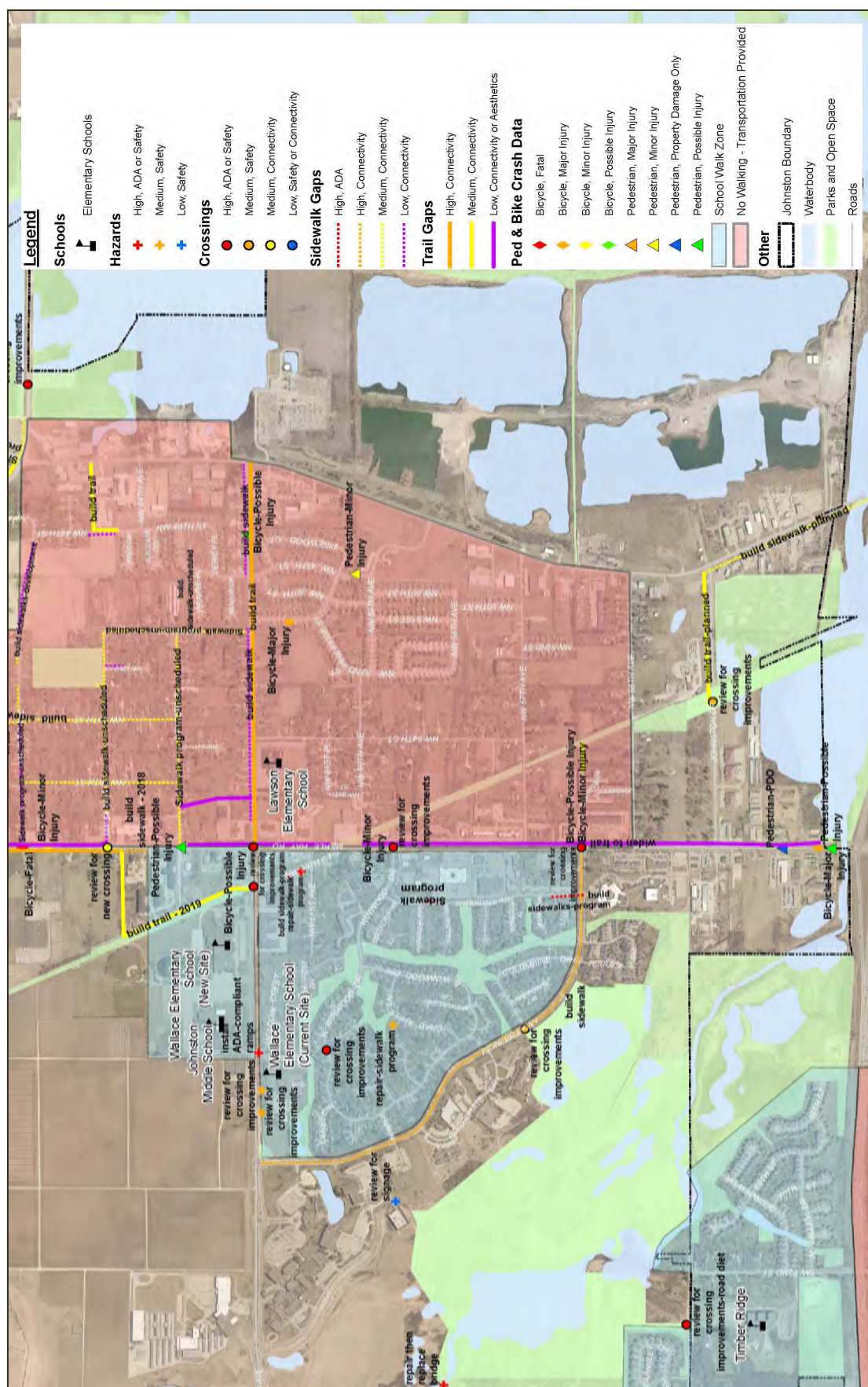
Northwest Johnston





Snyder & Associates  **Hazard, Crossing, and Gap Recommendations** **Northeast Johnston**

0 500 1,000 Feet

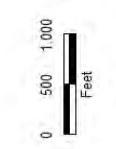
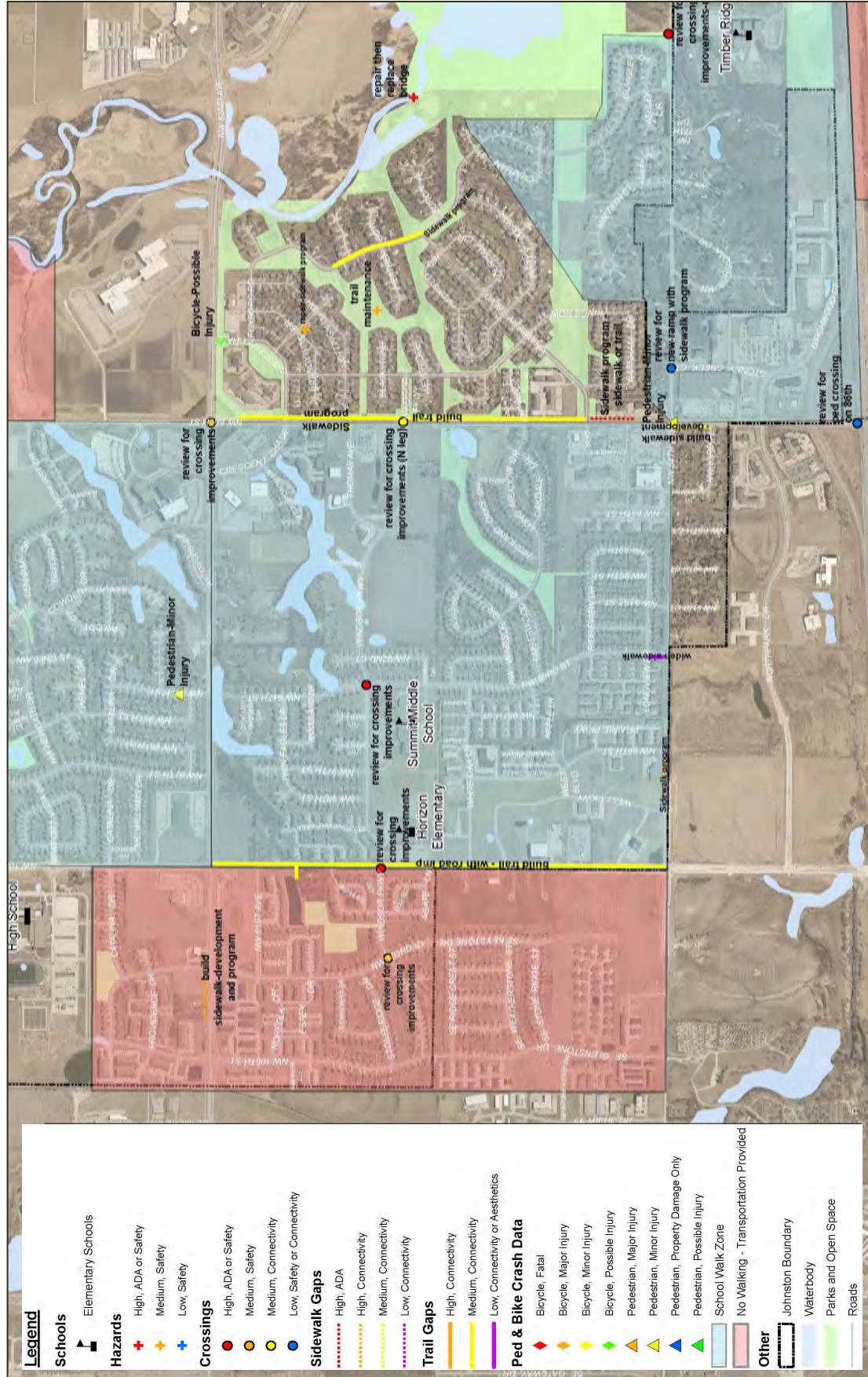


SNYDER
& ASSOCIATES

0 500 1,000
Feet

Hazard, Crossing, and Gap Recommendations

Southeast Johnston



Hazard, Crossing, and Gap Recommendations Southwest Johnston

ORDINANCE AND POLICY REVIEW AND RECOMMENDATIONS

Definitions of “Trail”

Use of City Greenbelt, Open Space, & Recreation Trails

Bicycle Regulations

Speed Regulations

Sidewalk Regulations

Zoning - General Regulations

Site Plan Requirements

Subdivisions Regulation

Sidewalk Program

Complete Street Policy

Sidepath Trail vs. Wide Sidewalk vs. Standard Sidewalk Installation

Future Mobility Trends

Maintenance Guidelines

REVIEWED ORDINANCES AND POLICIES

Upon review of Johnston's City Code of Ordinances and Policies, several of the policies reviewed are sufficiently addressing the needs of pedestrians. These include:

Chapter	Ordinance
62	General Traffic Regulations
65	Stop or Yield Required
67	Pedestrians
135	Street Use and Maintenance
150	Trees
151	Tree Protection and Conservation
167	Zoning District Regulations: Residential, Agricultural and Conservation Districts
168	Zoning District Regulations

Additional policies reviewed may be modified to better clarify intent or improve conditions for walkability. These include the following and recommendations for modification are provided below:

Chapter	Ordinance/Policy
48, 76, 165	Definition of "Trail"
48	Use of City Greenbelt, Open Space, and Recreation Trails
63	Speed Regulations
76	Bicycle Regulations
136	Sidewalk Regulations
166	Zoning - General Regulations
171	Site Plan Requirements
180	Subdivisions Regulations
-	Sidewalk Program
-	Complete Street Policy
-	Sidepath Trail vs. Wide Sidewalk vs. Standard Sidewalk Installation

DEFINITION OF “TRAIL”

Upon review of Johnston’s City Code of Ordinances and Policies, several of the policies reviewed are sufficiently addressing the needs of pedestrians. These include:

The Code of Ordinances uses three terms and definitions of a “trail” as follows:

CHAPTER 48: USE OF CITY GREENBELT, OPEN SPACE AREAS AND RECREATION TRAILS

2. “Recreation trails” are defined as bicycle and pedestrian trails owned by the City for the public benefit of active and passive recreation and principally for bicycle and pedestrian activity and recreation.

CHAPTER 76: BICYCLE REGULATIONS

2. “Multi-use trail” means a way or place, the use of which is controlled by the City as an owner of real property, designated by the multi-use recreational trail maps, as approved by resolution by the City Council, and no multi-use trail shall be considered as a street or highway.

CHAPTER 165: ZONING GENERAL PROVISIONS AND DEFINITIONS

234. “Trail” means a walkway or bikeway designated with a paved surfaced pathway for travel by means other than by motorized vehicles.

RECOMMENDATION

The three terms should be listed together to indicate that they may be used interchangeably. Further, the definitions should be combined and revised into one definition that is suitable for all three chapters and any other instances of the word “trail” throughout the Code of Ordinances. The term “Shared Use Path” should also be included since that term is used by Iowa SUDAS.



CHAPTER 48: USE OF GREENBELT, OPEN SPACE AREAS AND RECREATION TRAILS

48.03 ALCOHOLIC BEVERAGES PROHIBITED.

Wine, beer, and any other alcoholic beverages or drinks shall not be brought, transported or otherwise carried upon or consumed upon any greenbelt, open space areas or recreation trails.

RECOMMENDATION

Considering that trails are also part of the transportation network, and the City desires to encourage non-motorized transportation, this provision should be revised to allow the ability to carry alcoholic beverages along the trail network. The prohibition of carrying alcohol onto greenbelts and open space areas could remain, such that the alcohol is only allowed on the trail itself. Consumption would still be prohibited throughout.

The City has been working with area suburbs to consider prohibiting the use of tobacco on the trail system, particularly when the trail is located within park, greenbelt, or open space areas. An example of ordinance language pertaining to tobacco use is provided by the City of West Des Moines:

“Use Of Tobacco: No person, at any time, shall use tobacco of any kind while present on any city park property. Tobacco includes any product made or derived from tobacco that is intended for human use, including any component, part, or accessory of a tobacco product. This includes, but is not limited to, cigarettes, electronic smoking devices, cigarette tobacco, roll your own tobacco, smokeless tobacco, and dissolvable tobacco. “Electronic smoking devices” means any device that can be used to deliver an aerosolized solution that may or may not contain nicotine to the person inhaling from the device, including, but not limited to, an e-cigarette, e-cigar, e-pipe, vape pen, e-hookah, or other simulated smoking device. Nicotine products approved by the United States food and drug administration for tobacco cessation shall be allowed within city parks. (Ord. 2140, 3-21-2016)”

CHAPTER 76: BICYCLE REGULATIONS

76.12 BICYCLE LANES.

1. Whenever a bicycle lane has been established on a roadway, any person operating a bicycle upon the roadway at a speed less than the normal speed of traffic moving in the same direction may ride within the bicycle lane, except that such person may move out of the lane under any of the following situations:

...

D. When the bicycle lane does not include a marked shared lane.

RECOMMENDATION

It is not clear what is meant by, “When the bicycle lane does not include a marked shared lane.” A bicycle lane is a dedicated lane for cyclists and would not also be a shared lane, which is a dual vehicular and bicycle lane. This statement should be deleted.

CHAPTER 63: SPEED REGULATIONS

63.02 STATE CODE SPEED LIMITS.

The following speed limits are established in Section 321.285 of the Code of Iowa and any speed in excess thereof is unlawful unless specifically designated otherwise in this chapter as a special speed zone.

1. Business District – twenty (20) miles per hour.
2. Residence or School District – twenty-five (25) miles per hour.
3. Suburban District – forty-five (45) miles per hour.

RECOMMENDATION

The school district referenced above is defined in Section 321.1, subsection 70, of the Code of Iowa, as “the territory contiguous to and including a highway for a distance of two hundred feet in either direction from a schoolhouse in a city.” Section 321.285 also specified that the school district shall be marked by distinctive signs per the current Manual on Uniform Traffic Control Devices.

The City has the option of establishing a lower speed limit if deemed reasonable and safe. Per Section 321.290 of the Code of Iowa:

...

Whenever the council in any city shall determine upon the basis of an engineering and traffic investigation that any speed limit hereinbefore set forth is greater or less than is reasonable or safe under the conditions found to exist at any intersection or other place or upon any part of the city street system, except primary road extensions, said council shall determine and adopt by ordinance such higher or lower speed limit as it deems reasonable and safe thereat. Such speed limit shall be effective when proper and appropriate signs giving notice thereof are erected at such intersections or other place or part of the street.

The City may consider a lower speed limit within the defined school district area, and to enforce only during school start and end times. This proactive speed limit change would be justified by a reduced risk of fatal crash and injury. It is estimated that only 5 percent of pedestrians would die when struck by a vehicle traveling at 20 miles per hour or less. This compares with fatality rates of 40 percent for striking speeds of 30 miles per hour.²

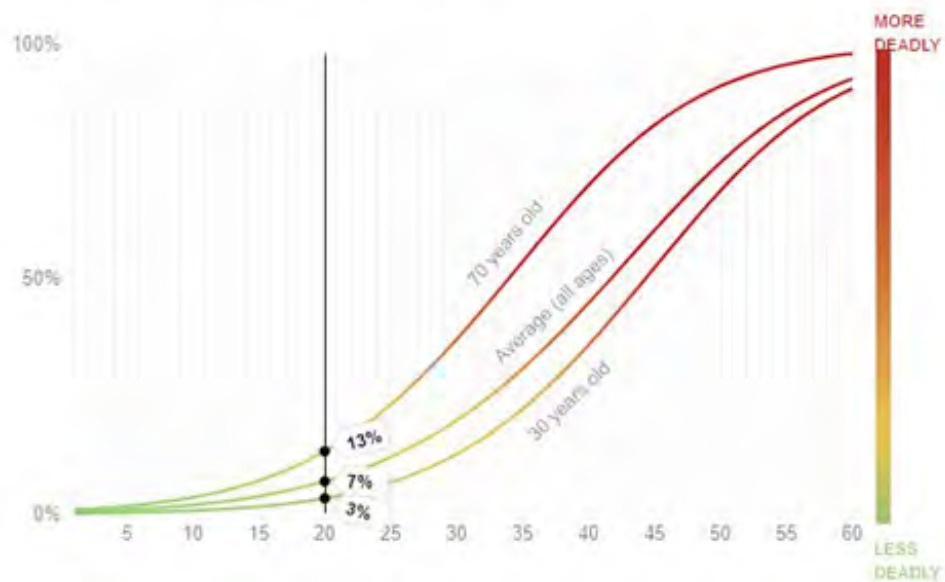
2 National Highway Traffic Safety Administration. Literature Review on Vehicle Travel Speeds and Pedestrian Injuries. Washington, D.C., USA: NHTSA, 1999
<https://one.nhtsa.gov/people/injury/research/pub/hs809012.html#recommendations>



<https://pamplinmedia.com/wbi/152-news/371220-254876-with-school-in-session-wpd-reminds-residents-of-traffic-laws>

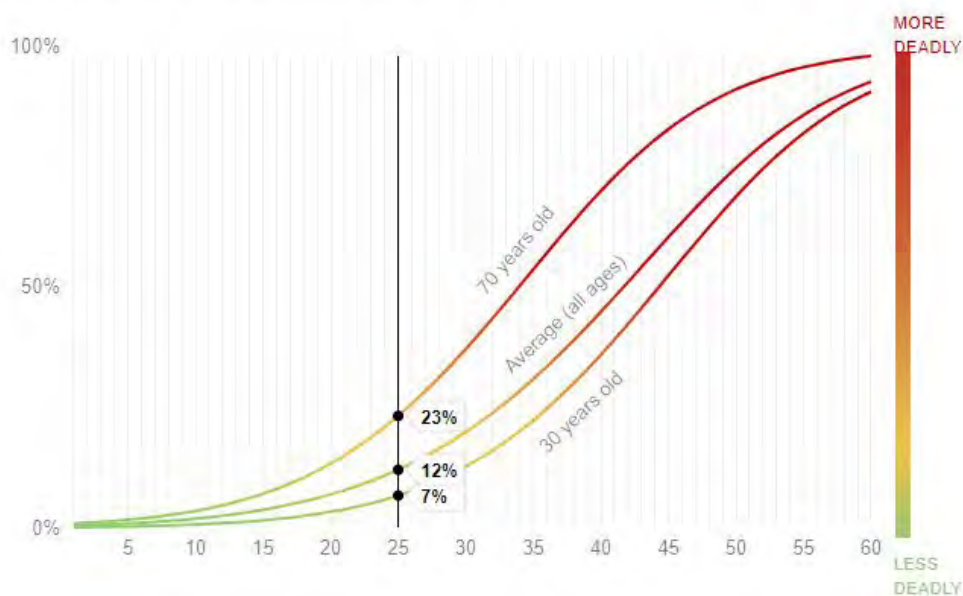
The Chance of Being Killed by a Car Going 20 mph

Roll over the curved lines to see the risk at any speed



The Chance of Being Killed by a Car Going 25 mph

Roll over the curved lines to see the risk at any speed



<https://www.propublica.org/article/unsafe-at-many-speeds>

The data used to create this interactive chart comes from Brian Tefft, a researcher at the AAA Foundation for Traffic Safety. He sent me the data from his 2011 report titled "Impact Speed and a Pedestrian's Risk of Severe Injury or Death." In the report, he estimates the risk of severe injury or death using data from a federal study of car crashes from 1994–1998.

A comparison of speed limits in a sample of school zones around the country reveals a range of 15 MPH to 25 MPH.

A Sample of School Speed Limit Zone Values

State	Speed Limit in School Zone	
Arizona	15 mph	
Deleware	20 mph	
Iowa	No fixed value. Locations are evaluated on a case-by-case basis, usually 10 mph below posted speed limit.	
Massachusetts	20 mph	
Minnesota	No more than 30 mph below the established speed limit and no lower than 15 mph.	
Montana	No fixed value. Locations are evaluated on a case-by-case basis.	
New Hampshire	10 mph under the posted speed limit.	
New Jersey	25 mph	
Ohio	20 mph	
Oregon	20 mph	
Pennsylvania	15 mph	
South Dakota	15 mph	
Texas	85th Percentile Speed	Suggested School Speed Limit
	Below 55 mph	Not more than 15 mph below 85th percentile speed or posted speed. Not to exceed a 35 mph school speed limit.
	55 mph	20 mph below the 85th percentile speed or posted speed
	Greater than 55 mph	Use buffer zone to transition to a 35 mph speed limit
Washington	20 mph	

“Reduced School Area Speed Limits,” Safe Routes to School Briefing Sheets, ITE

Some parents may currently drive their children to school because they feel it is not safe to walk due to vehicular speeds, particularly where children need to cross the street. If sidewalk and street crossing infrastructure is sufficient, slowing the traffic may be the only additional safety improvement for those parents to allow their children to walk to school.

One challenge associated with lowering the school district speed limit would be enforcement, particularly upon the initial implementation. Speed feedback signs and police officers posted at schools would help to encourage motorist compliance.

Another challenge would be that other cities in the Des Moines metro area do not have school district speed limits lower than 25 MPH. Johnston

would be the leader in this effort to improve safe routes to school through speed reduction beyond State Code requirements.



Timber Ridge Elementary School Zone Speed Limit along NW 54th Ave

CHAPTER 136: SIDEWALK REGULATIONS

136.01 PURPOSE.

The purpose of this chapter is to enhance safe passage by citizens on sidewalks, to place the responsibility for the maintenance, repair, replacement or reconstruction of sidewalks upon the abutting property owner and to minimize the liability of the City.

RECOMMENDATION

While it is common municipal practice to place responsibility for sidewalks on abutting property owners, this seems contrary to the concept that sidewalks are a necessary part of a City's infrastructure and benefit the community overall. Further, the financial responsibility of sidewalk construction and maintenance may unduly burden some property owners, such as those on corner lots, or those on limited or fixed incomes. The City's Low to Moderate Income Program assists owner-occupied single family property owners with the cost of installation of a sidewalk to help alleviate the financial burden on these households. Further, per Chapter 425 of the Iowa Code, financial assistance for special assessments may be available to individuals sixty-five years in age or older, those who are totally disabled, or those with limited income. However, since sidewalk repair or replacement is not part of a typical monthly budget, many additional homeowners may not have the funds available for the necessary work. This may hinder the City's ability to maintain safe walkability due to delayed maintenance.

Sidewalks could be funded, constructed, and maintained in the same manner as the street network, or similar to the City's sidepath trails. An example city that has taken on responsibly for sidewalks is Austin, Texas. One of the main reasons they took on full responsibility was to ensure compliance with the Americans with Disabilities Act. They created the infographic on the next page to describe the sidewalk program.

Alternatively, a cost share system could be implemented, where the adjacent property owner is only responsible for a portion of the overall cost and the City covers the remainder. The City may be more cost-efficient and effective at completing sidewalk repairs since they could have a city-wide contract for the work every year. The City's current Sidewalk Program provides an option for the homeowners to have their sidewalk repaired or constructed under the City's contract, and for the homeowner to pay for that through either direct payment or special assessment.

Corner property owners are relieved of the additional burden of ADA-compliant ramps. The City's current Sidewalk Program assigns responsibility for curb ramps to the City rather than the adjacent property owner.

136.04 RESPONSIBILITY FOR MAINTENANCE.

It is the responsibility of the abutting property owners to maintain in a safe and hazard-free condition any sidewalk outside the lot and property lines and inside the curb lines or traveled portion of the public street. (Code of Iowa, Sec. 364.12 [2c])

RECOMMENDATION

If the City does not choose to take on full responsibility for sidewalks, an option to encourage property-owner maintenance is to provide a reimbursement for concrete costs when making required repairs. Residents must pay up front for all materials and labor, and provide receipts for concrete in addition to a reimbursement request to the City.

Consider incorporating language about sediment control and cleanup to prevent accumulations of mud, dirt, leaves, or sand on the sidewalk. Also consider language requiring that trees, shrubs, and other vegetation be maintained such that they will not encroach into the walkway and impede pedestrian mobility.

Connecting Our Community

Let's Take a Walk: A Look at Sidewalks in Austin



City of Austin
Public Works Department

Sidewalk Program: Overview

The Public Works Department is responsible for building and repairing sidewalks all around Austin. The Americans with Disabilities Act (ADA) is a driving factor in making sure that the right-of-way along our streets is safe and accessible for everyone.

History: How Did We Get Here?

1990

Americans with Disabilities Act (ADA) signed into law



1995

City code updated; Sidewalk repairs are no longer landowner responsibility



1995-2012

Bond allocated funding for sidewalk construction and rehabilitation



2006

City of Austin sidewalk maintenance program initiated



2009

Sidewalk Master Plan adopted



2012

Transportation and Mobility Bond gives \$25 million for sidewalks



2016

Sidewalk Master Plan update adopted



State of the Sidewalks

DID YOU KNOW?

Public Works is currently responsible for **2,400 miles** of existing sidewalks.

The City of Austin is missing **2,580 miles** of sidewalks.

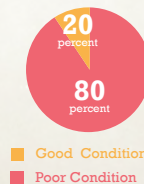
\$1.64 billion is needed for construction and maintenance of new and existing sidewalks.



At the current funding rate, it will take **192 years** to build and repair Austin's sidewalk network.

While **20%** of sidewalks are in good condition, **80%** of existing sidewalks are in poor condition.

Approximately **40%** of existing sidewalks have some type of overgrown vegetation blocking the pedestrian pathway.



How Are Sidewalks Funded?

- **BOND FUNDS** (PRIMARY)
- **CAP METRO** (INTERLOCAL AGREEMENT)
- **SIDEWALK FEE-IN-LIEU**
- **GRANTS**

How Are Sidewalks Built?

- **STREET & BRIDGE OPERATIONS**
- **CAPITAL IMPROVEMENT PROJECTS**
- **PRIVATE DEVELOPMENT**

THE BIG PICTURE

We want to encourage walking as a viable mode of transportation, improve pedestrian safety, and enable people to walk to and from transit stops.



CITY OF AUSTIN | PUBLIC WORKS DEPARTMENT

2016 Sidewalk Master Plan

10 YEAR PLAN

• **\$250 MILLION** •



ADDRESS PRIORITY SIDEWALKS WITHIN 1/4 MILE OF SCHOOLS, BUS STOPS, AND PARKS



- 390 miles of new sidewalks
- Both sides of moderate-to-high capacity roads
- One side of residential streets
- Includes public and private schools



What does that look like?
\$25 million a year



IMPROVE AND MAINTAIN OUR EXISTING SIDEWALKS



- Inform the public on removing overgrown vegetation from sidewalks and roadways
- Provide stable and sufficient funding for repair and rehabilitation of existing sidewalks
- Assess condition of at least 10% of the existing sidewalk network annually



What does that look like?
\$15 million a year

How Sidewalks Help Us



Reduce traffic congestion and improve air quality



Keep pedestrians **safe** throughout the city



Keep our city **connected & accessible**

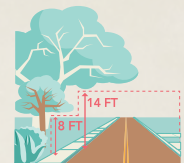
☆ BENEFITS ☆

- The average person will walk **half a mile** to their destination if there's a **safe path** to get them there. Walkability is frequently cited as one of the most sought-after features in a neighborhood.
- By **investing** in a network of dedicated walking paths to make active transportation **feasible, attractive and safe**, sidewalks will connect families to healthy food, children to schools and people from all backgrounds to jobs, public transportation and economic opportunities.

Engage: Make a Difference

KNOW THE RIGHT OF WAY, CLEAR THE RIGHT OF WAY

Clearing overgrown brush and vegetation on your property makes sidewalks **safe** and **accessible** for all.



Learn more at austintexas.gov/cleartherow

GET INVOLVED

Be informed with local elections. Work with your elected mayor and council members. **Join and engage** in local government at City Hall by serving on a board or commission that is important to you.



LEARN MORE

The Sidewalk Master Plan and supporting City plans and policies are available through the **Imagine Austin Plan** and **Complete Streets** at austintexas.gov/sidewalks.

FOLLOW US
[facebook.com/atxpublicworks](https://www.facebook.com/atxpublicworks)

QUESTIONS?

Contact the Public Works Department at 512.974.7065 or dial 3-1-1 (out of area: 512.974.2000) to speak to an ambassador.



CITY OF AUSTIN | PUBLIC WORKS DEPARTMENT
www.austintexas.gov/sidewalks

136.09 BARRICADES AND WARNING LIGHTS.

Whenever any material of any kind is deposited on any street, avenue, highway, passageway or alley when sidewalk improvements are being made or when any sidewalk is in a dangerous condition, it shall be the duty of all persons having an interest therein, either as the contractor or the owner, agent, or lessee of the property in front of or along which such material may be deposited, or such dangerous condition exists, to put in conspicuous places at each end of such sidewalk and at each end of any pile of material deposited in the street, a sufficient number of approved warning lights or flares, and to keep them lighted during the entire night and to erect sufficient barricades both at night and in the daytime to secure the same. The party or parties using the street for any of the purposes specified in this chapter shall be liable for all injuries or damage to persons or property arising from any wrongful act or negligence of the party or parties, or their agents or employees or for any misuse of the privileges conferred by this chapter or of any failure to comply with provisions hereof.

RECOMMENDATION

Also consider language requiring that trees, shrubs, and other vegetation be maintained such that they will not encroach into the walkway and impede pedestrian mobility.

136.17 MERCHANDISE DISPLAY.

It is unlawful for a person to place upon or above any sidewalk, any goods or merchandise for sale or for display in such a manner as to interfere with the free and uninterrupted passage of pedestrians on the sidewalk; in no case shall more than three (3) feet of the sidewalk next to the building be occupied for such purposes.

RECOMMENDATION

The City may want to consider modifying the 3 foot limitation to allow for additional area to be used in special circumstances, such as where the sidewalk widths are sufficient to accommodate the additional display area. Merchandise display can contribute to walkability by making the

route more interesting, as long as the remaining walkway width is sufficient for ADA compliance and to comfortably accommodate the volume of pedestrians on the route.

This could be implemented with a permit through either administrative review or as a conditional use through planning and zoning board approval. Also consider clarifying if this applies only to display of abutting storefronts.

CHAPTER 166: ZONING – GENERAL REGULATIONS

166.32 OPEN SPACE AND LANDSCAPING REQUIREMENTS

3. Street trees planted in public street right-of-way shall not be counted toward fulfillment of the minimum site requirements set forth below.

RECOMMENDATION

The Code currently does not require street trees to be planted as part of site plan landscaping requirements, but states that street trees will not count toward those requirements.

The exception is under Chapter 169.09 Merle Hay Road Corridor Overlay Zoning District, which requires street trees in addition to regular site plan requirements, as follows:

In addition, street trees shall be required on all streets and spaced at fifty foot (50) intervals. The species selected should provide a shade canopy over the public right-of-way and shall be two (2) to two and one-half (2-1/2) inches caliper or greater in size at the time of planting.



Consider adding this requirement to all projects subject to site plan review to improve walkability throughout the City.

166.33 OFF-STREET PARKING AND LOADING. The requirements and regulations of this section apply to any development or redevelopment within the City.

1. Statement of Intent. It is the intent of this section to prevent traffic congestion and to provide for proper traffic safety by preserving the public thoroughfares for the unimpaired movement of pedestrian and vehicular traffic. Therefore, it shall be recognized that the requirements of this section are minimum and that in certain uses of land, these requirements may be inadequate. Where review of the site plans and intended land use indicate through the application of proven standards or experienced statistics that the requirements herein are inadequate for the specific land use adaptation, a greater requirement for off-street parking space is justified and may be required to preserve the intent of this section.

RECOMMENDATION

Consider requiring or incentivizing bicycle parking spaces to encourage biking for transportation and keep bicycles out of pedestrian walkways. Bicycle parking shall conform to the guidelines of the Association of Pedestrian and Bicycle Professionals as set forth in the Essentials of Bike Parking for placement and design standards. Incentivizing may come in the form of reduced vehicular parking spaces, reduced landscape area, or other concessions. Consider allowing bike corrals during warmer months to be placed within a required parking space and removed and stored during winter months.



CHAPTER 171: ZONING – SITE PLAN REQUIREMENTS

171.05 DESIGN STANDARDS.

The standards of design are intended as minimum requirements so that the general arrangement and layout of the development requiring the site plan may be adjusted to address a variety of site conditions.

...

2. The proposed development shall have such entrances and exits upon public streets properly spaced and designed as are necessary for safety and the general welfare, and shall have such interior drives as are necessary for free movement of emergency vehicles; and shall have such pedestrian walkways as are necessary for safety and general the welfare. The following are guidelines for consideration in individual site plan requests. The case-by-case review would take into consideration existing entrances, the width of the property, and the traffic generation characteristics of the uses permitted in the district.

RECOMMENDATION

Consider more specific requirements for pedestrian walkways, such as requiring that they be distinctly separate from vehicular drive aisles and that they connect from adjacent sidewalks and trails to the front entrance of buildings.

CHAPTER 180: SUBDIVISION REGULATIONS

180.41 EASEMENTS.

Easements for public and private utilities, open space, walkways, and overland flowage shall be provided where needed. Such easements shall be a minimum of ten (10) feet total width for private utilities only, and fifteen (15) feet total width for combined private utility and walkway easements.

RECOMMENDATION

Since “walkway” is not defined, this could be misinterpreted to mean “trail,” especially since the definition of “Trail” in Chapter 165 includes the term “walkway” in the description. The term should be defined, or sidewalk should be used in its place for this section. Further, the need for 20-foot wide easements for trails should be added to this section.

180.42 IMPROVEMENTS REQUIRED

10. Sidewalks. The subdivider shall provide for the installation of sidewalks along all newly created lots, including sidewalks on adjacent existing streets. The sidewalks shall be built according to the standards and specifications of the City. The subdivider shall indicate in the application for approval of a preliminary or final plat those sidewalks that will be constructed at the time of installation of public improvements, and those that the subdivider would like the Council to defer until a later date. If the Council agrees to defer construction of the sidewalks, sidewalks shall be constructed at the time a principal structure is built upon the adjacent lot or lots or within five (5) years of plat approval, whichever is earlier. Notwithstanding the above, the Council may require the sidewalk’s construction at the time adjacent roadway construction takes place or at any other time as noted in the final plat approval. At the time sidewalk construction is required as provided above, such construction shall be completed at the sole cost and expense of the person or entity that owns the property or lot at the time of construction.

RECOMMENDATION

Consider identifying specific criteria for waivers—in the same vein as the Zoning Board of Adjustment does for variances—to help ensure that they are only awarded in appropriate circumstances. This criteria may be based upon the following:

Anticipated Pedestrian Traffic

- The potential pedestrian traffic in the area is so minimal that sidewalk aren’t warranted.
- The sidewalk will not contribute to pedestrian traffic flow in the area because it will not connect to existing sidewalk or trail infrastructure on both ends of the parcel frontage.
- The project is ½ mile or more away from any pedestrian generating uses (house of worship, bus stop, school, park, community center, commercial area, and recreational area).

Planned Street Reconstruction

- There are planned future street improvements which would destroy the sidewalk identified within the City’s CIP. In this case, a temporary sidewalk may be considered. Temporary sidewalks may be made of concrete, asphalt, planks, or a hard packed granular or asphalt milling surface. They should be ADA-compliant and maintained in a safe condition, but would not need to meet the thickness specifications of a permanent sidewalk.

Site Qualities

- A permanent alignment and profile cannot feasibly be set within public street right of way due to incompatible grade or other constraints. The factors to be considered should be consistent with Section 4 – Sidewalk Construction Deferral Guidelines of the City’s Sidewalk Program.
- In this case, an alternative route for pedestrians should be identified.

180.43-F.5. DEDICATION OF LAND OR EASEMENTS FOR TRAILS.

180.43-F.5. DEDICATION OF LAND OR EASEMENTS FOR TRAILS.

Where bike/pedestrian or recreational trails are indicated in the Comprehensive Plan, the developer shall be required to dedicate land or trail easements at least twenty (20) feet in width. This land or easements, if approved by the City Council, may serve to satisfy parkland dedication requirements.

RECOMMENDATION

Dedication should be given for any trail improvement, whether in the Comprehensive Plan or other adopted City plans, or in the case that the developer includes a trail that is not in a City plan but connects to and would be considered part of the City's trail network.



SIDEWALK PROGRAM

GENERAL

This program will address the following situations:

- Sidewalks that have been previously deferred by action of the City Council
- Existing developments in which sidewalks have not been constructed
- Properties within existing developments where there are gaps in the continuity of the sidewalks due to lots that have not been developed.
- Existing sidewalks that need to be repaired or replaced.

RECOMMENDATION

The policy states that it addresses, "Properties within existing developments where there are gaps in the continuity of the sidewalks due to lots that have not been developed;" however, there is no language within the policy that specifies what the City is prescribing for these lots. Presumably, the sidewalk or trail will be constructed concurrent with development of the lot.

Consider amending the Sidewalk Program to require temporary sidewalks in situations where:

- the sidewalk gap is impeding mobility due to existing sidewalks on either end of the parcel frontage (or on one end in the case of corner lots), and
- development of the lot will not begin within the next 12 months.

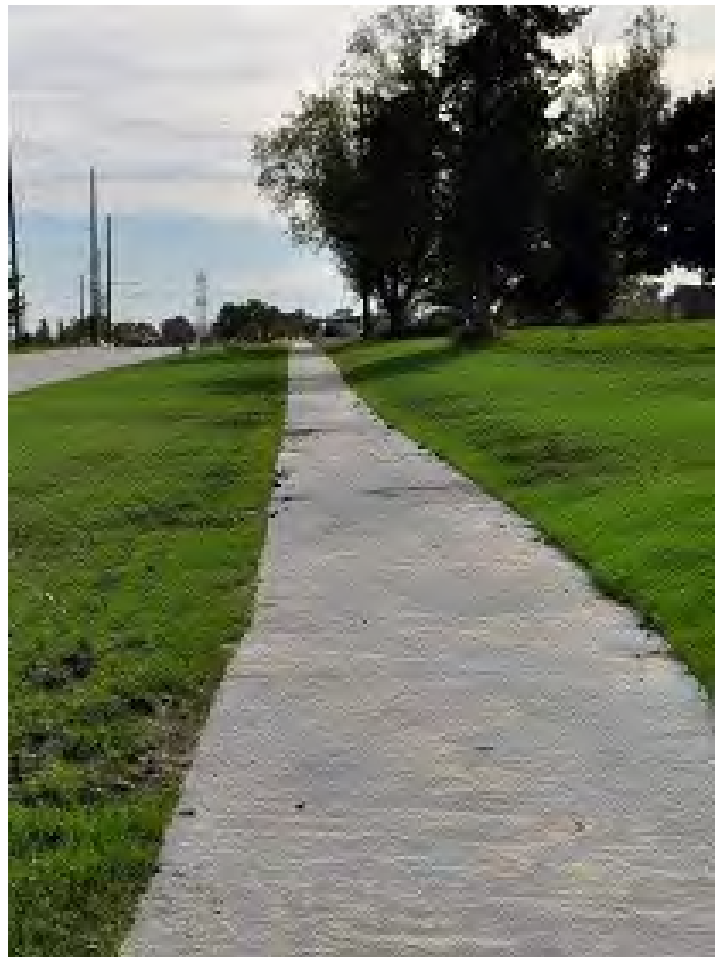
Temporary sidewalks may be made of concrete, asphalt, planks, or a hard packed granular or asphalt milling surface. They should be ADA-compliant and maintained in a safe condition, but would not need to meet the thickness specifications of a permanent sidewalk.

DEFERRAL GUIDELINES

It is recognized that unique circumstances may exist that make it difficult to construct a sidewalk. In order to request consideration for a deferral from construction of a sidewalk, the property owner must submit a written request to the Public Works Director. In the request, the property owner must describe the hardship that would be created from the construction of a sidewalk.

RECOMMENDATION

As part of the review for a deferral from construction under this section, either an existing or planned alternative pedestrian route should be identified.



SECTION 4 - SIDEWALK CONSTRUCTION

COMPLETE STREETS POLICY

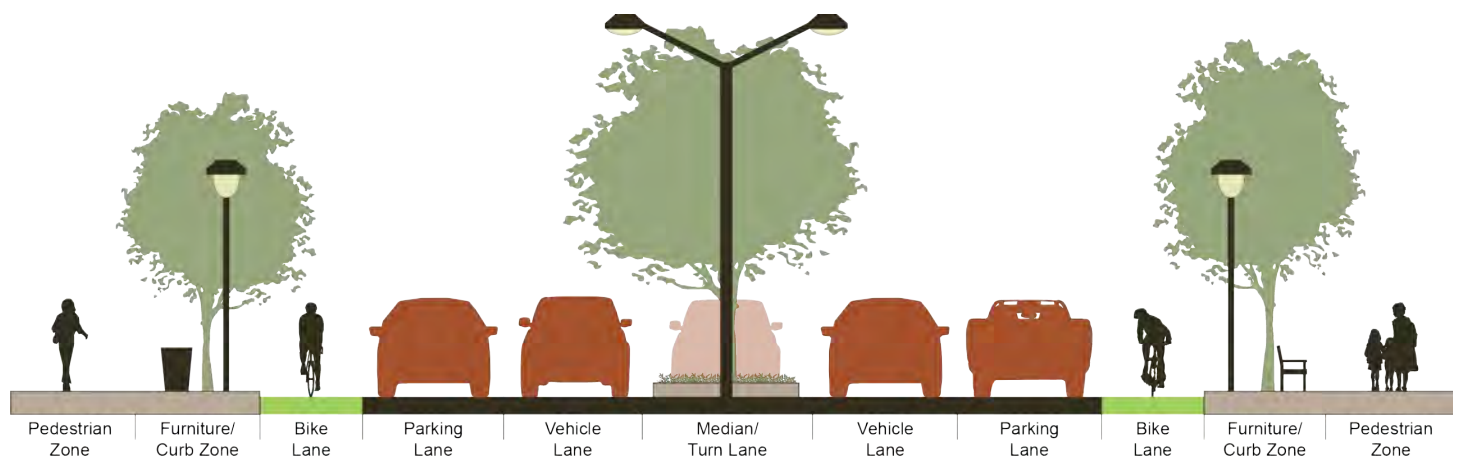
1.3 Design facilities to the best currently available standards and guidelines. The design of facilities for should follow design guidelines and standards that are commonly used, such as:

- AASHTO Guide for the Development of Bicycle Facilities;
- AASHTO's A policy on Geometric Design of Highways and Streets;
- AASHTO's Guide for the Planning, Design, and Operation of Pedestrian Facilities;
- SUDAS: State Urban Design and Specifications Manual;
- Federal Highway Administration's Manual on Uniform Traffic Control Devices for Streets and Highways;
- ITE Recommended Practice Context Sensitive Solutions in Designing Major Urban Thoroughfares for Walkable Communities; and,
- National Association of City Transportation Officials (NACTO) Urban Street Design Guide.

RECOMMENDATION

Consider adding National Association of City Transportation Officials (NACTO) Urban Bikeway Design Guide to the list of resources.

Consider formalizing a review process with staff, and potentially creating a new volunteer board or commission to review traffic safety and active transportation issues.



Complete Street Diagram, showing designated areas for drivers, cyclists, and pedestrians

SIDEPATH TRAIL VS WIDE SIDEWALK VS SIDEWALK INSTALLATION



Sidepath trail with few driveways or intersections (NW 62nd Ave., Johnston, IA)

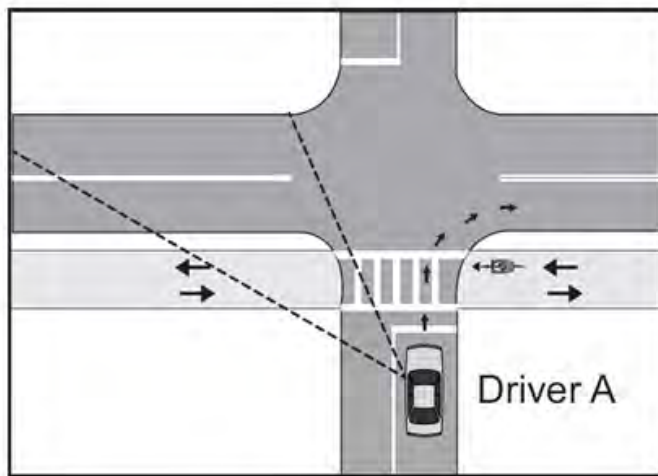
Sidepath trails are located along the side of a road, essentially functioning as a wide sidewalk. There currently is no ordinance or policy in Johnston specifying when an 8- or 10-foot wide sidepath trail should be installed parallel to a road instead of a typical sidewalk.

When planning for bicycle and pedestrian accommodations as part of an overall network, we can think of non-motorized routes in a hierarchical fashion similar to a street hierarchy. The “highways” link between communities and should be 10 to 12 feet wide; they have higher and faster users. The “arterials” may also be 10 feet wide, or 12 if a high volume of users is anticipated. For local trails, or those making short connections

to particular destinations, a wide sidewalk of 8-feet may be sufficient.

Sidepath trails with few intersection or driveway interruptions often function well for bicyclists and pedestrians. However, each intersection or driveway creates a conflict point with motorists, and because bicyclists travel much faster than pedestrians, these conflict points are more problematic for bicyclists. Perhaps the most serious challenge is mitigating the danger associated with cyclists traveling against the vehicular traffic flow while on the sidepath.

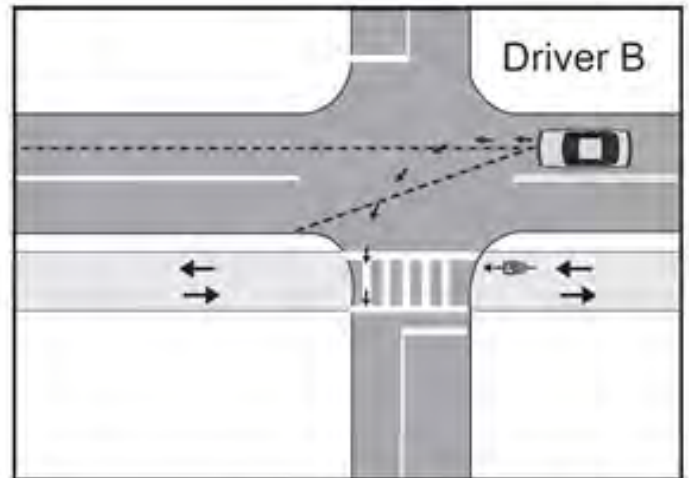
Figure 1



Right turning Driver A is looking for traffic on the left. A contraflow bicyclist is not in the driver's main field of vision.

Guide for the Development of Bicycle Facilities, AASHTO, 2012

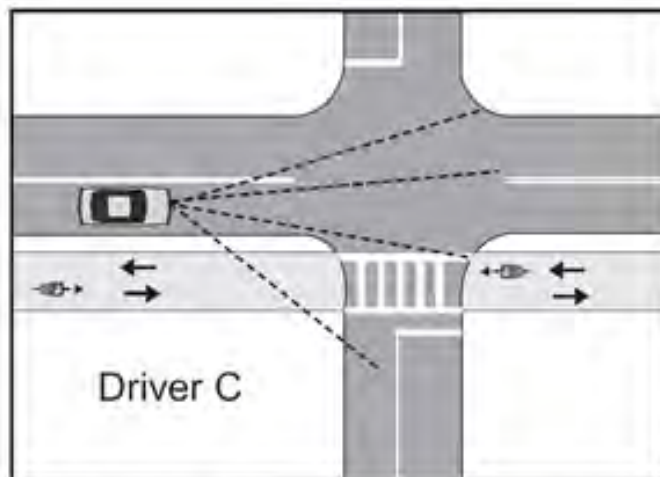
Figure 2



Left turning Driver B is looking for traffic ahead. A contraflow bicyclist is not in the driver's main field of vision.

Guide for the Development of Bicycle Facilities, AASHTO, 2012

Figure 3



Right turning Driver C is looking for left turning traffic on the main road and traffic on the minor road. A bicyclist riding with traffic is not in the driver's main field of vision.

Guide for the Development of Bicycle Facilities, AASHTO, 2012

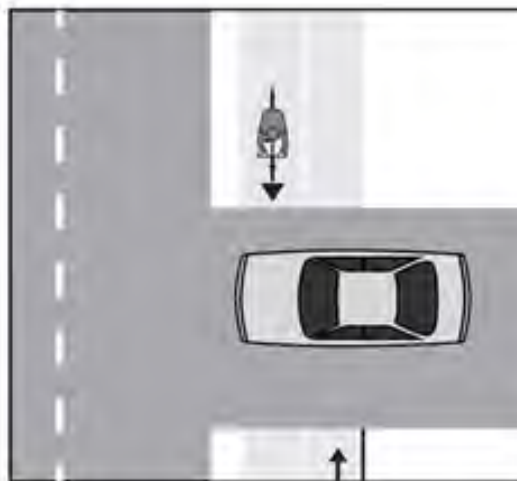
Right turning drivers (Driver A in Figure 1) look left more frequently than they look right, thus failing to notice cyclists coming from the right.² Contra-flow cyclists must be diligent to not bike into the path of a car preparing to make a right turn. The risk for cyclists on the sidepath due to cars turning from the parallel roadway onto the intersecting street or driveway is also increased over those traveling with the direction of traffic on the street. Figures 2 and 3 depict these turning movements.

Overall, studies have shown that the crash rate of bicyclists using sidepath trails can be between 1.8 and 3 times higher than riding on a road. One study found that of cyclists on sidepaths, those traveling contra-flow had a 4 times greater risk than a cyclist traveling on-street in the direction of traffic.

Studies Indicating Increased Crash Risk for Cyclists on Sidepaths

- **2.8 x greater than on minor road and 2.6 x greater than on major road**
(Kaplan, J.A., USDOT, "Characteristics of the Regular Adult Bicycle User." 1975-77)
- **1.8 x greater than on road**
(Wachtel and Lewiston, "Risk Factors for Bicycle-Motor Vehicle Collisions at Intersections," ITE Journal, Palo Alto, CA, September 1994.)
- **2.5 x greater risk than on road and 3.0 x greater at intersections**
(Pasanen and Rasanen. "Cycling Risks in the City of Helsinki." Helsinki, Finland, 1999³)
- **4 x greater for contra-flow sidepath than on road with traffic**
(Hiles, Jeffrey A. Listening to Bike Lanes: Moving Beyond the Feud. September 1996)

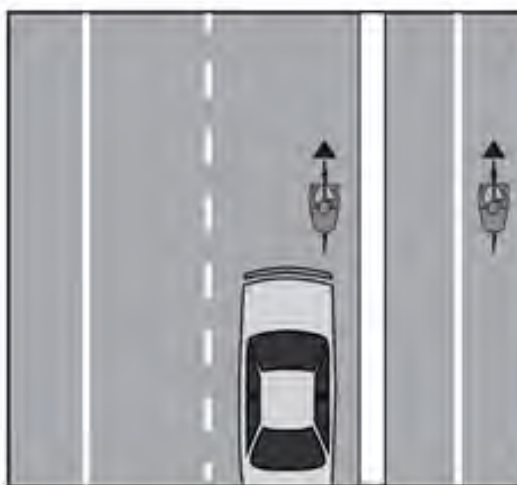
Figure 4



Stopped motor vehicles on side streets or driveways may block the path.

Guide for the Development of Bicycle Facilities, AASHTO, 2012

Figure 5



Some bicyclists may find the road cleaner, safer, and more convenient. Motorists may believe bicyclists should use a sidepath.

Guide for the Development of Bicycle Facilities, AASHTO, 2012

2 Summala, Pasanen, Rasanen, Sievanen. Helsinki, Finland, 1996

3 <http://www.bikexpert.com/research/pasanen/helsinki.htm#txt5a>

Additional challenges for cyclists associated with sidepaths include:

- Sidepath design encourages wrong-way riding on street where path begins or ends
- Signage and signals are not oriented toward contra-flow cyclists
- Creates difficult left turns for cyclists
- Vehicles may block path at street or driveway crossings, forcing the cyclists to stop or go around
- Cyclists may choose to bike in the vehicular lane regardless of the sidepath, which may cause confusion and frustration in motorists.
- Attempts to get cyclists to stop at street or driveways crossings are often inappropriate and ineffective.⁴

RECOMMENDATION

Generally, sidepath trails should not be considered the best solution for accommodating bicyclists without careful consideration of risks and alternatives. These same risks do not hold true for pedestrians along the same corridor, since they travel at a slower rate and can stop immediately. However, pedestrians may be at risk of crashing with fast-moving or high volumes of cyclists on sidepath trails. Planners must consider several factors when deciding whether a sidepath is an appropriate facility type for a particular corridor. They should consider:

Traffic volume and speed

- Lower speeds and lower traffic volumes are more conducive to on-street bicycle facilities than
- higher volume and speed roadways. Cyclists may be safer on the sidepath when vehicular speeds are over 40 mph.⁵

Number/frequency of intersections & driveways

- Each driveway or intersection creates multiple conflict points. Sidepaths are most appropriate when they parallel long stretches of roadway with no (or very limited or low volume) intersections, such as along a body of water, golf course, cemetery, or agricultural field. Sidepath designs which encourage the cyclists to slow down as they approach the intersection can help to mitigate the potential conflict.⁶

Ability to accommodate bicyclists on the roadway

- If cyclists can be safely accommodated on the roadway through shared lane markings or a type of bike lane appropriate for the speed of the roadway, then this on-street accommodation may be the preferred facility over the sidepath. Cyclists may also be safer on a sidepath when there are fewer road lanes;⁷ if there is only one lane in each direction, the motorists may be reluctant to pass into the oncoming lane to pass the cyclists. In this case, the motorist may pass too close to the cyclist. If there are two lanes, then the motorist can use the left lane to pass and provide plenty of room for the cyclist. Pedestrians may still need a wide sidewalk for accommodation.

Ability for cyclists to use alternative route/parallel streets

- If cyclists can easily take a parallel road to fulfill the same connection, providing an appropriate facility on the parallel route may be the preferred solution.

Number of pedestrians

- If there is a high volume of pedestrians along the corridor, such as in a downtown area, bicyclists are better accommodated on the street for the safety of the pedestrians and the convenience of the cyclists.

⁴ AASHTO, Guide for the Development of Bicycle Facilities

⁵ Petrisch, Landis, Huang, Challa. "Sidepath Safety Model: Bicycle Sidepath Design Factors Affecting Crash Rates." March 21, 2006. Transportation Research Record Journal of the Transportation Research Board

⁶ ibid

⁷ ibid

Number of cyclists

- If the area is expected to have a high volume of cyclists, a facility dedicated specifically to cyclists, rather than shared with pedestrians, would be most appropriate.

Anticipated Types of Cyclists

- Different types of cyclists have different needs in terms of bicycle facility types. Strong and fearless cyclists will be more comfortable closer to traffic. Children and less experienced or less confident cyclists will be more comfortable on a buffered or separated facility. Some corridors may benefit from both an on-street bike lane and a wide sidewalk or

sidepath to fully meet the needs of all users. Corridors near schools or parks that also lead to business districts would attract an array of types of cyclists.

Location of destinations

- Cyclists will want to be able to access destinations along the route. If a sidepath is the best solution, it should be on the same side as the destinations (however, this may be in conflict with the point about avoiding driveways and intersections). If destinations are on both sides of the roadway, a better solution may be to provide a bicycle facility on each side of the roadway as well.



Sidepath trail and bicycle lane (Indianola Ave, Des Moines, IA)



Rural sidepath trail (Gay Lea Wilson Trail, Iowa)

FUTURE MOBILITY TRENDS

Innovations in transportation like vehicle sharing, self-driving cars, and lightweight electric vehicles (LEVs, like ebikes, unicycles, hoverboards, skateboards, and other small gadgets also referred to as “tiny transportation,” “little vehicles,” etc.) are making their way into many communities. While some of these transportation modes may be far from becoming the new norm of transportation, they appear and take off quickly in many communities. These sudden changes in the type of vehicles on the road have a tendency to cause many conflicts if there is no policy in place surrounding them. In order to be accommodating to the future of transportation, Johnston should consider looking into these new systems and considering what policies might look like once these vehicles become a part of the transportation system.

While there is no specific timeline as to when



<https://techcrunch.com/2018/07/26/bird-and-skip-portland-scooter-permits/>

the community might begin expressing interest or even seeing some of these vehicles on city streets without prior approval, there are some steps that can be taken to prepare.

1) Assess the benefits – Due to the low cost and ease of use, LEVs support equitable mobility in a community. Because many are electric rather than gas-powered and they don’t contribute to vehicular congestion, they are eco-friendly. Their lightweight design is easy on the city’s pavement and they require little to no parking. Vehicle-share businesses also support a flexible transportation system and equitable mobility.

2) Alleviate the concerns – On bike/pedestrian shared spaces such as trails and some sidewalks, consider a speed limit regulation for motorized scooters and other motorized devices. Consider including scooters in your bicycle ordinances, establish parking regulations, and address yielding requirement between different modes using bikeways.

3) Regulate transportation-share businesses – If you want a scooter or bike share system in town, or you think one might just “pop up,” consider business operations and permitting requirements that would apply to such businesses to ensure the LEVs don’t become a nuisance on your trail, street, and sidewalk networks. Also consider regulations for vehicle-share programs.

4) Assess the infrastructure needs – People using LEVs for transportation will need safe places to ride. Preferably these places would be separated from both pedestrians and motor vehicles, or shared only in low-volume corridors. This system will look very similar to a bicycle-friendly community. Are there cracks or buckled pavement conditions that could be hazardous? Some LEVs, like scooters, are more susceptible to pavement conditions than cyclists. Are your trails and bike lanes wide enough for faster users to pass slower users?

5) Educate the public – Incorporate operation of LEVs into your trail rules and etiquette signage, bike education programs, and with driver’s education classes.

MAINTENANCE GUIDELINES

Trails, on-street bicycle facilities, and sidewalks require regular maintenance. People walking and biking are more susceptible than motor vehicles to pavement irregularities such as cracks, potholes, broken glass, or gravel. Johnston's annual budget should cover regular maintenance and minor repairs of trails and bicycle facilities, such as those activities listed in the table below. The City should document compliance with the plan such that records can be provided in the case of any crashes or injuries that may occur on the trail, sidewalk, or street network.

Bicycle and Pedestrian Facility Maintenance	
Trail Inspections	
City staff should conduct an annual inspection of the overall trail system, including surfacing, amenities, bridges, and signage. An annual report should be prepared and work schedule developed to address trail-related repairs and improvements.	<p>Action items:</p> <ul style="list-style-type: none"> • City trail staff should complete an annual trail system inspection in the spring of each year. • An annual report should be prepared from the inspection to address trail repairs. • A priority scale should be assigned to trail projects to address safety concerns first and enhancements throughout the season. • Projects should be assigned to specific staff to ensure completion and documentation. • Weekly inspections should be completed by trail staff during regular maintenance activities. • Annually, trail surface cracking should be rated and appropriately scheduled for repair or replacement.
Plowing/Sweeping/Blowing	
Pedestrians are susceptible to slipping or tripping on snow, ice, and cut or fallen vegetation. Mown grass or fallen leaves that become wet can become a slip and fall hazard. Bicyclists often avoid shoulders, bike lanes and bridges filled with sand, gravel, broken glass and other debris; they will ride in the roadway to avoid these hazards, potentially causing conflicts with motorists. On bridges, debris is often swept to the curb edge or the jersey barrier wall, requiring cyclists to take a lane or share a narrow facility with cars.	<p>Action items:</p> <ul style="list-style-type: none"> • Sweep trails, walkways and bikeways whenever there is an accumulation of debris on the facility. Extra sweeping may be necessary in the fall. • Establish a seasonal sweeping schedule that prioritizes roadways with major bicycle routes and bridges. • In curbed sections and bridges, sweepers should pick up debris; on open shoulders, debris can be swept onto gravel shoulders. • Debris from the roadway should not be swept onto sidewalks, bikeways, or trails. • Snow on the roadway shall not be plowed onto sidewalks or block crosswalks. • Pave gravel driveway approaches to minimize loose gravel on paved bikeways, sidewalks, or trails.

Bicycle and Pedestrian Facility Maintenance

Pavement Markings

Pavement markings help guide bicyclists to proper positioning in the roadway, direct pedestrians to safer crossing locations, and provide awareness of the potential for bicyclists and pedestrians to be in the area. Wet pavement markings can become slippery. Pavement markings can wear off quickly due to weather and vehicular travel.

Action items:

- Repaint pavement markings at least annually, preferably in spring.
- Consider twice a year applications for areas that have higher vehicular or bicycle/pedestrian volumes.
- Painted pavement markings should include a silica broadcast for traction.
- Consider longer-term durable pavement markings for less frequent maintenance.

Roadway, Sidewalk or Trail Surface

Bicycles and pedestrians are much more sensitive to subtle changes in roadway surface than motor vehicles. Ridges, cracks, and uneven transitions between materials can cause hazardous conditions.

Action items:

- Crack sealing program
- Ensure that on new roadway construction, the finished surface on bikeways does not vary more than $\frac{1}{4}$ ".
- Maintain a smooth surface on all bikeways that is free of potholes.
- Maintain pavement so ridge buildup does not occur at the gutter-to-pavement transition, adjacent to railway crossings, or at manholes.
- Replace broken sidewalk panels.

Gutter-to-Pavement Transition

On streets with concrete curbs and gutters, 1' to 2' of the curbside area is typically devoted to the gutter pan, where water collects and drains into catch basins. On many streets, the bikeway is situated near the transition between the gutter pan and the pavement edge. It is at the location that water can erode the transition, creating potholes and a rough surface for travel. The pavement on many streets is not flush with the gutter, creating a vertical transition between these segments. This area can buckle over time, creating hazardous environment for bicyclists. Since it is the most likely place for bicyclists to ride, this issue is significant for bike travel.

Action items:

- Ensure that gutter-to-pavement transitions have no more than a $\frac{1}{4}$ " vertical transition.
- Examine pavement transitions during every roadway project for new construction, maintenance activities, and construction project activities that occur in streets.
- Pave the full width of the bike lane to the curb with the same material. This may mean widening the gutter pan to at least 5' feet to create a smooth bike lane.

Bicycle and Pedestrian Facility Maintenance

Drainage Grates and Culverts

Drainage grates are typically located in the gutter area near the curb of a roadway. Many grates are designed with linear parallel bars spread wide enough that if a bicycle were to ride on them, the front tire would become caught and fall through the slot.

Also, drainage grates and culverts that become clogged can cause hazardous flooding along bikeways and crosswalks.

Action items:

- Require all new drainage grates be bicycle-friendly, including grates that have horizontal slats or a grid pattern on them so that bicycle tires do not fall through.
- Inventory all existing drainage grates and replace hazardous grates as necessary.
- Inspect grates and culverts every fall and after storms to remove accumulation of debris that may block storm water flow.

Drainage

Mud or algae from frequent ponding can be extremely slippery and hazardous to both bicycle and pedestrian traffic.

Action items:

- Grade adjacent shoulders and sod buildup for positive drainage.
- Add subdrains to encourage better subsurface drainage.
- Add rain gardens to handle storm water by infiltration when possible.

Pavement Overlays

Pavement overlays are opportunities to improve conditions for cyclists by widening the paved area onto the shoulder or re-striping to include bike lanes.

When repaving, a ridge should not be left in the area where cyclists ride (this occurs where an overlay extends part-way into a shoulder bikeway or bike lane).

Action items:

- Extend the overlay over the entire roadway surface to avoid leaving an abrupt edge.
- If there is adequate shoulder or bike lane width, it may be appropriate to stop at the shoulder or bike lane stripe, provided no abrupt ridge remains.
- Ensure that inlet grates, manhole and valve covers are within ¼ inch of the pavement surface.
- Pave gravel driveways to the property line to prevent gravel from spilling onto shoulders or bike lanes.

Landscaping

Trails, bikeways and sidewalks can be rendered inaccessible or dangerous due to overgrown vegetation that can become an obstacle or block an otherwise clear line of sight.

Action items:

- Trim landscaping such that it does not impede passage or clear view, particularly at intersections and along curves.
- Keep a 2-foot minimum clear zone horizontal on each side of the trail and a 10-foot clear zone vertical.
- After major damage incidents such as storms or nearby construction, remove fallen trees or other debris from trails, bikeways, and sidewalks as quickly as possible.

Bicycle and Pedestrian Facility Maintenance

Signage

Pedestrian and bicycle routes, including trails, incorporate signage for way-finding and regulations. Such signage is vulnerable to vandalism and wear, requiring regular maintenance and replacement. Most signage standards are covered in the Manual on Uniform Traffic Control Devices (MUTCD).

Custom signage for the trail system is recommended in the 2006 Communication Master Plan for the Central Iowa Trails.

Action items:

- Check regulatory and way-finding signage placed along bike and pedestrian routes for signs of vandalism, graffiti, or normal wear.
- Replace signage along the trail, pedestrian, and bikeway network on an as-needed-basis.
- Update maps as necessary
- Remain updated on changes to MUTCD standards and update signage accordingly.

IMPLEMENTATION PLAN

Policy and Ordinance Recommendations

Infrastructure Recommendations

- High Urgency
- Medium Urgency
- Low Urgency

Conceptual Cost Opinions

Funding Opportunities

POLICY AND ORDINANCE RECOMMENDATIONS

The following table summarizes the recommendations detailed in the memo related to the review of City policies and ordinances. The table provides a timeframe and lead department for moving the recommendation forward.

Timeframes of 6 months pertain to changes that are expected to be non-controversial and simple to write and implement. They are not expected to require public engagement other than the typical meetings of boards, committees, or City Council that are required to adopt the change.

Timeframes of 1 year may require additional research or engagement of the public or outside parties, and may be slightly controversial.

Timeframes of 2 years are likely to require additional research and engagement with the public, and may be controversial.

There are two items which have timeframes of “Any - non-urgent.” This is for the recommendation of lowering school zone speed limit to 20 mph and for the City taking on full responsibility for sidewalks. These ideas would be unique in the metro area and may be highly controversial.

Chapter/Policy	Recommendation	Timeframe	Lead
Chapters 48, 76, 165 - Definition of “Trail”	Revise to a single definition	6 months	Parks
Chapter 48: Use of City Greenbelt, Open Space, and Recreation Trails; 48.03 Alcoholic Beverages Prohibited	Allow for closed container of alcohol on trails	6 months	Parks
Chapter 48: Use of City Greenbelt, Open Space, and Recreation Trails	Prohibit tobacco usage on trails	1 year	Parks, in coordination with area suburbs
Chapter 63: Speed Regulations	Review the feasibility of lowering school zone speed limits	Any – non-urgent	Public Works, in consultation with the Police Department and School District

Chapter/Policy	Recommendation	Timeframe	Lead
Chapter 76: Bicycle Regulations; 76.12 Bicycle Lanes	Delete unclear statement	6 months	Parks
Chapter 136: Sidewalk Regulations	Take on full or partial responsibility for sidewalk construction and maintenance	Any – non-urgent	Public Works
Chapter 136: Sidewalk Regulations; 136.04 Responsibility for Maintenance	Add language regarding adjacent property owner responsibility to remove sediment and debris and to keep vegetation cut back.	6 months	Public Works
Chapter 136: Sidewalk Regulations; 136.09 Barri-cades and Warning Lights	Add language requiring a detour per Iowa SUDAS, Chapter 12.	6 months	Public Works
Chapter 136: Sidewalk Regulations; 136.17 Merchandise Display	Allow exceptions to the limitations of display based upon administrative review or conditional use permit	1 year	Public Works, Planning
Chapter 166: Zoning – General Regulations; 166.32 Open Space and Landscaping Requirements	Add requirement for street trees to landscaping requirements	1 year	Planning, in consultation with Public Works
Chapter 166: Zoning – General Regulations; 166.33 Off-Street Parking and Loading	Incentive the provision of bicycle parking	1 year	Planning

Chapter/Policy	Recommendation	Timeframe	Lead
Chapter 171: Site Plan Requirements; 171.05 Design Standards	Add specific requirements that pedestrian walkways be separate from drive aisles between the front sidewalk or trail and the front door	1 year	Planning
Chapter 180: Subdivision Regulations; 180.41 Easements	Define “walkway” or revise to “sidewalk” and add 20-foot wide easements for trails.	1 year	Planning
Chapter 180: Subdivision Regulations; 180.42 Improvements Required	Adopt criteria for sidewalk waivers	2 years	Planning, Public Works, Parks
Chapter 180: Subdivision Regulations; 180.43-F.5 Dedication of Land or Easements for Trails	Revise to indicate that dedication of land and construction of trail improvements shall be given for any trail improvement, whether in the Comprehensive Plan or other adopted City Plan, or proposed by the developer and agreed by the City to be part of the network.	1 year	Planning, Public Works, Parks
Sidewalk Program (dated 3/6/2017); General	Add requirements for temporary sidewalks in certain circumstances	2 years	Public Works
Sidewalk Program (dated 3/6/2017); Construction Deferral Guidelines	Add requirement to identify an alternative pedestrian route when granting a deferral	1 year	Public Works
Complete Street Policy	Add NACTO Urban Bikeway Design Guide to the list of resources	6 months	Public Works

Chapter/Policy	Recommendation	Timeframe	Lead
Complete Street Policy	Formalize review process and establish a complete street committee	1 year	Parks, Public Works, Planning
Sidepath Trail vs. Wide Sidewalk vs. Standard Sidewalk Installation	Identify list of criteria that should be reviewed when deciding on the width of a sidewalk or side-path trail.	6 months	Parks, Public Works, Planning
Future Mobility Trends	Investigate need for regulations addressing motorized and non-motorized vehicle share businesses, permitted uses on trails, and trail etiquette and signage.	1 year	Parks, Public Works, Planning

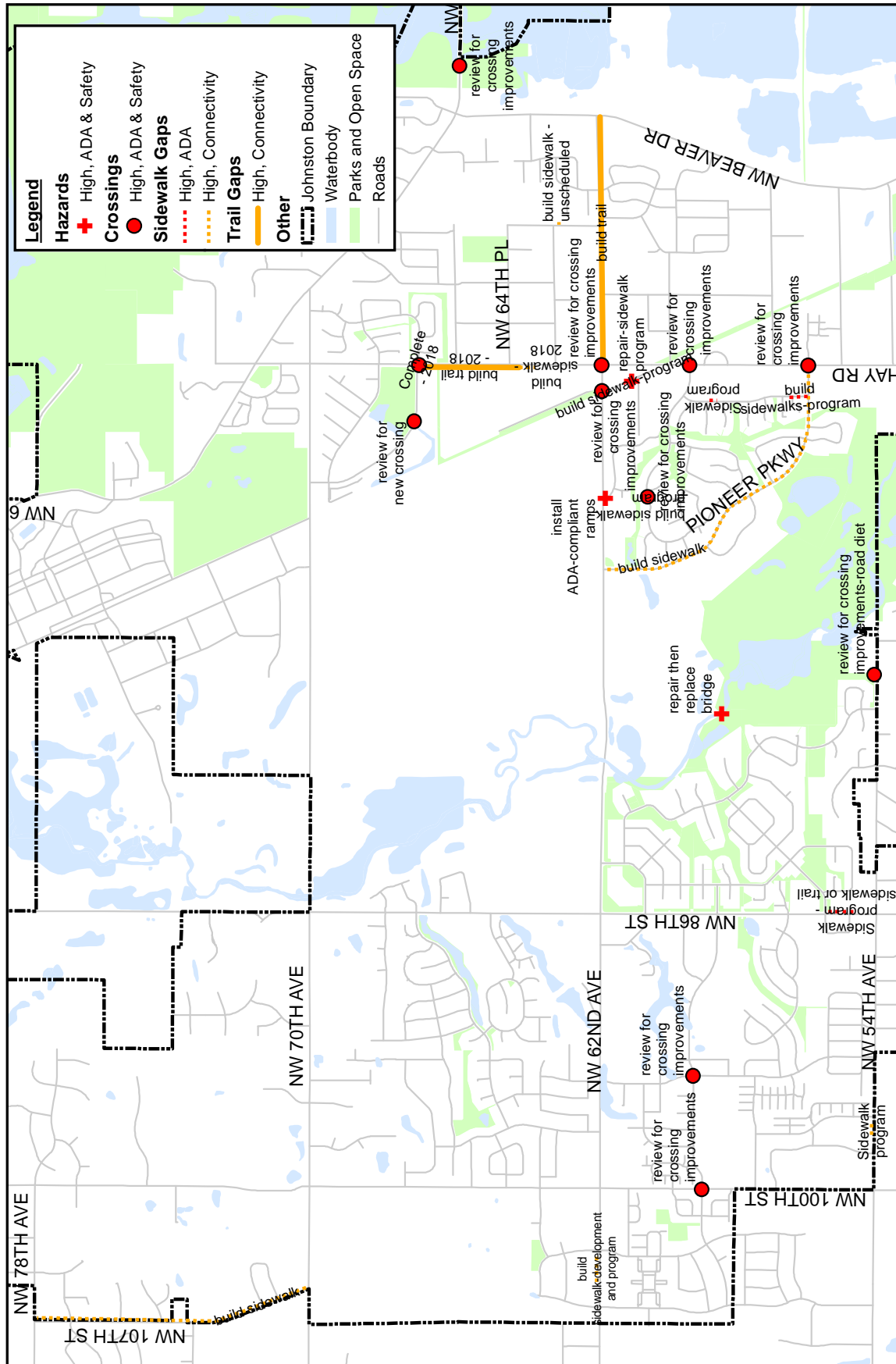
Changes to the City Code should be reviewed by any relevant boards and committees prior to being adopted by the City Council.

Policies which were previously approved by the City Council should return to City Council for approval of changes.

INFRASTRUCTURE RECOMMENDATIONS

Features which were rated has “High” urgency should be addressed as soon as possible due to safety concerns or non-compliance with ADA; this would be preferably within the next year. Features which were rated as “Medium” urgency should be addressed within 2-5 years. Features which were rated as “Low” urgency should be addressed as time and budget allows.

The exhibits on the following pages show maps of the recommendations corresponding with each level of urgency, and are followed by tables specifying the location and other qualities of each specific recommendation. The descriptions in the corresponding tables are adapted from public comments received on the map.social website.



Infrastructure Recommendations - High Urgency

Johnston Walkability Study | Johnston, Iowa | 10/31/2018

HAZARDS - HIGH URGENCY

Location	Recommendation	Work Category	Difficulty	Description	Currently in CIP
NW 59th Ct and driveway	Repair-sidewalk program	Maintenance	Low	Broken Sidewalk	No
Intersection of NW 62nd Ave and Meadow Crest Dr	Install ADA-compliant ramps	Infrastructure	Medium	Narrow and rough ramps; lack of ADA ramps	Yes
Beaver Creek Bridge	Repair then replace bridge	Maintenance	High	Bridge is in poor condition, unsafe and abrupt approach	No

CROSSINGS - HIGH URGENCY

Location	Recommendation	Work Category	Difficulty	Description	Currently in CIP
Crowwing and N Winwood Dr	Review for crossing improvements	Infrastructure	Low	Poor crossing south of Wallace Elementary	Yes
NW 54th Ave and road to ball park	Review for crossing improvements-road diet	Infrastructure	Low	No crosswalk markings on north side of 54th to get to ball parks. Pooling water on sidewalk	Yes
NW 62nd Ave and NW 59th Ct	Review for crossing improvements	Infrastructure	Low	Need better pavement markings, signage	Yes
Windsor Pkwy and NW 93rd St	Review for crossing improvements	Infrastructure	Low	Poor crossing	Yes
Winwood Dr and Merle Hay Rd	Review for crossing improvements	Infrastructure	Low	Unsafe crossing. Timer is too short for peds to cross. Lacking markings and signage	Yes
Merle Hay Rd and Pioneer Pkwy	Review for crossing improvements	Infrastructure	Medium	Walk button to cross Merle Hay Road is on the north side of Pioneer Parkway, difficult for bikes and peds	No

CROSSINGS - HIGH URGENCY (CONTINUED)

Location	Recommendation	Work Category	Difficulty	Description	Currently in CIP
North Glenn Dr and parking lot	Review for new crossing	Infrastructure	Medium	Kids run accross North Glenn Dr to get to Library, lacking pavement markings, signage	Yes
North Glenn Dr and Merle Hay Rd	Ramps, timers, reconstruct - 2018	Infrastructure	Medium	No crosswalk on south side of road	Yes
WIndsor Pkwy and NW 100th St	Review for crossing improvements	Infrastructure	Medium	High speed south to westbound traffic	Yes
NW 62nd Ave and Merle Hay Rd	Review for crossing improvements	Infrastructure	High	No Clear Crossing at 62nd and Merle Hay, poorly designed for bikes/peds	Yes
NW 66th Ave and driveway	Review for crossing improvements	Infrastructure	High	Unsafe crossing from north side of 66th to Soccer fields, lacking grade-separated crossing	No

SIDEWALK GAPS - HIGH URGENCY

Route Name	Starting	Ending	Recommendation	Difficulty	Description	Currently in CIP
Greendale Rd	Greendale PI	Driveway	Sidewalk program	Low	Sidewalk gap on east side of Greendale Road	Yes
Merle Hay Rd	NW 64th PI	Driveway	Build sidewalk - 2018	Low	Merle Hay Sidewalk Gap	Yes
NW 86th St	Chambery Blvd	Chambery Blvd	Sidewalk program - sidewalk or trail	Low	Missing sidewalk along 86th	Yes

SIDEWALK GAPS - HIGH URGENCY (CONTINUED)

Route Name	Starting	Ending	Recommendation	Difficulty	Description	Currently in CIP
North Glenn Way	Merle Hay Rd	Sidewalk/trail	Complete - 2018	Medium	No sidewalk to curb at SE corner	Yes
NW 59th Ct	South of NW 62nd Ave	North of NW 61st Ave	Build sidewalk-program	Medium	Sidewalk gap missing due to communications device, needs to be ADA compliant	Yes
NW 86th St	Chambery Blvd	Chambery Blvd	Build sidewalks-program	Medium	Sidewalk gaps along Greendale Road	Yes
NW 107th St	NE 18th St	E 1st St	Build sidewalk	Medium	107th Street Sidewalk Gap - east side	No
Pioneer Pkwy	NW 62nd Ave	Merle Hay Rd	Build sidewalk	Medium	Pioneer Pkwy needs trails and needs sidewalk gaps filled	Yes
Prairie Pl	NW 51st St	Prairie Pl	Build sidewalk-unscheduled	Medium	Missing sidewalk connection from Prairie Place and NW 51st Street	Yes
NW 54th Ave	Existing sidewalk	NW 96th St sidewalk	Sidewalk program	High	Missing sidewalk on 54th Street	Yes
NW 62nd Ave	Fire Station	Apartment Complex	Build sidewalk-development and program	High	Sidewalk gap between fire station and apt complex on north side of 62nd	No

TRAIL GAPS - HIGH URGENCY

Route Name	Starting	Ending	Recommendation	Difficulty	Description	Currently in CIP
Merle Hay Rd	North Glenn Dr	NW 64th Pl	Build trail - 2018	Medium	Merle Hay Trail Gap	Yes
NW 62nd Ave	Merle Hay Rd	NW Beaver Dr	Build trail	Medium	Trail gap, change existing sidewalk to trail	Yes



Infrastructure Recommendations - Medium Urgency

Johnston Walkability Study | Johnston, Iowa | 10/31/2018



SNYDER
& ASSOCIATES

Mode of Transport	Miles
Car	0.55
Train	0.3
Boat	0.5
Plane	0.6

HAZARDS - MEDIUM URGENCY

Location	Recommendation	Work Category	Difficulty	Description	Currently in CIP
Crab Apple Ln sidewalks	Repair-sidewalk program	Maintenance	Low	Sidewalks in this neighborhood need replacement	Yes
Trail off of Heatherbow	trail maintenance	Maintenance	Low	Trail needs repair, cracks, seal coating	No
Wellington Blvd and Brandywine Dr	Repair-sidewalk program	Maintenance	Low	Sidewalks in this neighborhood need replacement	Yes
Sidewalk at NW 62nd Ave and driveway #1	Review for crossing improvements	Infrastructure	Medium	Narrow and rough ramps; lack of clear delineation of ramp vs curb	No
Sidewalk at NW 62nd Ave and driveway #2	Review for crossing improvements	Infrastructure	Medium	Narrow and rough ramps; lack of clear delineation of ramp vs curb	No
Trail off of Morningside Dr	Trail replacement	Maintenance	Medium	Large crack/gap in trail near top of hill.	No

CROSSINGS - MEDIUM URGENCY

Location	Recommendation	Work Category	Difficulty	Description	Currently in CIP
Johnston Dr and trail	Review for crossing improvements	Infrastructure	Low	Interurban Trail crossing needs improvement	No
Morningside Dr and Merle Hay Rd	Review for crossing improvements	Infrastructure	Low	Unsafe intersection, high vehicle speed, unprotected ped and bike travel	No
NW 86th St and Wooded Point Dr	Review for crossing improvements	Infrastructure	Low	Four lane road difficult for safe pedestrian crossing, Improve at-grade crossing	No

CROSSINGS - MEDIUM URGENCY (CONTINUED)

Location	Recommendation	Work Category	Difficulty	Description	Currently in CIP
Beaver Creek Elem to Prairie Ridge/Brookridge Dr	Review for crossing improvements	Infrastructure	Medium	Crossing from Beaver Creek Elementary to Beaver Creek Trail Head is unsafe.	No
NW 62nd Ave and NW 86th St	Review for crossing improvements	Infrastructure	Medium	Unsafe intersection, no marked crosswalks, signal too short	No
NW 64th Pl and Merle Hay Rd	Review for new crossing	Infrastructure	Medium	NW 64th Place street crossing needs update	No
NW 86th St and Windsor Pkwy	Review for crossing improvements (N leg)	Infrastructure	Medium	Poor crossing eastbound on Windsor Pkwy to reconnect with trail, must ride in street	Yes
NW Newgate Dr and NW 86th St	Review for crossing improvements	Infrastructure	Medium	Unsafe crossing at intersection of Newgate and 86th Street, recommended ped activated flashing beacon	No
Pioneer Pkwy and Columbine Dr	Review for crossing improvements	Infrastructure	Medium	Crossing Pioneer Parkway to get to Terra Park needs safety improvements	Yes
Windsor Pkwy and NW 103rd St	Review for crossing improvements	Infrastructure	Medium	Windsor and 103rd Crossing could use all-way stop	Yes

SIDEWALK GAPS - MEDIUM URGENCY

Route Name	Starting	Ending	Recommendation	Difficulty	Description	Currently in CIP
NW 56th Ave	NW Beaver Dr	Driveway	build sidewalk on north side with development	Low	Sidewalk/trail to soccer fields	No

SIDEWALK GAPS - MEDIUM URGENCY (CONTINUED)

Route Name	Starting	Ending	Recommendation	Difficulty	Description	Currently in CIP
NW 86th St	NW 54th Ave	NW 53rd PI	build sidewalk - development	Low	Missing sidewalk on west side of 86th	No
Foxboro Rd	Chambery Blvd	Existing Sidewalk	Sidewalk program	Medium	Missing sidewalk - staff comment	Yes
NW 54th Ct	NW Beaver Dr	NW 53rd PI	build sidewalks-unscheduled	Medium	No sidewalk along NW 54th court	Yes
NW 64th PI	Driveway	Dewey Park	build sidewalk-unscheduled	Medium	Sidewalk gap to Dewey Park	Yes
NW 66th Ave	NW 54th Ct	Existing Sidewalk	build sidewalks on both sides of street	Medium	Sidewalk gap, must walk on street	No
NW 70th St	NW 93rd St	NW 86th St	build sidewalk - 2019	Medium	Sidewalk on north side with 2019 construction	Yes
NW 70th Ave	NW 100th St	Driveway	build sidewalk - 2019	Medium	No sidewalk	Yes
NW 78th Ave	NW 104th Ct	NW 100th St	build sidewalk	Medium	No sidewalk on either side of inclined road, must bike on street	No
NW 86th St	Sidewalk	Thomas Ave	Sidewalk program	Medium	Sidewalk incomplete on west side	Yes
River Bend	Eagle Ridge Dr	NW Beaver Dr	Sidewalk program	Medium	No sidewalk to get out of Eagle Ridge	Yes
NW 51st St	NW 64th PI	NW 62nd Ave	Sidewalk program-unscheduled	High	51st	Yes
NW 51st St	NW Beaver Dr	NW 66th Ave	Build sidewalks-unscheduled	High	No sidewalks to get to Dewey park	Yes
NW 52nd St	Cul-de-sac	NW 66th PI	Sidewalk program-unscheduled	High	52nd	Yes

SIDEWALK GAPS - MEDIUM URGENCY (CONTINUED)

Route Name	Starting	Ending	Recommendation	Difficulty	Description	Currently in CIP
NW 53rd St	NW 66th Ave	NW 66th PI	Sidewalk program-unscheduled	High	53rd	Yes
NW 54th Ct	Dead Cul-de-sac	Coburn Ln	Sidewalk program-unscheduled	High	54th Cul-de-sac	Yes
NW 56th St	NW 66th Ave	NW 63rd PI	Sidewalk program-unscheduled	High	56th	Yes
NW 63rd PI	Merle Hay Rd	NW 51st St	Sidewalk program-unscheduled	High	63rd	Yes
NW 64th PI	Dewey Park	NW 51st St	Sidewalk program-unscheduled	High	64th	Yes
NW 66th Ave	West of vacant lot	East of vacant lot	Sidewalk program-unscheduled	High	vacant lot	Yes
NW 66th PI	NW 54th Ct	NW 52nd Ct	Sidewalk program-unscheduled	High	66th	Yes
NW 68th St	NW 52nd Ct	NW 51st St	Sidewalk program-unscheduled	High	68th	Yes
NW Beaver Dr	Johnston Dr	Interstate 80	Build sidewalk-planned	High	Need connection from bridge safely	No

TRAIL GAPS - MEDIUM URGENCY

Route Name	Starting	Ending	Recommendation	Difficulty	Description	Currently in CIP
100th Street crossing	Pond along NW 100th St	NW 100th St	Build trail connect trail to S - with road	Medium	Dead end trail from park, extend to 100th	Yes
Foxboro Rd	Huntingwood Ct	Chambery Blvd	Review for trail (or SLM)	Medium	Biking in street required, sidewalk is narrow, need trail connecting segments of existing trail	No

TRAIL GAPS - MEDIUM URGENCY (CONTINUED)

Route Name	Starting	Ending	Recommendation	Difficulty	Description	Currently in CIP
Johnston Commons	Morningside Dr	Library	Build trail	Medium	Trail through Johnston Commons	Yes
Johnston Dr	Trail	NW Beaver Dr	Build trail-planned	Medium	Connect Beaver Ave from main trail	No
Johnston Public Works	NW Beaver Dr	NW 48th St	Build trail	Medium	Incomplete trails, need to connect, lots of cars and bikes travel on narrow sidewalk-beaver to west	No
NW 59th Ct	Merle Hay Rd	NW 62nd Ave	Build trail - 2019	Medium	Access to trail, Johnston Middle School, Library without having to cross Merle Hay	Yes
NW 70th Ave	NW 98th St	NW 86th St	Build trail - 2019	Medium	Lacking connection along 70th between 86th and 100th	Yes
NW 78th Ave	Driveway west of NW 104th Ct	NW 100th St	Build trail	Medium	no sidewalk on either side of inclined road, must bike on street	No
NW 100th St	Marnewood Dr	NW 70th Ave	Build trail - unscheduled	Medium	Sidewalk gap from Crosshaven to Johnston High School	Yes
NW 100th St	NW 62nd Ave	NW 64th Ave	Build trail - with road imp	Medium	Connect Horizon to JHS, connects 54th to bike path on 62nd	Yes
Pioneer Pkwy	Pioneer Pkwy	Trail	Build trail gap (need ROW) - development	Medium	Merle Hay to Johnston Station trail connection	No
NW 86th St	Crescent Chase	Chambery Blvd	Build trail	Medium	Non existent on east side of 86th	Yes
NW Beaver Dr	NW 78th Ave	NW 66th Ave	Build trail	High	East side of Beaver Drive, crucial to hook up with Neal Smith Trail	Yes



HAZARDS - LOW URGENCY

Location	Recommendation	Work Category	Difficulty	Description	Currently in CIP
Trail between Kensington Cir and NW 54th Ct	Review drainage on site	Maintenance	Low	Stream erosion, water enters pathway	No
Trail off of South Dr	Review for signage	Infrastructure	Low	Signage/wayfinding unclear and in need of improvement	No

CROSSINGS - LOW URGENCY

Location	Recommendation	Work Category	Difficulty	Description	Currently in CIP
Stoney Creek CT and NW 54th Ave	Review for new ramp with sidewalk program	Infrastructure	Low	No ramp to cross from north side of 54th Ave to Stoney Creek Court	No
NW 86th St crossing I-80	Review for ped crossing on 86th	Infrastructure	High	Discussion of crossing at I-80 - outside city limits	No

SIDEWALK GAPS - LOW URGENCY

Route Name	Starting	Ending	Recommendation	Difficulty	Description	Currently in CIP
Library Parking Lot	Library building	North Glenn Dr	build sidewalk through lot - Library	Low	Library access- need path across lot	No
Merle Hay Rd	NW 70th Ave	Trail	build sidewalk	Low	Merle Hay Gap	Yes
NW 48th St	Existing sidewalk on NW 48th Street	Existing sidewalk on NW 48th Street	build sidewalk- development	Low	Sidewalk gap, connect developments	No

SIDEWALK GAPS - LOW URGENCY (CONTINUED)

Route Name	Starting	Ending	Recommendation	Difficulty	Description	Currently in CIP
NW 62nd Ave	Merle Hay Rd	NW Beaver Dr	build sidewalk	Low	Sidewalk needed on north side of road - Merle Hay to Beaver	Yes
NW 52nd Ct	NW 64th Pl	52nd cul-de-sac	Sidewalk program-unscheduled	Medium	52nd cul-de-sac	Yes
NW 64th Pl	Merle Hay Rd	Driveway	build sidewalk	Medium	Extend trail to Library, suggested route	No
NW 66th Ave	Existing NW 66th Ave	NW 66th Ave	build sidewalks-development	High	Connect missing road/sidewalk segment of NW 66th Ave.	No
NW 66th Ave	Merle Hay Rd	NW 54th Ct	Sidewalk program-unscheduled	High	66th (Merle Hay to 54th) Low because trail parallels to north	Yes

TRAIL GAPS - LOW URGENCY

Merle Hay Rd	NW 63rd Pl	NW 60th Ave sidewalk	Widen to trail	Low	Merle Hay Gap	Yes
Merle Hay Rd	Winwood Dr	Beaver Creek	Widen to trail	Low	Merle Hay Gap - sidewalks existing	Yes
Merle Hay Rd	NW 60th Ave	Winwood Dr	Widen sidewalk	Medium	Trail loop around food destinations, change sidewalk to trail	Yes
NW 93rd St	Longview Dr	Sidewalk	Widen sidewalk	Medium	sidewalk is narrow	Yes
86th St connection	Trail	86th St	Build trail - development	High	Need connection to 86th Street	No

TRAIL GAPS - LOW URGENCY (CONTINUED)

Route Name	Starting	Ending	Recommendation	Difficulty	Description	Currently in CIP
Connection by High School	NW 70th Ave	NW 62nd Ave	Build trail - with road	High	Need trail or sidewalk connection between 62nd and 70th, west of high school	No
New Valley Parkway segment	New Development	Valley Parkway	Build trail - development	High	Needs connection north to new development	No
Trail parallel to Merle Hay Rd	NW 63rd PI	NW 62nd Ave	Build trail - development	High	Extend trail to Library, suggested route	No

INTERSECTION SAFETY

Intersections should be designed to accommodate bicyclists, pedestrians and motorists in a safe and efficient manner. Designs for intersections should reduce conflicts between users by increasing visibility, identifying the right-of-way for each user, and making it clear to each user where they should be located within the intersection.

For uncontrolled crossings where the recommendation is “Review for Crossing Improvements,” the City should consult the Federal Highway Administration Guide to Improve Uncontrolled Crossings and the associated Field Guide for Selecting Countermeasures at Uncontrolled Intersections.

For controlled crossings, where the recommendation is “Review for Crossing Improvements,” the City may also consider the countermeasures listed in Table 2.

Roadway Configuration	Speed Limit								
	≤30 mph	35 mph	≥40 mph	≤30 mph	35 mph	≥40 mph	≤30 mph	35 mph	≥40 mph
	Vehicle AADT <9,000			Vehicle AADT 9,000–15,000			Vehicle AADT >15,000		
2 lanes*	① 2 3 4 5 6	① ③ 5 6 7	① ③ 5 6 ⑦	① 3 4 5 6	① ③ 5 6 7	① ③ 5 6 ⑦	① 3 4 5 6 7	① ③ 5 6 7	① ③ 5 6 ⑦
3 lanes with raised median*	① 2 3 4 5	① ③ 5 7	① ③ 5 ⑦	① 3 4 5 7	① ③ 5 ⑦	① ③ 5 ⑦	① ③ 4 5 7	① ③ 5 ⑦	① ③ 5 ⑦
3 lanes w/o raised median†	① 2 3 4 5 6 7	① ③ 5 6 7	① ③ 5 6 ⑦	① 3 4 5 6 7	① ③ 5 6 ⑦	① ③ 5 6 ⑦	① ③ 4 5 6 7	① ③ 5 6 ⑦	① ③ 5 6 ⑦
4+ lanes with raised median‡	① ③ 5	① ③ 5 7	① ③ 5 ⑦	① ③ 5 7	① ③ 5 ⑦	① ③ 5 ⑦	① ③ 5 ⑦	① ③ 5 ⑦	① ③ 5 ⑦
4+ lanes w/o raised median‡	① ③ 5 6 7 8	① ③ 5 ⑥ 7 8	① ③ 5 ⑥ ⑦ 8	① ③ 5 ⑥ 7 8	① ③ 5 ⑥ ⑦ 8	① ③ 5 ⑥ ⑦ 8	① ③ 5 ⑥ ⑦ 8	① ③ 5 ⑥ ⑦ 8	① ③ 5 ⑥ ⑦ 8
*One lane in each direction †One lane in each direction with two-way left-turn lane ‡Two or more lanes in each direction									
Given the set of conditions in a cell, ● Signifies that the countermeasure should always be considered, but not mandated or required, based upon engineering judgment at a marked uncontrolled crossing location. # Signifies that the countermeasure is a candidate treatment at a marked uncontrolled crossing location. The absence of a number signifies that the countermeasure is generally not an appropriate treatment, but exceptions may be considered following engineering judgment.									
1 High-visibility crosswalk markings, parking restriction on crosswalk approach, adequate nighttime lighting levels 2 Raised crosswalk 3 Advance Yield Here To (Stop Here For) Pedestrians sign and yield (stop) line 4 In-Street Pedestrian Crossing sign 5 Curb extension 6 Pedestrian refuge island 7 Pedestrian Hybrid Beacon 8 Road Diet									
This table was developed using information from: Zegeer, C. V., Stewart, J. R., Huang, H. H., Lagerwey, P. A., Feaganes, J., & Campbell, B. J. (2005). <i>Safety effects of marked versus unmarked crosswalks at uncontrolled locations: Final report and recommended guidelines</i> (No. FHWA-HRT-04-100); <i>Manual on Uniform Traffic Control Devices</i> , 2009 Edition, Chapter 4F. Pedestrian Hybrid Beacons; the Crash Modification Factors (CMF) Clearinghouse website (http://www.cmfclearinghouse.org/); and the Pedestrian Safety Guide and Countermeasure Selection System (PEDSAFE) website (http://www.pedbikesafe.org/PEDSAFE/).									

Table 1. Application of Pedestrian Crash Countermeasures by Roadway Feature, FHWA Field Guide for Selecting Countermeasures at Uncontrolled Pedestrian Crossing Locations








































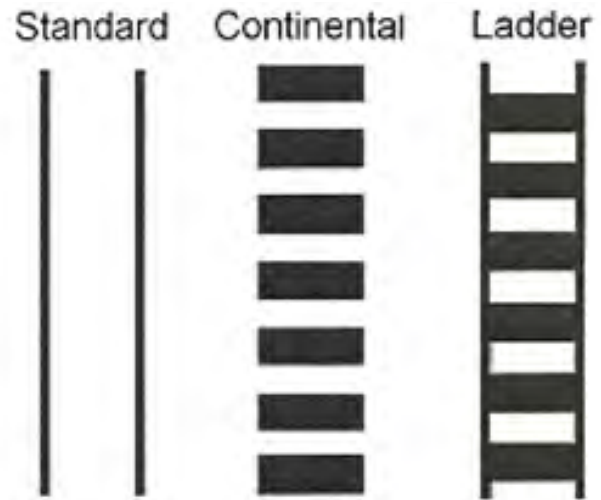
Pedestrian Crash Countermeasure for Uncontrolled Crossings	Safety Issue Addressed				
	Conflicts at crossing locations	Excessive vehicle speed	Inadequate conspicuity/visibility	Drivers not yielding to pedestrians in crosswalks	Insufficient separation from traffic
Crosswalk visibility enhancement					
High-visibility crosswalk markings*					
Parking restriction on crosswalk approach*					
Improved nighttime lighting*					
Advance Yield Here To (Stop Here For) Pedestrians sign and yield (stop) line*					
In-Street Pedestrian Crossing sign*					
Curb extension*					
Raised crosswalk					
Pedestrian refuge island					
Pedestrian Hybrid Beacon					
Road Diet					
*These countermeasures make up the STEP countermeasure "crosswalk visibility enhancements." Multiple countermeasures may be implemented at a location as part of crosswalk visibility enhancements.					

Table 2 - Safety Issues Addressed Per Countermeasure, FHWA Field Guide for Selecting Countermeasures at Uncontrolled Intersections

ENHANCED VISIBILITY CROSSWALKS

More prominent crosswalk markings improve visibility of the crosswalk area for motorists. The pavement markings also indicate to motorists that they are required to stop for pedestrians that are in the crosswalk. Stop bars may also be painted in advance of the crosswalk to guide motorists to the proper stopping position.

The ladder and continental styles are generally preferred over the standard parallel lines because they are more visible and they enable a greater amount of paint to remain visible over time, as more paint is outside the vehicular wheel path.



Crosswalk Pavement Marking Types, Source: FHWA

PEDESTRIAN COUNTDOWN TIMERS

A pedestrian countdown timer can be used as an enhancement to a signalized intersection. Some pedestrians feel like they need to rush across an intersection when the flashing “Don’t Walk” signal illuminates. Actually, when the flashing red signal appears, there are still several seconds remaining to safely cross, but the signal doesn’t convey that. Pedestrian countdown timers can be used in lieu of standard Walk/Don’t Walk signals. The countdown timers show the number of seconds remaining to safely cross the street before the “don’t walk” signal illuminates. This can give pedestrians greater confidence in crossing the intersection and lessen anxiety associated with the feeling that they must rush across.



Pedestrian Countdown Timer, Source: SafeRoutesInfo

ACTIVE WARNING BEACONS (RECTANGULAR RAPID FLASHING BEACONS - RRFB)

Active warning beacons are user-actuated amber flashing lights that supplement warning signs at unsignalized intersections or mid-block crosswalks. Beacons can be actuated either manually by a push button or passively through radar detection. Warning beacons can be installed on either two-lane or multi-lane roadways. Warning beacons should be used to alert drivers to yield where bicyclists and pedestrians have the right-of-way crossing a



Active Warning Beacons (Texas) Source: Texas A&M Transportation Institute

road. Rectangular rapid-flashing beacons have a vehicle yielding compliance of approximately 70% higher than a standard beacon.

HAWK SIGNALS

A pedestrian hybrid beacon is defined in the MUTCD as “a special type of hybrid beacon used to warn and control traffic at an unsignalized location to assist pedestrians in crossing a street or highway at a marked crosswalk.”

These hybrid beacons are also known as HAWK (High-Intensity Activated Crosswalk) signals. These can be considered for installation to facilitate pedestrian crossings at a location that does not meet traffic signal warrants, or at a location that meets traffic signal warrants under sections 4C.05 (Warrant 4, Pedestrian Volume) and/or 4C.06 (Warrant 5, School Crossing) if a decision is made not to install a traffic control signal.

An engineering study is required in order to determine whether a traffic signal installation is warranted. In the case that it is determined that a traffic signal is not warranted but warrants 4 and 5 are met then consideration should be given to HAWK signal guidelines installation.

RAISED CROSSWALKS/RAISED INTERSECTIONS

Adding a raised crosswalk can help slow vehicles down and bring more attention to the pedestrians crossing because they increase the conspicuity of pedestrians, by raising them a few inches to be more centered in the driver's field of vision. These raised crosswalks, also called speed tables, may be built with distinctive pavers or other materials that help both drivers and pedestrians delineate the location of the crosswalk. A pedestrian crossing or speed hump sign should be included along the street's edge to notify the driver of the upcoming raised crosswalk.

Entire intersections can also be raised, which highlights the intersection as a conflict area, causes users to slow, and, brings awareness to multiple users in the intersection.



HAWK Signal (High Trestle Trail, Ankeny, IA)



Raised Crosswalk (SW 14th Street, Des Moines, IA)



Raised Trail Crosswalk (Minneapolis, MN)



Raised Intersection (Cambridge, MA) Source: NACTO

PEDESTRIAN REFUGE ISLAND

A pedestrian refuge island is a curb-protected space in the center of the street for pedestrians, and sometimes for bicyclists. They can be used at both controlled and uncontrolled pedestrian crossings. They allow pedestrians to cross one direction of vehicular travel and then wait within the refuge to cross the opposite direction of vehicular travel. These islands may be used where there are only two vehicular lanes if there is sufficient space, but they are most useful on wider or multi-lane streets. They generally should be at least 56 feet wide, but are preferred to be 8 to 10 feet wide.



Pedestrian Refuge Island (Johnston, IA)

CURB EXTENSION

Curb extensions, also referred to as bulb outs or neckdowns, are areas where the curb is extended to allow for dedicated pedestrian space. They are used to shorten the length of the crosswalk for pedestrians. This also narrows the road for vehicular traffic, which may cause motorists to reduce their speed. They can be used at roadway intersections or midblock crossings. They are particularly useful where there is on-street parking so that pedestrians can wait outside the line of parked cars and be more visible to approaching vehicles.



Intersection Curb Extension (West Palm Beach, FL) Source: FHWA



Mid-block Curb Extension (Johnston, IA)

CONCEPTUAL COST OPINIONS

For general budgeting purposes, conceptual, pre-design costs can provide a basis. There are numerous factors that can impact the cost of a particular improvement, so the more that is known about the project, the more refined the cost opinion can become.

Trail Type	Heuristic Cost per Mile	Elements	Modification Factor	Resulting Cost per Mile
Paved Trail - 10' wide (independent alignment)	\$450,000	Former RR Grade	0.5	\$225,000
		Flat Terrain	0.7	\$315,000
		Rolling Terrain	1	\$450,000
		Hilly Terrain	1.5	\$675,000
		Along Streambank	1.8	\$810,000
Paved Sidepath - 10' wide	\$325,000	Along urban roadway	1	\$325,000
		Along rural roadway	1.6	\$520,000

Sidewalk	Heuristic Cost per Foot
Paved Sidewalk - 5' wide	\$20

Crosswalk Items	Heuristic Unit Costs	Unit	Life Cycle
Standard/Parallel Markings	\$300 - \$1,500	Per crosswalk	1-3 years
Continental Markings (24 inch markings/24 inch spacing)	\$750 - \$1,500	Per crosswalk	1-3 years
Crosswalk Warning Signs	\$1,000 - \$1,750	Per crosswalk	5-10 years
Pedestrian Countdown Timers (add to existing poles)	\$1,500 - \$2,000	Per crosswalk	15-20 years
Accessible pedestrian signals/ pushbuttons (add to existing poles)	\$3,000 - \$5,000	Per crosswalk	15-20 years
Rectangular Rapid Flash Beacon (RRFB)	\$10,000 - \$20,000	Per crosswalk	5-10 years
Pedestrian Hybrid Beacon (HAWK Signal)	\$90,000 - \$175,000	Per crosswalk	15-20 years
Raised Crosswalk	\$10,000 - \$25,000	each	20 years
Raised Intersection	\$50,000 - \$100,000	each	20 years
Pedestrian Refuge Island	\$5,000 - \$40,000	each	20 years
Curb Extension	\$5,000 - \$20,000	each	20 years

FUNDING OPPORTUNITIES

Funding for infrastructure improvements can come from a variety of sources. Local funding is a primary source of funds, but state and federal funding sources may be available depending up on the details of the project. For larger projects, a combination of funding sources is often necessary. Sometimes, private individuals, families, and companies choose to donate land or dollars to develop particular projects that they can view as a legacy or significant improvement to the community's quality of life. With regards to pedestrian infrastructure, private donations are most likely to be associated with trail projects and amenities such as benches, drinking fountains, and landscaping.

CITY FUNDING

Currently, the City's CIP dedicates \$500,000 per year to "Sidewalks" with the focus on ADA-compliance related to curb ramps and implementing the citywide sidewalk program.

When individual roadway or intersection projects are identified within the CIP, pedestrian accommodations are included within the project budget as needed. Trail projects may be budgeted for individually as well.

When applying for grants, a significant investment that is greater than the minimum match required indicates to application review committees that the city places a high priority on completing the project. This commitment should be officially documented in some way, such as through the Capital Improvement Program or a resolution from the City Council.

DONATIONS

A trails or bike/pedestrian-targeted "Friends" group could be developed for the trail, bikeway, or pedestrian system overall, or for targeted projects, as necessary. "Friends" groups often assist City staff in mutually defined goals of fundraising efforts, and sometimes programmatic efforts. In any case, a "fundraising committee"

may be formed, representing a variety of interested parties, to lead fundraising efforts.

Donations from private sources typically help to leverage state and federal grant dollars. Even small contributions from local private sources help make applications for grant programs more compelling, as they indicate strong local support for the project. Also, potential donors/grantors prefer to see evidence that there will be enough funding in place for a project to be completed.

When deciding who to contact for private support, the fundraising committee should first identify which individuals, companies, and/or nonprofits, and organizations would benefit the most from the proposed project. The committee could begin implementing this step by approaching adjacent property owners to seek a letter (or letters) of support for the project.

The committee could then move on to companies located nearby that maybe be able to contribute financially or in-kind. Incentive programs could be used to encourage their workforces to utilize the trails and on-street network as an alternative means of transportation to work.

The committee should also develop a structure for recognizing various levels of support on the project. For example, a trail, route, or amenity could be named for a major donor. Other donors could be recognized through temporary or permanent signage, a list on the City's website, an announcement via social media, or at a public ribbon cutting. The possibilities for recognition are as unlimited as the committee members' imaginations.

The committee should also request support from groups and individuals, even if those individuals do not have funding or resources that they can contribute to the project. For example, daycares, places of worship, bicycling/running clubs, and the school district may all see a benefit to the project but not have resources to contribute. In this case, the committee should request a letter

of support that indicates how that group will benefit. These letters may be included in grant applications.

PRIVATE FUNDING OPPORTUNITIES

AARP Community Challenge

This grant program funds projects that improve transportation and mobility options, which may include permanent and temporary improvements for connectivity, walkability, bikeability, and access to transit. Applications are due in May, awardees are notified in June, and projects must be completed by November.

America Walks Community Change Grants

This grant program funds projects that create healthy, active, and engaging places to live, work and play. With a \$1500 maximum award, projects may be small, but impactful and able to be completed within a year of award.

Prairie Meadows Community Betterment Grant

This statewide program awards grants between \$100 and \$99,999. A variable amount of funds, which may be near \$2 million, is available to be awarded in four categories: Arts & Culture, Economic Development, Education, and Health and Human Services. Trails are eligible under the Economic Development category. The Community Betterment Grant requires that the project be completed within a year.

Prairie Meadows Legacy Grant

Prairie Meadows also offers a Legacy Grant for requests of \$100,000 to \$1 million, which must have at least 50 percent of the project budget secured. The applicant cannot apply for both the Community Betterment Grant and the Legacy Grant for the same project.

PeopleForBikes Community Grant Program

This national program awards up to \$10,000 to worthy projects and programs that support bicycling. The grant cannot fund more than 50 percent of the project budget. The program is competitive, with only 10 to 15 percent of

proposals being funded. There are two grant cycles each year, with applications opening in June for the fall submittal, and in December for the spring submittal. The process requires a letter of interest prior to submitting a full application.

Wellmark MATCH Grant

Matching Assets to Community Health (MATCH), is a grant awarded by the Wellmark Foundation to promote policies and projects that help communities in Iowa and South Dakota create safe, healthy, and active environments. Two challenge grant opportunities are available—the Large MATCH and Small MATCH. The Large MATCH program awards up to \$100,000 that must have a \$1 to \$1 local contribution. The Small MATCH program awards up to \$25,000, requiring a 50% local contribution. For example, a \$50,000 large grant must have a local match of \$50,000; a \$10,000 small grant must have a \$5,000 local match. Applications are due in March each year.

PUBLIC FUNDING OPPORTUNITIES

Community Attraction and Tourism (CAT) – Iowa Economic Development Authority

The CAT program is designed to assist communities in the development of multiple purpose attraction, recreation, education, entertainment, and cultural facilities. The program received a \$5 million appropriation for FY 2019. CAT funding is limited to 45% of total project costs and must be the “last dollar” to complete the project. Awards are typically closer to 10-20% of project costs. Applications are reviewed by the Enhance Iowa Board quarterly. The board policy is to not award more than \$1 million to a single project. Broad local support, both philosophical and financial, is necessary for a CAT application to be successful.

Federal Recreational Trails – Iowa DOT

The Federal Recreational Trails program typically provides about \$1 million annually for projects in Iowa, with a maximum award of 80 percent of the project cost. Applications are due on October 1 each year.

Iowa Clean Air Attainment Program (ICAAP) – Iowa DOT

The ICAAP program is intended to finance projects and programs that result in attaining or maintaining the National Ambient Air Quality Standards (NAAQS) of the 1990 Clean Air Act Amendments. The focus is on reducing volatile organic compounds, nitrogen oxides, carbon monoxide, and, under certain conditions, particulate matter. This may be done by reducing motor vehicle congestion. To the extent that walking and biking can replace vehicular trips, some trail, bikeway, and sidewalk projects may be eligible for this funding. The maximum award is 80 percent of the project cost. Applications are due on October 1 of each year.

Iowa Great Places – Iowa Department of Cultural Affairs

The Iowa Department of Cultural Affairs provides up to \$400,000 per award to communities and nonprofit organizations. Communities must demonstrate a strong vision for innovation, and strive to enhance community vitality and quality of life while maintaining its unique character. Awardees are designated as an Iowa Great Place. The average award is \$185,000. Letters of intent are usually due by May 1, with a grant application deadline in early June.

Pedestrian Curb Ramp Construction – Iowa DOT

Projects must be located on an Iowa DOT primary road. In Johnston, a recent annexation brings a portion of Highways 415 and 141 into the city boundaries. This program is to assist with compliance with the Americans with Disabilities Act, primarily by constructing curb ramps. The maximum award is \$250,000. The program can award up to 100% of the project cost. Letters of request are accepted by the Iowa DOT District Engineer year-round.

Resource Enhancement and Protection Grant (REAP) – Iowa Department of Natural Resources

REAP funds are appropriated by the Iowa

Legislature and divided amongst various categories, with 15% going to City Parks and Open Space. Projects may be for the acquisition, establishment and maintenance of natural parks, preserves and open spaces. Grants may include expenditures for multipurpose trails, rest room facilities, shelter houses and picnic facilities, museums, parks, preserves, parkways, city forests, city wildlife areas as well as other open space oriented acquisition and development projects. Cities with a population between 10,001 and 25,000 are eligible for up to \$125,000 per project. Applications are due on August 15 each year.

Regional Transportation Alternatives Program (TAP) – Des Moines Area Metropolitan Planning Organization (MPO)

TAP is also known as the Surface Transportation Block Grant Set-Aside Program. It provides funding for programs and projects such as on- and off-road pedestrian and bicycle facilities, improving non-driver access to public transportation through infrastructure, environmental mitigation, and safe routes to schools. Each year, approximately \$1.2 million is available in TAP funding through the Des Moines Area MPO.

Statewide Transportation Alternatives Program (TAP) – Iowa DOT

TAP is a portion of the Federal Surface Transportation Program (STP) funding received by the State of Iowa. Applicants compete on a statewide level for a portion of the TAP fund, which may be used for a wide array of projects, including trails and other bicycle and pedestrian facilities. Projects should be statewide or multi-regional. Projects which connect Johnston to other communities or regional destinations would be better candidates than projects which the benefits are internal to the city.

State Recreational Trails – Iowa DOT

The amount of State Recreational Trails funding varies from year to year, but it is often between \$1 million and \$3 million. The maximum award

is 75 percent of the project cost. Applications are due on July 1 of each year.

Surface Transportation Block Grant Program (STBG) – Des Moines Area MPO

The intent of the STBG programs is to preserve and improve the conditions and performance on any federal-aid highway, bridge, public road, pedestrian and bicycle infrastructure and transit capital projects. Each year, approximately \$12 million is available in STBG funding for the Greater Des Moines region. The maximum award is 80 percent of the project cost. Applications are due in December for funds to be programmed in the federal fiscal year 5 years out.

are accepted by the Iowa DOT District Engineer year-round.

Traffic Safety Improvement Program (TSIP) – Iowa DOT

The TSIP provides funds within the following three categories:

- Site-specific - construction or improvement of traffic safety and operations at a specific site or corridor with a crash history.
- Traffic control devices - purchase of materials for installation of new traffic control devices, such as signs, signals or pavement markings; or replacement of obsolete signs or signals
- Research, studies and public information - transportation safety research, studies or public information initiatives, such as signing or pavement marking research, driver education/information, work zone safety, and crash data analysis improvements.

The program can award up to \$500,000 and no match is required. Applications are due on August 15 each year.

Urban State Traffic Engineering Program (U-STEP) – Iowa DOT

Projects must be located on an Iowa DOT primary road. In Johnston, a recent annexation brings a portion of Highways 415 and 141 into the city boundaries. An engineering analysis of the project area is required. U-STEP can award up to \$200,000 for a spot improvement, such as a crosswalk or intersection, and up to \$400,000 for linear improvements. The program can award up to 55% of the project cost. Letters of request

Public and Private Grant Funding Opportunities for Johnston

Due Date	Program	Project Types	Max Award	Match Required	Date Funds Available	Completion Date	Website
January 15 (quarterly thru year)	Community Attraction and Tourism (CAT)	trails, tourism	10-20% of the final negotiated project cost, not to exceed \$1 Million	At least 65% of funds must be secured, grant is last dollar in	Upon award	As per the grant agreement	https://www.iowaeconomicdevelopment.com/Enhance
February	Prairie Meadows Community Betterment	trails, economic development	\$99,999	none	July	Within 12 months	https://www.prairiemeadows.com/community/betterment-grants
February	Prairie Meadows Legacy	trails, economic development	\$100,000 - \$1M	75%	July	As per the grant agreement	https://www.prairiemeadows.com/community/legacy-grants
April and October	PeopleforBikes Community Grant	trails, bicycle infrastructure	\$10,000	50%	December	Provide updates every 6 months	http://peopleforbikes.org/our-work/community-grants/
May	Wellmark MATCH Grant	safe, healthy, and active community improvements	\$75,000	100%	December	2 years	https://www.wellmark.com/foundation/traditional-grants.html
May 1	Iowa Great Places	trails, quality of life improvements	\$400,000 (\$185,000 average)	100%	October	As per the grant agreement	https://iowaculture.gov/about-us/about/grants/iowa-great-places
May 16	AARP Community Challenge	transportation and mobility options; permanent and temporary improvements for connectivity, walkability, bikeability, and access to transit	several thousand for larger projects	none	July 18	November	https://www.aarp.org/livable-communities/about/info-2017/aarp-community-challenge-submission-instructions.html
July 1	State Recreational Trails	trails	None specified (highest award was \$780,000)	25%	Upon authorization	As per the grant agreement	http://www.iowadot.gov/systems/planning/fedstate/recreational-trails.htm
August 15	Resource Enhancement and Protection (REAP) City Parks & Open Spaces	trails, restrooms, parkways	\$125,000 (for cities with populations between 10,001 and 25,000)	none	October	As per the grant agreement (~2 years)	http://www.iowadnr.gov/Conservation/REAP/REAP-Funding-at-Work/City-Parks-Open-Spaces

Due Date	Program	Project Types	Max Award	Match Required	Date Funds Available	Completion Date	Website
August 15	Traffic Safety Improvement Program (TSIP)	traffic safety improvements	\$500,000	none	July 1	As per the grant agreement	https://iowadot.gov/traffic/traffic-and-safety-programs/tsip/tsip-program
October 1	Federal Recreational Trails	trails	\$5,000 min – no upper limit (highest award was \$490,000)	20%	Upon authorization	As per the grant agreement	http://www.iowadot.gov/systems_planning/fedstate_rectrails.htm
October 1	Iowa Clean Air Attainment Program (ICAAP)	highway/street, transit, bicycle/ pedestrian	None specified (minimum request \$20,000 per project)	20%	None specified	As per the grant agreement	https://iowadot.gov/systems_planning/grant-programs/iowa-clean-air-attainment-program-icaap
November 2	America Walks Community Change Grants	projects creating healthy, active, and engaged places to live, work, and play	\$1,500	none	December	Following calendar year	http://americawalks.org/
December 1	Statewide STP TAP	trails, pedestrian, bicycle improvements, safe routes to schools, access to transit	None specified	20%	Upon authorization	As per the grant agreement	https://iowadot.gov/systems_planning/grant-programs/transportation-alternatives
December 7	DMAMPO TAP	trails, pedestrian, bicycle improvements, safe routes to schools, access to transit	None specified	20%	FFY 2023	As per the grant agreement	https://dmampo.org/ffy-2023-transportation-alternatives-program/
December 7	Surface Transportation Block Grant Program (STBG)	federal-aid routes, bridges, public roads, pedestrian and bicycle infrastructure, transit capital improvements	None specified	20%	FFY 2023	As per the grant agreement	https://dmampo.org/funding/surface-transportation-program/
Letters of request accepted all year	Urban-State Traffic Engineering Program (U-STEP)	solve traffic operation and safety problems on primary roads	\$200,000 for spot improvements, \$400,000 for linear improvements	45%	None specified	As per the grant agreement	Contact Iowa DOT District Engineer
Letters of request accepted all year	Pedestrian Curb Ramp Construction	assist cities in complying with the Americans with Disabilities Act (ADA) on primary roads	\$250,000	none	None specified	As per the grant agreement	n/a

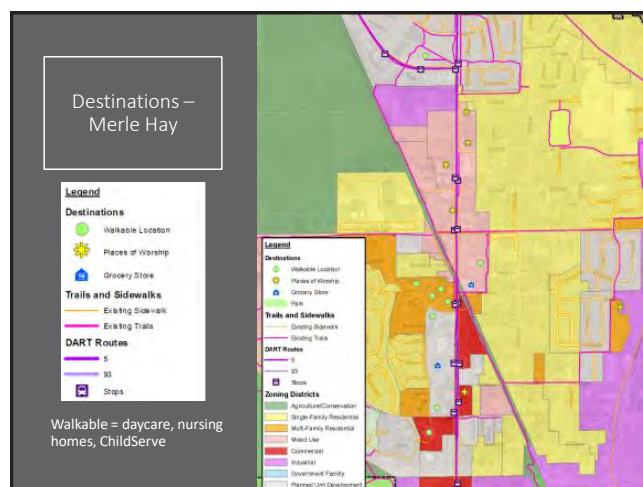
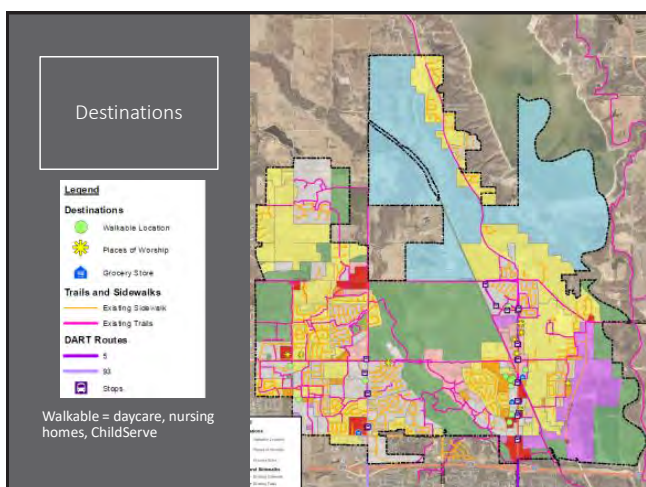
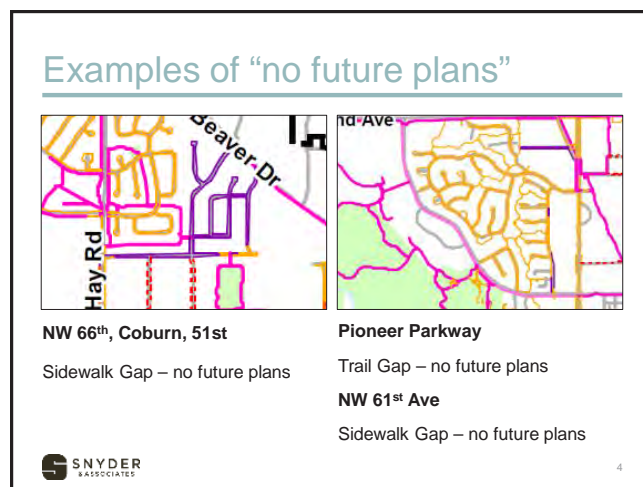
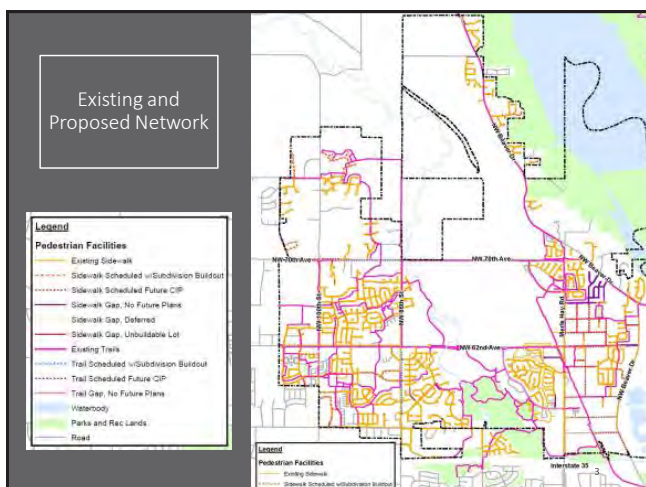
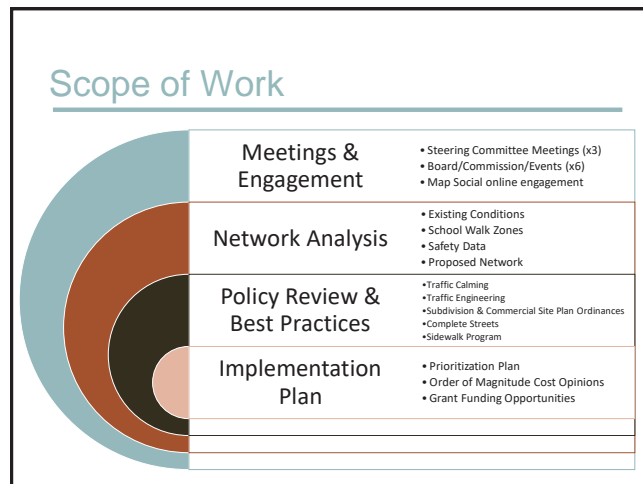
APPENDICES

Presentations and Meeting Notes

- Steering Committee Meeting #1
- Steering Committee Meeting #2
- Steering Committee Meeting #3
- Park Board and Tree Board
- Planning and Zoning Commission
- Johnston Community School Board
- Trails Committee
- Johnston City Council

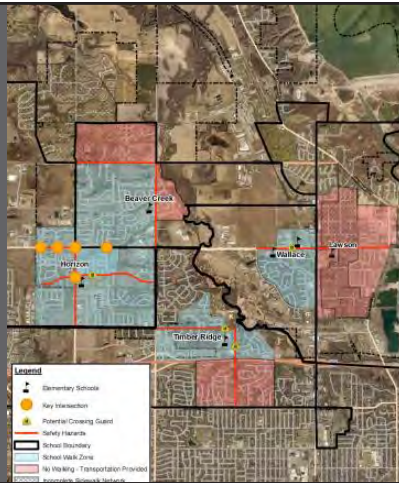
Map Social Data

- Pedestrian Destinations
- Favorite Pedestrian Routes
- Gaps in Pedestrian Routes
- Pedestrian Safety Concerns
- Problematic Intersection or Street Crossing
- Beautification Needed
- Other
- Overall Comments



Elementary School Walk Zones

- Beaver Creek
- Horizon
- Timber Ridge
- Wallace
- Lawson



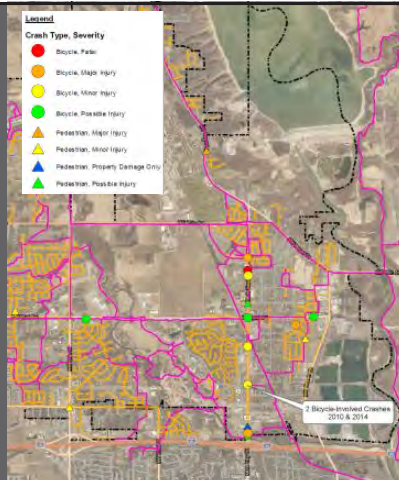
Middle and High School Walk Zones

- Summit Middle = Grades 6-7
- Johnston Middle = Grades 8-9
- Johnston High School = Grades 10-12

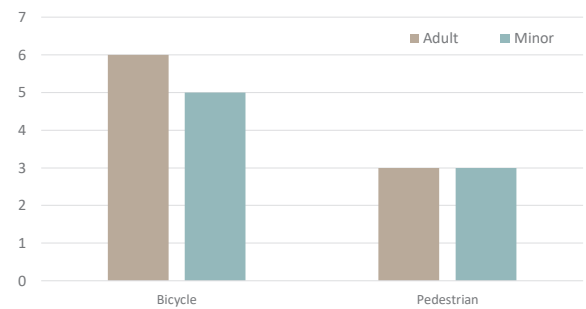


Bicycle and Pedestrian Crash Data

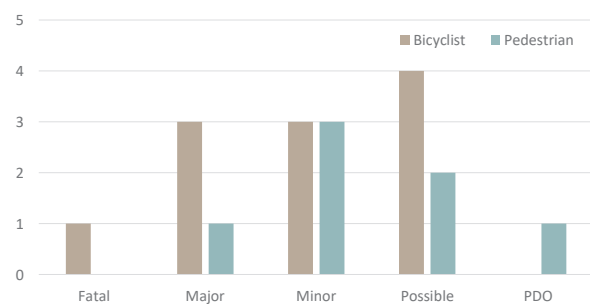
- 2008-2017
- 11 bicycle crashes
- 7 pedestrian crashes
- 8 female
- 9 male
- 2 at Merle Hay and Pioneer Parkway (both bicycle)



Bicycle & Pedestrian vs Adult/Minor (2008 - 2017)



Bicycle & Pedestrian Crashes vs Severity (2008-2017)



Areas of Concern

- Currently - City Staff
- Need to Add =
 - Committee
 - Public



Let's Make Johnston More Walkable!

Walkability Study

CREATE YOUR MAP

Map Social
www.cityofjohnston.com/walk

Timeframe
 • Now – June 8? (or 18?)

Distribution

- Business cards
- Community email newsletters
- Scrolling display in City Hall
- Library kiosks
- School emails
- Committee members
- Events
 - Mayor's Ride
 - Coffee with a Cop
 - Farmer's Market
 - Green Days

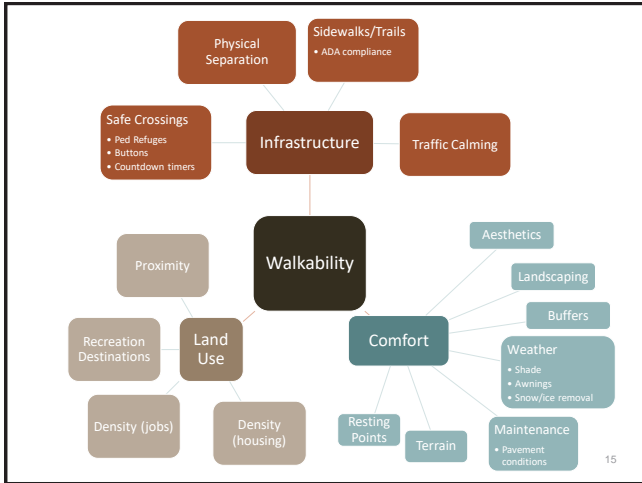
SNYDER & ASSOCIATES

Vision and Goal Setting

What makes a community walkable?

What can we improve through this project?

SNYDER & ASSOCIATES



Upcoming Meetings

June – tentatively between June 25 – 29	July - Boards and Committees	September – tentatively between Sept 17 – 21
<ul style="list-style-type: none"> • Map Social findings • Proposed draft network / improvement areas • Ordinances & policies 	<ul style="list-style-type: none"> • Park Board • Trails Subcommittee • Planning and Zoning Commission • Senior Citizens Advisory Board • Pioneer Subcommittee 	<ul style="list-style-type: none"> • Final network / improvement areas • Priorities • Funding & implementation

SNYDER & ASSOCIATES

SNYDER & ASSOCIATES

QUESTIONS?

f in G+



Meeting Notes

To: Johnston Walkability Study Steering Committee

Date: 5/9/2018

From: Mindy Moore, AICP, Project Manager

CC: Mark Perington, PE

RE: JOHNSTON WALKABILITY STUDY STEERING COMMITTEE MEETING #1

The first Johnston Walkability Study Steering Committee met on May 8, 2018 at 5:30 pm at Johnston City Hall. The following members were in attendance:

Johnston Walkability Study Steering Committee			
Community Representatives			
Last	First	Representing	May 8, 2018
Dierenfeld	Paula	Mayor	
Cope	Tom	City Council Member	x
Martin	Rhonda	City Council Member	x
Andrews	Lindsey	Heartland Soles & event planner	x
Clark	Kelsey	Johnston Chamber of Commerce	
Danielson	Lyle	Johnston Park Board	
Dockum	Greg	School Board	x
Kacer	Laura	Johnston School District	x
Morrill	Jill	JCSD	x
Scholbrock	Jason	Pioneer	x
Soelberg	Ginger	Trails Committee	x
City of Johnston Staff			
Last	First	Title	May 8, 2018
Sanders	Jim	City Administrator	x
Greiner	Matt	Public Works Director	
McDaniel	Dennis	Police Chief	x
Schmitz	John	Parks Director	x
Wilwerding	David	Community Development Director	x
Snyder & Associates, Inc.			
Last	First	Title	May 8, 2018
Perington	Mark	Principal In Charge	x
Moore	Mindy	Project Manager/Planner	x
Foss	Jared	Planner/GIS	x

Steering Committee Meeting #1 Notes
May 9, 2018
Page 2 of 4

The following is a compilation of the questions and comments the committee had throughout the presentation and map analysis session.

Existing Pedestrian Facilities and Gaps

- The current map indicates Pioneer Parkway as a future trail with no plans. This is incorrect. The City is under contract with FOTH to develop a concept starting at 62nd to Merle Hay. This may be a trail or bicycle lanes.
- Sidewalks north of 62nd and west of Dewey Park will be evaluated and allow for future connections.

School Walk Zones

- Hazards identified in the school walk zones are all defined differently. There was no specific criteria evaluated when identifying these areas. Many of them relate to lack of infrastructure, inadequate signage or button placement, or wrong infrastructure in place.

Pedestrian and Bicycle Crash Data

- The police chief explained that there were likely more property damage only crashes, but these were not reported with the DOT. The DOT standards are generally \$1,500 or more in damages to be required for reporting, therefore you will not see many of these. Most of the crashes reported have physical injuries.
- How do we measure these “near misses” that are not reported? Are there patterns or locations that these take place?
- Ginger provided some insight on a recent Des Moines Register article stating the Perils of Walking. The article stated that pedestrian injuries/fatalities has gone up 46% in the last 10 years. Distractions are mostly to blame. Ginger passed along the article link:
desmoinesregister.ia.newsmemory.com/publink.php?shareid=21e6e92ad

Areas of Concern

- A lot of runners use the Pioneer Parkway corridor. There is no sidewalk/trail along this corridor forcing the runners to use the grass, resulting in a worn path from 62nd to Merle Hay.
- The Terra Park walkway leads to some destinations but needs access from 62nd. The cross country teams utilize this route often.
- How does all of this fit in with the complete streets policy of the City? When should there be a sidewalk and when should there be a trail?
- Windsor east of 97th Street
- Augustine Crossing
- North Glenn

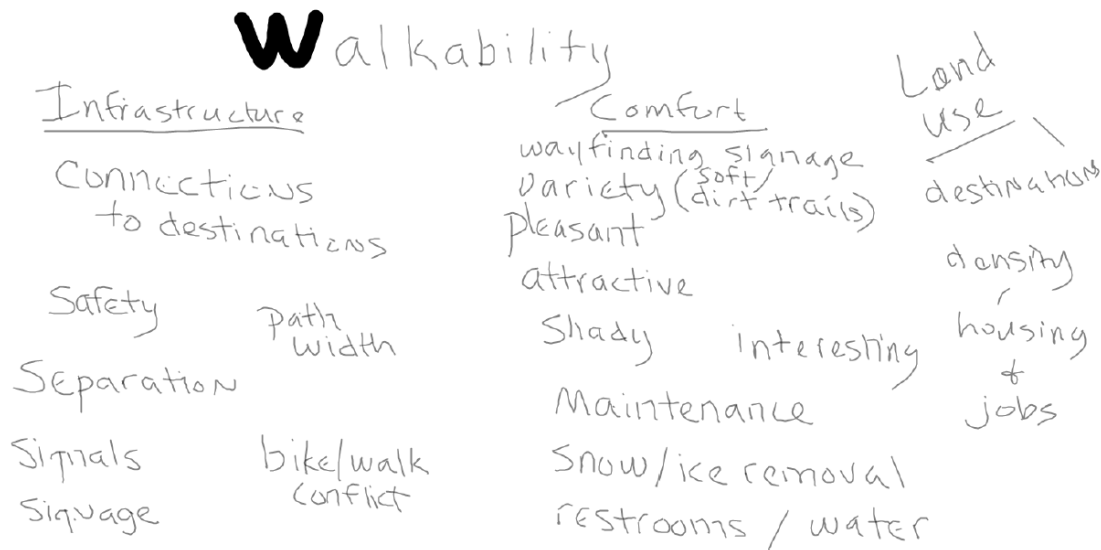
Steering Committee Meeting #1 Notes
May 9, 2018
Page 3 of 4

Map Social

The overall feedback for the Map Social site was positive. The city plans to promote the site to avid trail and sidewalk users by placing temporary signage along trails and high traffic routes. Data collection will be open until June 18th.

Vision and Goal Setting

What Makes a Community Walkable?



Infrastructure

- Connections to destinations
- Facilities need to be well maintained, free of cracks and hazards
- Signals and signs located in appropriate spots
- Safety
- Separation of cars and bicycles, appropriate facilities
- Facility/path width
- Limiting biking and walking conflicts

Comfort

- Routes need have a pleasant, attractive, shady, interesting and comforting vibe
- Snow and ice removal, seasonal treatments
- Access to amenities along trail, restrooms, benches, water
- Provide a variety of facility types (soft trails for runners, walkers)
- Wayfinding signage
- Tree lined paths provide comfort, safety, and slow traffic. Provide a variety

of trees for aesthetics and use approved street trees.

Land Use

- Destinations. We need to have a reason to go somewhere.
- Surrounding land uses provide destinations, attractions
- Housing Density
- Demographics of neighborhoods, need for transportation
- Location of employment and job density

Steering Committee Meeting #1 Notes
May 9, 2018
Page 4 of 4

What can we improve through this project?

- We are focused on infrastructure and policies as they relate to walking. Land use change would need to come through a land use plan.
- Walking for fitness and recreation are likely the most appropriate goal and greatest demand for the project. Focus on these types of connections. Walking for transportation is less of a goal.
- Johnston is a very affluent community, most families have 1-3 cars and can drive most places. How can we influence them to utilize alternate transportation?
- Many students old enough to bike to school alone or with a friend, but too young to drive utilize these routes to get to school.
- Would Merle Hay be used for biking and walking more with infrastructure changes? If you build it, will they come? Generally, when communities build a safe and attracting bike or pedestrian facility, more people will use it. There is latent demand for this type of infrastructure.
- The four-way stop at Horizon Elementary has been a great addition. Utilize more of these intersection treatments.
- We need to look closely at deferred sidewalks (those which Council has agreed to allow private developers to delay construction), to be sure that Council does request their construction at some point in the future.
- How does sidewalk/trail snow clearance policy relate to school walkability?
 - The City code states that in the typical event, the public has 48 hours to clear their sidewalk. The City clears their priority trails and sidewalks in 24 hours and non-priority trails and sidewalks in the 48 hour timeframe. Many times it depends on the timing of the snow and whether school is in session. The City maintains trail or sidewalk over 5 feet wide, unless it is private trail.

Meetings Schedule

Future Steering Committee meetings will continue to be at 5:30 pm. Next meeting is planned for late June. In July, Snyder & Associates, Inc., will plan to meet with the Parks Board, Tree Board, Trails Subcommittee, P&Z, Senior Citizens Advisory Board, Pioneer Subcommittee and the school board, prior to a presentation with the City Council in August to voice the feedback received from each group.

Map Discussions

- Landlocked for kids that live in dense housing away from library
- Concern area across from new retirement community along Windsor
- Apartment complex along Windsor needs to complete the gap
- Pedestrian movement at I-80 interchange
- Augustine and 86th - hard to cross in to neighborhood and school
- Missing sidewalk along Pioneer
- Beaver Drive, NW 70th Street intersection

JOHNSTON WALKABILITY STUDY

Steering Committee Meeting #2
June 26, 2018

Agenda

MAP.SOCIAL RESULTS

ADDRESSING THE FINDINGS

ORDINANCE AND POLICY
REVIEW AND
RECOMMENDATIONS

Map.Social Results

Map.Social Outreach Summary

- Open May 11 – June 18
- 500 business cards
- Committee members
- Community email newsletters
- Johnston Living magazine
- Johnston Register
- Business Record
- Social Media
 - Facebook – 838 views; 5 shares; 3 comments; 16 reactions
 - Twitter – 5 retweets; 6 likes
 - YouTube – 37 views
- Events
 - Mayor's Ride
 - Coffee with a Cop
 - Farmer's Market
 - Green Days

Johnston seeks comments in walkability study

Johnston has hired Snyder and Associates to study how to make it easier for residents and businesses to get around town. The City of Johnston is looking for input from residents and businesses to help make the city more walkable. More information about the study and additional maps are online. The study will be open until the summer. The deadline for comments is June 18.

Walkability study starts in Johnston

The City of Johnston is conducting community-wide study to see how walkable the city really is. The walkability study looks to address the overall connectivity of the sidewalk and trail network between neighborhoods, schools, parks and business destinations to see how accessible it is for walkers and bicyclists. The city is working with Snyder & Associates to complete the study. Goals include developing priorities for

Pedestrian Destination

Places I would like to walk to:

36 Features

Favorite Pedestrian Routes

Places I like to walk:

15 Features

Gaps in Pedestrian Routes

Areas needing a sidewalk or trail to complete a connector:

102 Features

Problematic Intersection or Intersection or road block crossings that are difficult for pedestrians:

23 Features

Pedestrian Safety Hazard

Areas that pose a safety concern to people walking:

21 Features

DART Stops Needing

DART stops that need a better waiting area or route to/from:

0 Features

Beautification Needed

Areas that are aesthetically unappealing to walk by:

8 Features

Other

All other points:

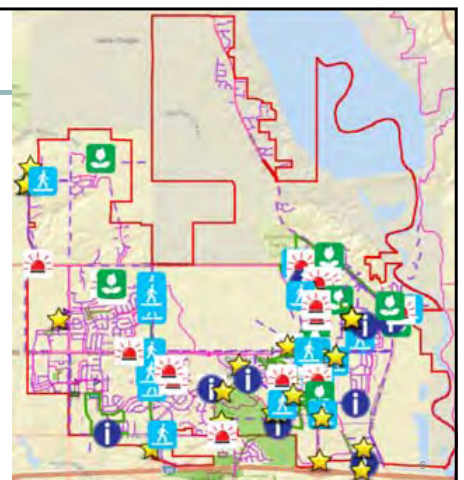
9 Features

Input Options

Results

51 + 9 (admin) =
60 contributors

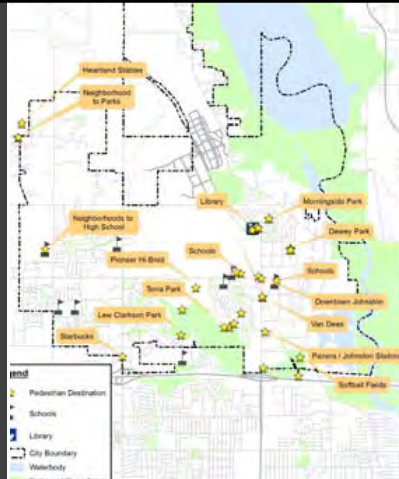
214 features



Destinations

36 FEATURES

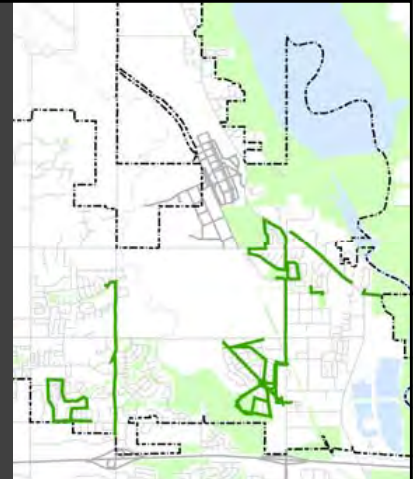
- Parks (Terra & Dewey)
 - x12 + 38 likes
- Library
 - x6 + 15 likes
- Schools
 - x4 + 8 likes
- Van Dees
 - x2 + 6 likes
- Starbucks
 - 8 likes
- Panera
 - 5 likes



Favorite Routes

15 FEATURES

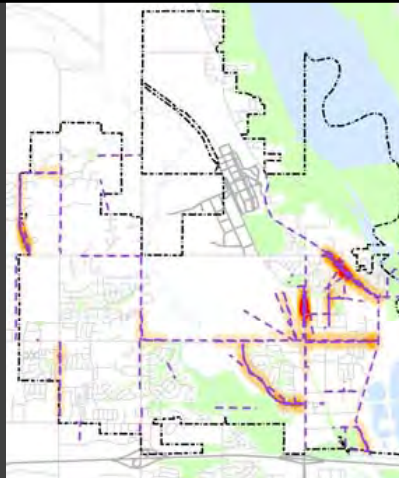
- Around neighborhoods (x5)
- Terra Park (x3)
- Shady Route
- Library
- Van Dees
- Starbucks
- Panera
- Link to Neal Smith/Kempton Bridge



Gaps in Routes

102 FEATURES

- Pioneer Pkwy
 - x4 + 15 likes
- Merle Hay-west side
 - x6 + 14 likes
- NW Beaver Dr
 - x6 + 7 likes
- NW 107th St
 - x5 + 7 likes



Pedestrian Safety Hazard

21 FEATURES

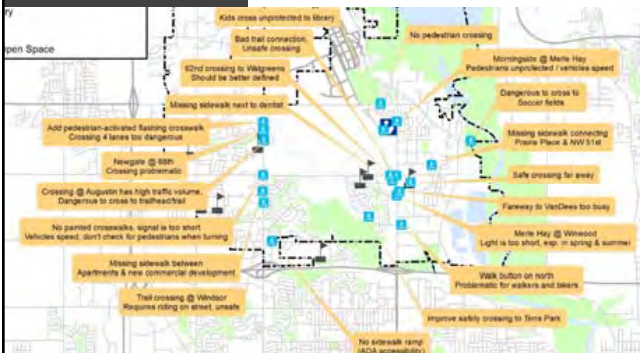
- Lack of Sidewalks
 - West Merle Hay Road – 21 likes
- Pavement/Bridge Maintenance
 - x7 + 7 likes
- Crossings
 - x5 + 11 likes
- Behavior (mopeds; alertness; pick up after pet)
 - 3 likes
- Speed limit
 - 3 likes



Problematic Intersection or Crossing

23 FEATURES

- Crossing 86th St north of 62nd Ave
 - x4 + 12 likes
- Crossing Merle Hay Rd @ Pioneer Pkwy (button north/ trail south)
 - 7 likes
- Missing Sidewalk @ NW 86th St
 - 8 likes

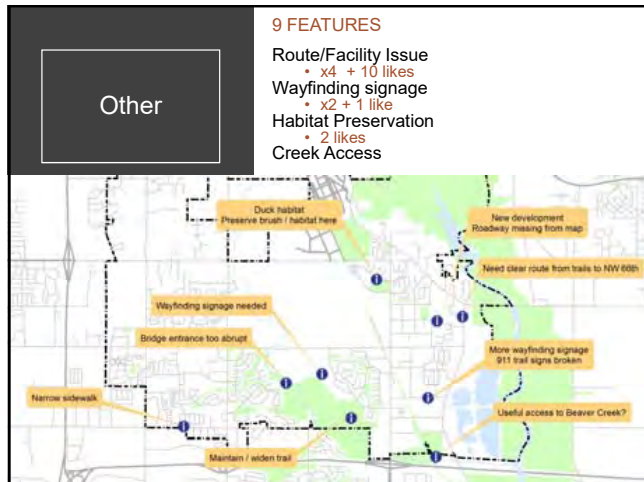


Beautification Needed

8 FEATURES

- Land Use Related
 - x3 + 5 likes
- Landscape/Amenities





Miss Wheelchair Iowa: Accessibility Map

Please take into consideration the importance of sidewalks, and their quality, to people in your community with disabilities. Without properly maintained sidewalks and curb cutouts access is limited for these individuals.

by LAURA HARTER

CREATED 2018-05-18
MODIFIED 2018-05-18

0 Features

ChildServe Accessibility

As an employee of ChildServe, it is important that the children, specifically ones in wheelchairs, are able to access parks, stores, and neighborhoods in the Johnston area.

by KELLYRIFLE

CREATED 2018-05-29
MODIFIED 2018-05-29

0 Features

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Addressing the Findings

15

Organizing the Data

General vs. Specific

Enforcement Issues

Education Issues

Policy Related

Minor Maintenance Issues

Major Maintenance Issues

Capital Improvements

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Pedestrian Hazard

Urgency

Difficulty

Project Type

Justification

Map #	Comment	Description	Urgency	Difficulty	Project Type	Justification
1	Corbett/Jackson Circle	Roundabout				
2	Mopeds on the Trail	I often see you people driving mopeds on the bike trails. This section is especially bad.	High	Low	Education, Enforcement, Policy	Safety
3	Missing Sidewalk w rough terrain	I have fallen here, my son has fallen off his bike here. This section could cause a serious injury. The ground is uneven, and if you do not know the sidewalk has a broken section existing, it's hard to see.	High	Low	Maintenance - Sidewalk replacement/construction	Safety, ADA
4	Crossing Needed	Those on the South Side of 32nd Dr. Need a Safe Crossing Point to Get into the Trail Head on the North Side of the Road.	Medium	Low	Pavement marking & crossing improvements, vehicle signage improvements	Safety, Connectivity
5	Green Meadows West	Neighborhood sidewalks needing replacement	Medium	Low	Maintenance	Safety, ADA
6	Green Meadows West, pavement	There is a bike trail that runs through the big prairie area in Green Meadows West. The trail is asphalted. This may be low on city priorities, but sealing cracks and seal coating the path might help to delay its deterioration. Some of the cracks are growing quite wide. I hope this helps.	Medium	Low/Medium	Maintenance - seal cracks, patch asphalt	Safety, ADA
7	Bridge maintenance	Very poor repair with broken planks and rotten wood. Very scary to run on can not imagine walking a bike across.	High	Medium	Maintenance - Deck Replacement	Safety, Aesthetics
8	No markings	No markings on the road going across road to trail park. The sidewalk on east side does not drain water. Have to walk through the mud.	High	Low	Crossing Improvements	Safety
9	Excessive Speed	High to residential neighborhoods. Speed should be 35 until you get west to Camp Dodge Entrance.	Medium	Low	Speed Limit Change	Safety
10	dog poop	neighbors around here could use some policing...	Low	Low	Enforcement, Alternative - install doggy bag dispenser and receptacles	Nuisance, Environmental
11	pothole in hallway	Have caught stroller wheel on this many times and even fell over with toddler once, near top of hill by sidewalk	High	Medium	Maintenance - seal cracks, patch asphalt	Safety, ADA
12	West Merle Hay Road	No sidewalks	High	Medium	New Construction	Safety, Connectivity, Popular Opinion

Example

Merle Hay Road and S Winwood Drive

Map #	Comment	Description	Urgency	Difficulty	Project Type	Justification
18	Curb in sidewalk ramp	It's a split walk with a divider curb about 2 feet long in between the entrance. I've witnessed 2 accidents there, where they thought the whole entrance was open. I had to call an ambulance for the one guy. Bikers come across the street & hit that divider road on. It needs to be removed or painted yellow.	High	Low	Phase 1: Maintenance - grind down curb, Reconstruction - install ADA ramps	Safety, ADA

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CITY OF JOHNSTON, IOWA

TABLE OF CONTENTS

GENERAL CODE PROVISIONS

CHAPTER 1. CODE OF ORDINANCES

CHAPTER 2. CHARTER

CHAPTER 3. MUNICIPAL INSTRUCTIONS

CHAPTER 4. OPERATING PROCEDURES

CHAPTER 5. CITY ELECTIONS

CHAPTER 6. FINANCIAL MANAGEMENT

TRAFFIC SAFETY FACTS
2015 Data

NHTSA Pedestrians

RESOLUTION 16-92

A RESOLUTION OF THE CITY COUNCIL ADOPTING A COMPLETE STREETS POLICY

WHEREAS, The City of Johnston wishes to ensure that all users of our transportation system are able to travel safely and conveniently on all streets and roadways within the public right-of-way in Johnston; and,

WHEREAS, a street is defined as one which provides a safe, convenient, and continuous of travel, for users of all ages and all abilities; and,

WHEREAS, streets better serve the needs of those who use transit by providing access

streets have public health benefits, such as encouraging physical activity providing the opportunity for more people to bike and walk safely; and,

WHEREAS, complete streets improve access and safety for those who cannot or choose not to drive motor vehicles; and,

Safe Routes to School
Briefing Sheets

Reduced School Area Speed Limits

Ordinance & Policy Recommendations

SNYDER ASSOCIATES

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Ordinance And Policy Review

Trail Definition	• consistency
Trails	• alcohol • tobacco
Speed Regulation	• school zones
Bicycle Regulations	• bike lane vs. shared lane
Sidewalk Regulations	• responsibility • detours • merchandise display
Zoning – General Regulations	• fences • bicycle parking
Zoning – Site Plan Requirements	• path from sidewalk to door
Subdivision Regulations	• criteria for waivers • easements
Complete Street Policy	• guidance document • committee review
Sidewalk, Trail vs. Sidewalk, Installation	• issues • what to Consider

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Definition of “Trail”

CHAPTER 48 – USE OF CITY GREENBELT, OPEN SPACE AREAS AND RECREATION TRAILS

“Recreation Trail” are defined as bicycle and pedestrian trails owned by the City for the public benefit of active and passive recreation and principally for bicycle and pedestrian activity and recreation.

CHAPTER 76 – BICYCLE REGULATIONS

“Multi-use trail” means a way or place, the use of which is controlled by the City as an owner of real property, designated by the multi-use recreational trail maps, as approved by resolution by the City Council, and no multi-use trail shall be considered as a street or highway.

CHAPTER 165 – ZONING

“Trail” means a walkway or bikeway designated with a paved surface pathway for travel by means other than by motorized vehicles.

RECOMMENDATION

- Consolidate to 1 definition

Trails – Alcohol and Tobacco

48.03 ALCOHOLIC BEVERAGES PROHIBITED

Wine, beer, and any other alcoholic beverages or drinks shall not be brought, transported or otherwise carried upon or consumed upon any greenbelt, open space areas or recreation trails.

RECOMMENDATION

- Allow unopened alcohol along trail
- Prohibit smoking



SHAUN STANLEY/Durango Herald file photo

Bicycle Regulations

76.12 BICYCLE LANES

Whenever a bicycle lane has been established on a roadway, any person operating a bicycle upon the roadway at a speed less than the normal speed of traffic moving in the same direction may ride within the bicycle lane, except that such person may move out of the lane under any of the following situations:

...

When the bicycle lane does not include a marked shared lane.

RECOMMENDATION

- Delete?



23

School Zone Speed Limits

63.02 STATE CODE SPEED LIMITS

The following speed limits are established in Section 321.285 of the Code of Iowa and any speed in excess thereof is unlawful unless specifically designated otherwise in this chapter as a special speed zone.

1. Business District – twenty (20) miles per hour.
2. Residence or School District – twenty-five (25) miles per hour.
3. Suburban District – forty-five (45) miles per hour.

RECOMMENDATION

- Reduce speed limit in school zones during before/after school hours



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School Zone Speed Limits

Table 1. A Sample of School Speed Limit Zone Values

State	Speed Limit in School Zone
Arizona ¹	15 mph
Delaware ²	20 mph
Iowa ³	No fixed value. Locations are evaluated on a case-by-case basis, usually 10 mph below posted speed limit.
Massachusetts ⁴	20 mph
Minnesota ⁵	No more than 30 mph below the established speed limit and no lower than 15 mph.
Montana ⁶	No fixed value. Locations are evaluated on a case-by-case basis.
New Hampshire ⁷	10 mph under the posted speed limit.
New Jersey ⁸	25 mph
Ohio ⁹	20 mph
Oregon ¹⁰	20 mph
Pennsylvania ¹¹	15 mph
South Dakota ¹²	15 mph
Texas ¹³	85 th Percentile Speed Below 35 mph Not more than 15 mph below 85th percentile speed or posted speed. Not to exceed a 35 mph school speed limit. 55 mph 20 mph below the 85th percentile speed or posted speed. Greater than 55 mph Use buffer zone to transition to a 35 mph speed limit.
Washington ¹⁴	20 mph

"Reduced School Area Speed Limits," Safe Routes to School Briefing Sheets, ITE

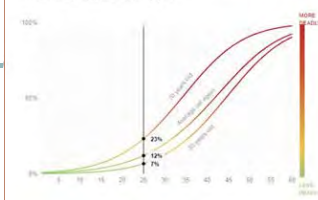
Speed vs Risk of Fatality

25 mph reduced to 20 mph results in 5% less risk (for ages 15+)

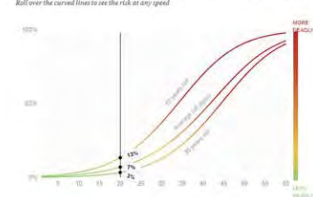
Considerations:

- Compliance and Enforcement
- Different from rest of metro
- Proactive
- Leader
- Transition - signage, education
- Potential of additional children walking

The Chance of Being Killed by a Car Going 25 mph
Roll over the curved lines to see the risk at any speed



The Chance of Being Killed by a Car Going 20 mph
Roll over the curved lines to see the risk at any speed



<https://www.pewpublics.org/article/unsafe-at-many-speeds>
Data from: Tefft, Brian, Impact Speed and a Pedestrian's Risk of Severe Injury or Death. AAA Foundation for Traffic Safety. 2011.

Sidewalk Responsibility

136.01 PURPOSE

The purpose of this chapter is to enhance safe passage by citizens on sidewalks, to place the responsibility for the maintenance, repair, replacement or reconstruction of sidewalks upon the abutting property owner and to minimize the liability of the City.

RECOMMENDATION

- Take on full responsibility
- OR
- Take on partial responsibility
 - ADA Ramps
 - Portion of cost (e.g. concrete only)



2

Connecting Our Community

Let's Take a Walk: A Look at Sidewalks in Austin

Sidewalk Program Overview

Why Sidewalks Matter

- 1980s: Sidewalks were primarily for aesthetics.
- 1990s: Sidewalks became more functional, with ADA requirements.
- 2000s: Sidewalks became more integrated with the urban landscape.
- 2010s: Sidewalks became more sustainable, with green infrastructure.
- 2020s: Sidewalks became more inclusive, with universal design.

How Sidewalks are Funded?

- Property taxes
- City of Austin
- State of Texas
- Federal government

How Sidewalks are Built?

- Design
- Construction
- Maintenance

THE BIG PICTURE

2016 Sidewalk Master Plan

10 YEAR PLAN

\$250 MILLION

BENEFITS

- Improved safety
- Increased accessibility
- Enhanced community
- Reduced traffic
- Improved quality of life

Engage! Make a Difference

KNOW YOUR RIGHT OF WAY

KEEP IT CLEAN

LEARN MORE

CONTACT

Why or Why Not?

Why?

- Sidewalks are a necessary aspect of City's infrastructure and benefit the community overall
- To share the financial responsibility through property taxes
- Sidewalk costs may burden some property owners such as those on:
 - corner lots
 - limited or fixed incomes
- To ensure safe walkability and adequate maintenance
- To ensure ADA compliance

Why Not?

- Different than rest of metro
- Increase CIP needs
- Potentially increase staff needs
- Potentially need to raise property taxes (or identify other funding mechanism)

Sidewalk Regulations - Detours

136.09 BARRICADES AND WARNING LIGHTS

...it shall be the duty of all persons ...to put in conspicuous places at each end of such sidewalk and at each end of any pile of material deposited in the street, a sufficient number of approved warning lights or flares, and to keep them lighted during the entire night and to erect sufficient barricades both at night and in the daytime to secure the same.

RECOMMENDATION

When a sidewalk is blocked such that pedestrian passage is not safe or ADA compliant, a detour route should be provided.



3

Sidewalk Regulations - Merchandise

136.17 MERCHANDISE DISPLAY

...in no case shall more than three (3) feet of the sidewalk next to the building be occupied for such purposes.

RECOMMENDATION

- Allow for additional area to be used in special circumstances, such as where the sidewalk widths are sufficient to accommodate the additional display area.
- Implement with a permit through either administrative review or as a conditional use through Planning and Zoning Board approval.
- Clarify if this applies only to display of abutting storefronts

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Zoning-General Regulations

166.27 FENCES, WALLS, AND VISION CLEARANCE

- A. Fences and walls are limited to a maximum height of six feet except in the following areas where fences and walls shall not exceed 2½ feet if solid or four feet if 70% transparent, such as a chain link fence:
- 1) Between the front property line and the front building setback line when extended to the full width of the lot (applies to both frontages on a corner lot).
 - 2) On a double frontage lot, the additional height restriction would apply to the side from which driveway access is obtained.



RECOMMENDATION

- Require a minimum setback from the edge of sidewalk to a fence
- OR
- Require that the sidewalk to be a foot wider when a fence abuts it
- ALSO
- Requiring that gates open into the yard, away from the sidewalk

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Zoning - General Regulations

166.33 OFF-STREET PARKING AND LOADING

RECOMMENDATION

- Consider Bike Parking Spaces (requirement or incentive)
- Follow *Essentials of Bike Parking* - Association of Pedestrian and Bicycle Professionals

Incentivizing:

- reduced vehicular parking spaces
- reduced landscape area
- other concessions
- Allow bike corrals during warmer months to be placed within a required parking space and removed and stored during winter months



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Zoning - Site Plan Requirements

171.05 DESIGN STANDARDS

Shall have such pedestrian walkways as are necessary for safety and general the welfare

RECOMMENDATION

Requires pedestrian walkways that:

- Are separate from vehicular drive aisles
- Connect between adjacent sidewalks and trails to the front entrance(s)



Subdivision Regulations - Easements

180.41 EASEMENTS

Minimum of 10 feet total width for private utilities only, and 15 feet total width for combined private utility and walkway easements...

RECOMMENDATION

- Define walkway or use sidewalk in its place
- Include minimum 20-foot wide easements for trails

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Subdivision Regulations - Waivers

180.42 IMPROVEMENTS REQUIRED

10. Sidewalks. ...If the Council agrees to defer construction of the sidewalks, sidewalks shall be constructed at the time a principal structure is built upon the adjacent lot or lots or within five (5) years of plat approval, whichever is earlier. Notwithstanding the above, the Council may require the sidewalk's construction at the time adjacent roadway construction takes place or at any other time as noted in the final plat approval.

Recommendation

- Establish criteria for waivers



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Complete Streets Policy



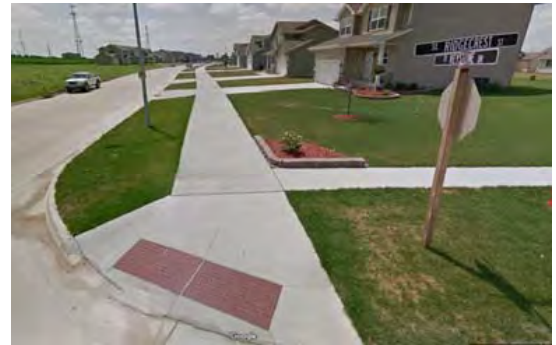
Add National Association of City Transportation Officials (NACTO) Urban Bikeway Design Guide to the list of resources

Formalize a review process with staff

Creating a new volunteer board or commission to review traffic safety and active transportation issues (or expand duties of a current board)

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Sidepath vs. Sidewalk



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What is a Sidepath?

Sidepaths are bidirectional shared use paths that run adjacent to the roadway, often along busy roads deemed inhospitable for biking.



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Source: AASHTO (2012)

When Could a Sidepath be Used?

Along high-speed/volume roads

For short distances to connect sections of a path in independent rights-of-way

Along roads with very few roadway/driveway crossings

Where their termination points sit at streets that are accommodating to bicyclists or other connecting paths

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Challenges with Sidepaths

Encourage wrong-way riding on streets where the path begins/ends

Additional road crossings may be required

Signage and signals are not oriented toward contra-flow cyclists

Left turns are difficult for cyclists

May require barriers if close enough to the roadway

Path width often constrained by existing objects

Bicyclists are not within normal visual scanning area of turning vehicles

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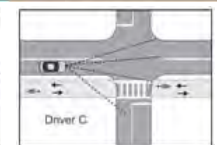
Source: AASHTO (2012)

Visibility Concerns

Right Turns onto Roadway

Left Turns off Roadway

Right Turn off Roadway



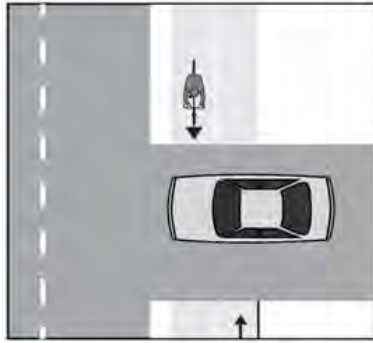
Source: AASHTO (2012)

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Vehicular Conflicts

Bicyclists cross faster than pedestrians

Attempts to get cyclists to stop are difficult and ineffective



Stopped motor vehicles on side streets or driveways may block the path.

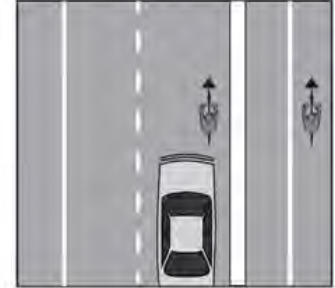
Source: AASHTO (2012)

Where Should Cyclists Ride?

Ups and downs of ramps

Conflict with pedestrians

Conflict with slower cyclists



Some bicyclists may find the road cleaner, safer, and more convenient. Motorists may believe bicyclists should use a sidepath.

Source: AASHTO (2012)

When Considering a Sidepath...

Traffic volumes & speed	<ul style="list-style-type: none"> If high, facilities separated from the road are preferred Buffer between road and sidepath
Number/frequency of intersections & driveways	<ul style="list-style-type: none"> If high, move cyclists to street or other path Slow cyclists at intersections & notify drivers
Ability to accommodate bicyclists on the roadway	<ul style="list-style-type: none"> Shared lanes, bike lanes, separated lanes, etc. Number of travel lanes
Ability for cyclists to use alternative route/parallel streets	<ul style="list-style-type: none"> Consider bicycle facilities on parallel route
Number of pedestrians or bicyclists	<ul style="list-style-type: none"> If high, move cyclists to bike-only facility
Anticipated types of cyclists	<ul style="list-style-type: none"> Strong & Fearless, Enthusied & Confident, Interested but Concerned
Location of destinations	<ul style="list-style-type: none"> Consider need to cross the street



Example: Highway Sidepath



Limited driveway/roadway crossings

Wide separation from roadway

Only a two-lane roadway



Example: Sidepath and Bike Lane



Space provided for both walkers and cyclists

Ability for children/less experienced riders to use the sidepath while more experienced cyclists have access to the bike lane



Upcoming Meetings

July Boards and Committees

- Park Board
- Trails Subcommittee
- Planning and Zoning Commission
- Senior Citizens Advisory Board
- Pioneer Subcommittee

September

tentatively between
Sept 17-18; or 24-28

- Network / improvement areas
- Priorities
- Funding & implementation



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Meeting Notes

To: Johnston Walkability Study Steering Committee

Date: 6/28/2018

From: Mindy Moore, AICP, Project Manager

CC: Mark Perington, PE

RE: JOHNSTON WALKABILITY STUDY STEERING COMMITTEE MEETING #2

The second Johnston Walkability Study Steering Committee met on June 26, 2018 at 5:30 pm at Johnston City Hall. The following members were in attendance:

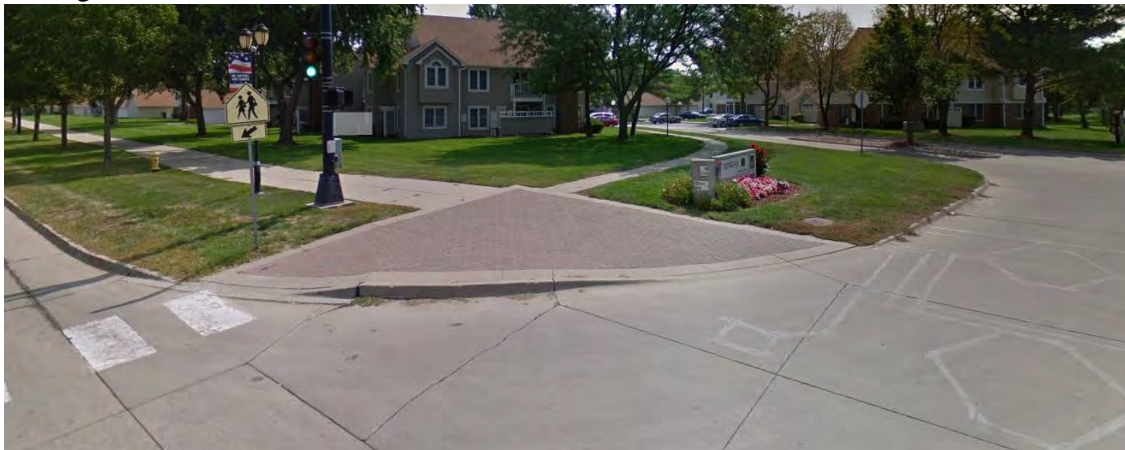
Johnston Walkability Study Steering Committee			
Community Representatives			
Last	First	Representing	June 26, 2018
Dierenfeld	Paula	Mayor	
Cope	Tom	City Council Member	
Martin	Rhonda	City Council Member	x
Andrews	Lindsey	Heartland Soles & event planner	
Clark	Kelsey	Johnston Chamber of Commerce	
Danielson	Lyle	Johnston Park Board	x
Dockum	Greg	School Board	
Kacer	Laura	Johnston School District	x
Morrill	Jill	JCSD	x
Scholbrock	Jason	Pioneer	x
Soelberg	Ginger	Trails Committee	x
City of Johnston Staff			
Last	First	Title	
Sanders	Jim	City Administrator	x
Greiner	Matt	Public Works Director	x
McDaniel	Dennis	Police Chief	
Schmitz	John	Parks Director	x
Wilwerding	David	Community Development Director	x
Snyder & Associates, Inc.			
Last	First	Title	
Perington	Mark	Principal In Charge	x
Moore	Mindy	Project Manager/Planner	x
Mauck	Zoey	Planner/Intern	x

Steering Committee Meeting #2 Notes
June 26, 2018
Page 2 of 4

The following is a compilation of the questions and comments the committee had throughout the presentation.

Map Social

- No comments received about DART issues.
- We are not assuming that all of the issues have been found.
- Review of each of the maps
- Additional item not noted in map.social - 62nd Street Trail, by Wallace, has some narrow and rough curbs at ramp locations; a clear delineation of trail ramps should help people to avoid hitting the curb



Addressing the Map Social Findings

- Review of each of the maps and pass out maps and comments also assessing: urgency, difficulty, project type, and justification of each item for:
 - Favorite Routes
 - Difficult Crossing
 - Pedestrian Hazards
 - Beautification
 - Other
- Network gaps map is still being developed due to the high number of comments included
- ADA accessibility and safety should be primary focus of need – making those items high priority.
- How is “difficulty” of implementation defined? What factors combine to establish these levels? Cost? Design?
- More retirement homes/communities are being added around Johnston, so ADA will be more important.
- Utility box blocking the addition of a sidewalk in front of Johnston Dentistry. Utility can be moved to allow sidewalk to continue straight.
- The intersection at NW Beaver and 66th is nice for bikes crossing

Steering Committee Meeting #2 Notes
June 26, 2018
Page 3 of 4

Ordinance and Policy Review/Recommendations

A. Trail definition –

- Code has 3 definitions of trail that should be revised to one definition.
- Is a trail defined by width or a “designation”?
 - Parks maintains every “trail” that is 6 feet or greater
 - Should consider SUDAS definition as well – which says that typical width is 10 feet and that widths can be narrowed to 8 feet in certain circumstances. (Chapter 12B-2)

B. Trails

- Consider allowing closed containers of alcohol on trails to support transportation use of trails
- Waukeg, Urbandale, and Clive currently looking into an ordinance to prohibit tobacco on trails
- West Des Moines has a tobacco-related ordinance currently

C. Bicycle Regulation

- No existing bike lanes or shared lanes in Johnston at this time
- The confusing phrase in the ordinance may be deleted.

D. Speed Regulation – School Zones

- Consider 20 mph school zone speed limits to lower the risk of fatality and injury if a crash occurs
- Need law enforcement input to see what effect slower school zone speeds would have
- Just one of many tools needed to slow down traffic. Complete streets needed too.
- Is there a study available about child pedestrian fatality, or pedestrian fatality specifically within school zones?
- Sometimes parents are part of the problem, dropping their kid(s) off and then speeding to work.
- Slow school zone traffic may lead to speeding traffic through residential areas to avoid the slowed route

E. Sidewalk Regulations

- Consider the City taking on full or partial sidewalk responsibility
- City is developing a sidewalk program that specifies a shared responsibility, such that the City would be responsible for the ADA ramps and turn space.
- Policy change (ADA ramps, corners, steep sections)
- New sidewalks will be added in areas without them and the property owners will be assessed for the cost
- There might be no public sidewalks adjacent to private businesses, especially those that would be selling merchandise on the sidewalk.
- Sidewalk closures/detours
 - Need more regulation/better definition on type of closure that would require a detour (number of days closed, etc.)
 - Instances of bad/no sidewalk detours provided along Merle Hay Road during construction

Steering Committee Meeting #2 Notes
June 26, 2018
Page 4 of 4

- Requirements should include “reasonable detour route” and “reviewed by city officials”
- F. Zoning Regulations
 - Fences are allowed to be constructed on the front and corner property lines.
 - There should be a buffer between the fence and the sidewalk. A problem results if vegetation grows along the fences (shrubs, vines, etc encroach on walking space).
 - City already requires that the sidewalk be constructed 1-foot from the property line, so this might not be that significant of an issue.
- G. Zoning – site plan requirements
 - Bike parking – city currently encourages, but does not require or incentivize, bike parking
 - Also need safe bike route to bike parking area from the street/trail.
 - Need safe pedestrian passage from the adjacent sidewalk/trail to the front of building
 - Many people live across from library, need better crossing across the street and across the parking lot for those walking/biking.
- H. Subdivision Regulations
 - Silt fence during construction could be required to be 4’ from curb instead of 2’. Will also have to comply with erosion control regulations for silt fence placement.
 - Would appreciate having a list of criteria for approving sidewalk waivers by the city
 - Consider temporary surface for sidewalk (2” concrete? limestone? asphalt?) for when there is a gap in the system that is awaiting construction.
- I. Complete Streets Policy
 - Add NACTO to list of guidance documents; consider formalizing the review process and creating a board/commission to review Active Transportation issues.
 - Include policy on wayfinding signage
- J. Sidepath Trail vs. Sidewalk Installation
 - More clarification on terminology (sidepath, trail, sidewalk, etc.) A sidepath is a particular type of trail that runs parallel to the roadway.
 - Discussion of when to install a sidepath vs a sidewalk or bike lane.

Next Steps

- Map.social data – need to consolidate like items
 - Consolidate like items
 - Compare to staff input
 - Compare to current plans in CIP
 - May require a staff working meeting for review
- Meetings
 - July and August - Trails Subcommittee, Pioneer Subcommittee, Senior Citizens Advisory Board, Park Board, and P&Z.
 - September (tentatively between Sept. 17-18 or Sept. 24-29) - Steering Committee meeting



JOHNSTON WALKABILITY STUDY

Steering Committee Meeting #3
October 2, 2018



Agenda

RECOMMENDATIONS

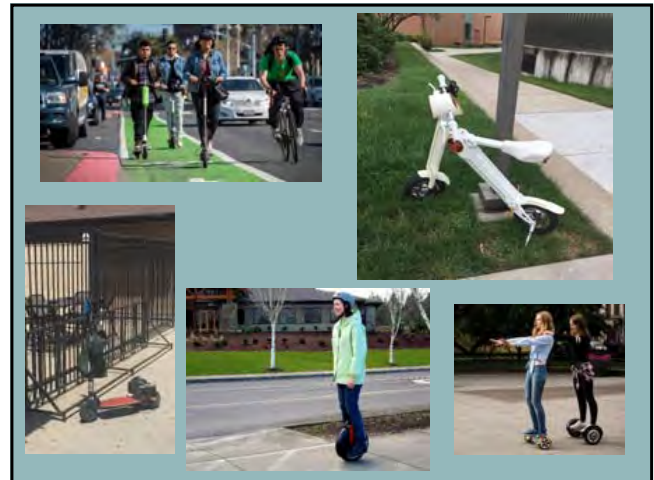
PRIORITIES

CROSSWALK ENHANCEMENTS

COSTS & FUNDING

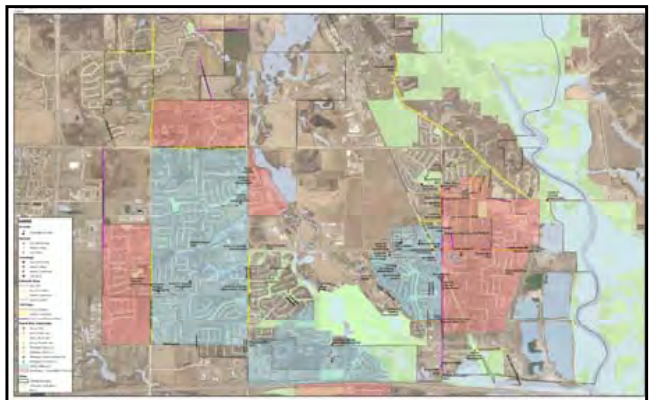
MAINTENANCE

But first, Scooters...

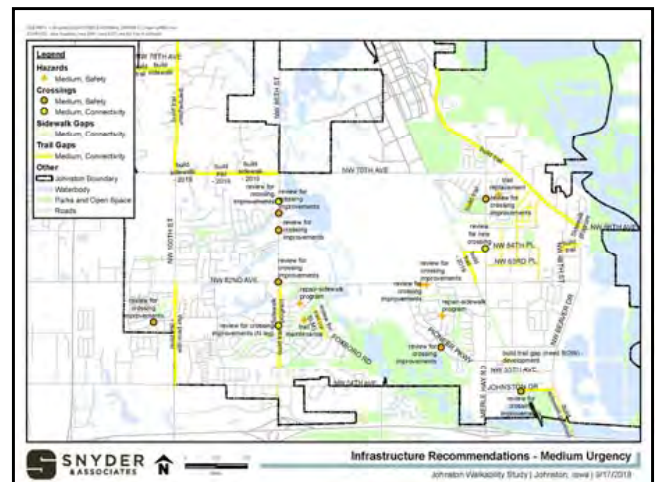
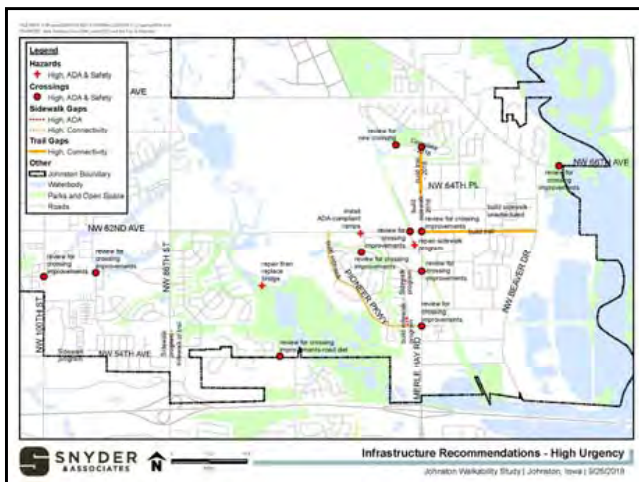
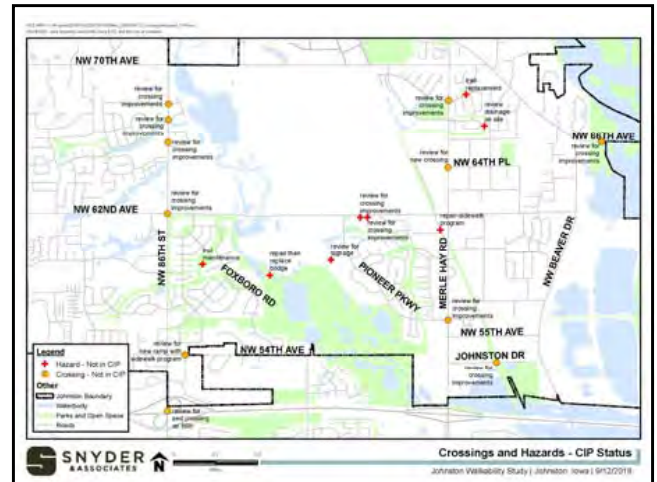
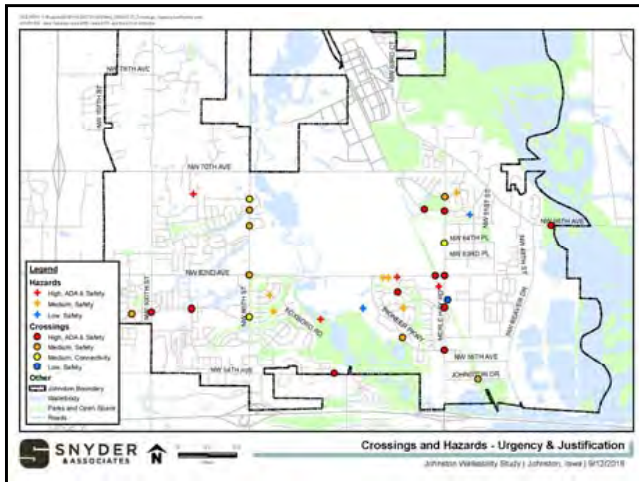
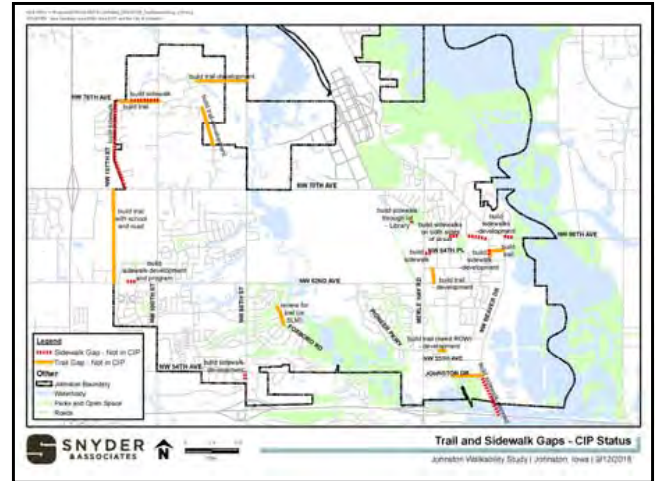
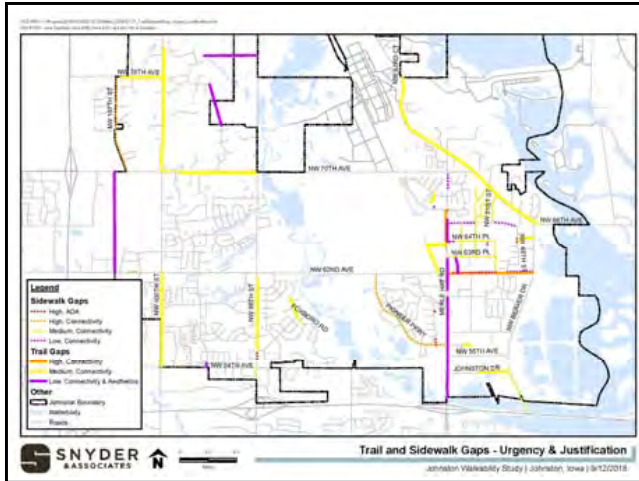


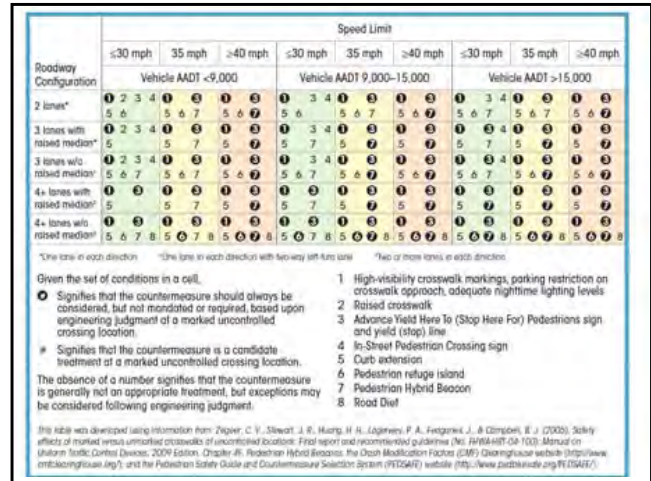
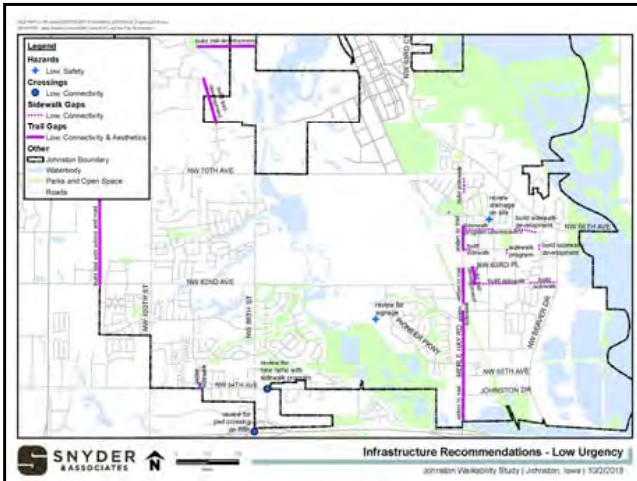
Policies - Implementation








































Ordinance Chapter/Policy	Recommendation	Timeframe	Lead
Chapters 48, 76, 165 - Definition of "Trail"	Revise to a single definition	6 months	Parks
Chapter 48: Use of City Greenbelt, Open Space, and Recreation Trails; 48.03 Alcoholic Beverages Prohibited	Allow for closed container of alcohol on trails	6 months	Parks
Chapter 48: Use of City Greenbelt, Open Space, and Recreation Trails	Prohibit tobacco usage on trails	1 year	Parks, in coordination with area suburbs
Chapter 63: Speed Regulations	Lower school zone speed limits	Any - non urgent	Public Works, in consultation with the Police Department and School District
Chapter 76: Bicycle Regulations; 76.12 Bicycle Lanes	Delete unclear statement	6 months	Parks
Chapter 136: Sidewalk Regulations	Take on full or partial responsibility for sidewalk construction and maintenance	Any - non urgent	Public Works
Chapter 136: Sidewalk Regulations; 136.04 Responsibility for Maintenance	Add language regarding adjacent property owner responsibility to remove sediment and debris and to keep vegetation cut back.	6 months	Public Works
Chapter 136: Sidewalk Regulations; 136.09 Barricades and Warning	Add language requiring a detour per Iowa SUDAS, Chapter 12.	6 months	Public Works



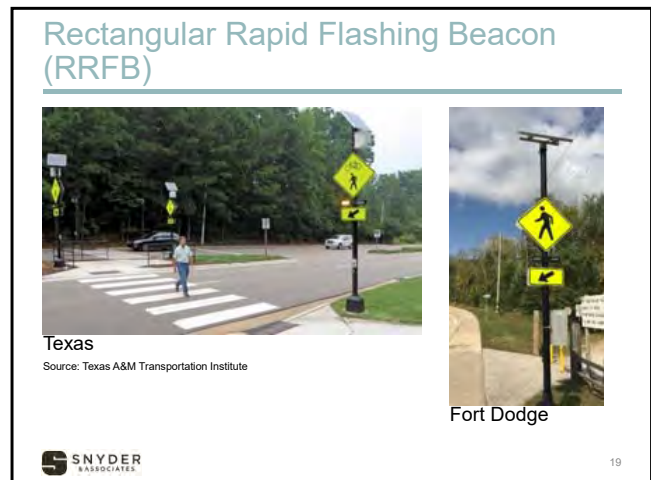
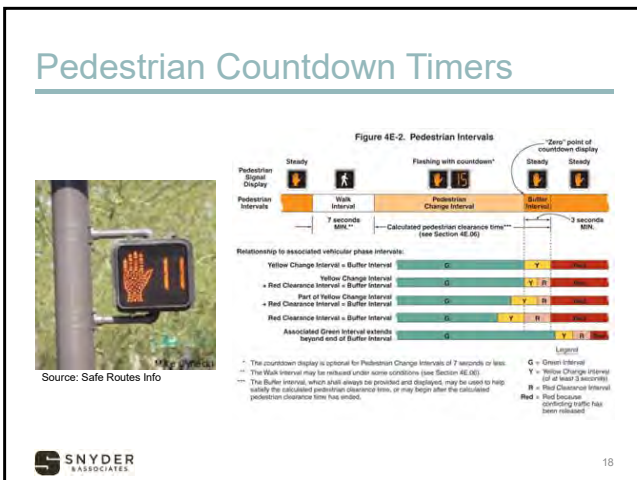
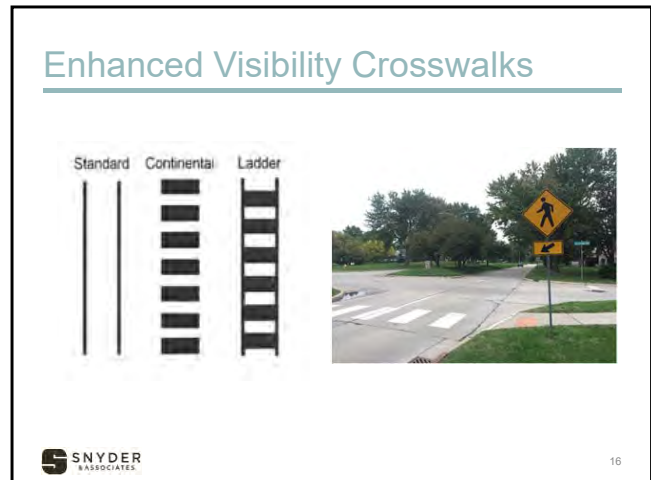
Map.Social Recommendations





	Safety Issue Addressed				
	Conflicts at crossing locations	Excessive vehicle speed	Inadequate conspicuity/visibility	Drivers not yielding to pedestrians in crosswalks	Insufficient separation from traffic
Pedestrian Crash Countermeasure for Uncontrolled Crossings					
Crosswalk visibility enhancement					
High-visibility crosswalk markings*					
Parking restriction on crosswalk approach*					
Improved nighttime lighting*					
Advance Yield Here To (Stop Here For) Pedestrians sign and yield (stop) line*					
In-Street Pedestrian Crossing sign*					
Curb extension*					
Raised crosswalk					
Pedestrian refuge island					
Pedestrian Hybrid Beacon					
Road Diet					

*These countermeasures make up the STEP countermeasure "crosswalk visibility enhancements." Multiple countermeasures may be implemented at a location as part of crosswalk visibility enhancements.



HAWK Signals



Ankeny - High Trestle Trail



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Raised Crosswalk

Midblock – Des Moines



Driveway - Minneapolis



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Raised Crosswalk

Intersection – San Francisco



Source: San Francisco Streetsblog

Intersection – New York City



Source: New York City Streetsblog



22

Raised Intersection

Cambridge, MA



Source: NACTO

New Jersey



Source: New Jersey Bike Ped



23

Pedestrian Refuge Island



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Curb Extensions

Mid Block - Johnston



Intersection



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Crosswalk Improvement Costs

Crosswalk Items	Heuristic Unit Costs	Unit
Standard/Parallel Markings	\$100 - \$2,000	each leg/approach
Continental Markings	\$600 - \$6,000	each leg/approach
Crosswalk Warning Signs	\$300 - \$600	per pair
Pedestrian Countdown Timers	\$300 - \$800	per signal
Rectangular Rapid Flash Beacon (RRFB)	\$10,000 - \$20,000	per pair
Pedestrian Hybrid Beacon (HAWK Signal)	\$75,000 - \$150,000	each
Raised Crosswalk	\$2,000 - \$20,000	each
Raised Intersection	\$25,000 - \$100,000	each
Pedestrian Refuge Island	\$2,000 - \$40,000	each
Curb Extension	\$2,000 - \$20,000	each



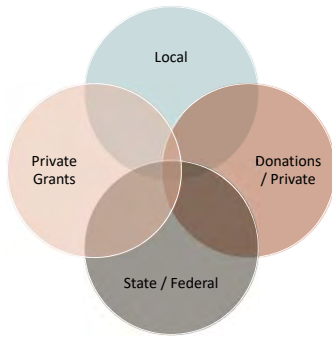
26

Trail and Sidewalk Costs

Trail Type	Heuristic Cost per Mile	Elements	Modification Factor	Resulting Cost per Mile
Paved Trail - 10' wide (independent alignment)	\$450,000	Former RR Grade	0.5	\$225,000
		Flat terrain	0.7	\$315,000
		Rolling terrain	1	\$450,000
		Hilly terrain	1.5	\$675,000
		Along streambank	1.8	\$810,000
Paved Sidepath - 10' wide	\$325,000	Along urban roadway	1	\$325,000
		Along rural roadway	1.6	\$520,000
Sidewalk	Heuristic Cost per Foot			
Paved Sidewalk - 5' wide	\$20			

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Funding



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Due Date	Program	Project Types	Max Award	Match Required
January 15 (quarterly thru year)	Community Attraction and Tourism (CAT)	trails, tourism	10-20% of the final cost, not to exceed \$1 Million	At least 65% of funds must be secured, grant is last dollar in
February	Prairie Meadows Community Betterment / Legacy Grants	trails, economic development	\$99,999 / \$1M	None / 75%
April and October	PeopleforBikes Community Grant	trails, bicycle infrastructure	\$10,000	50%
May	Wellmark MATCH Grant	safe, healthy, and active community improvements	\$75,000	100%
May 1	Iowa Great Places	trails, quality of life improvements	\$400,000 (\$185,000 average)	100%
May 16	AARP Community Challenge	transportation and mobility options; permanent and temporary improvements for connectivity, walkability, bikeability, and access to transit	several thousand for larger projects	none
July 1	State Recreational Trails	trails	None specified (highest award was \$780,000)	25%
August 15	Resource Enhancement and Protection (REAP) City Parks & Open Spaces	trails, restrooms, parkways	\$125,000 (for cities with populations between 10,001 and 25,000)	none
August 15	Traffic Safety Improvement Program (TSIP)	traffic safety improvements	\$500,000	none
October 1	Federal Recreational Trails	trails	\$5,000 min - no limit (highest = \$490,000)	20%
October 1	Iowa Clean Air Attainment Program (ICAAP)	highway/street, transit, bicycle/pedestrian	None specified (minimum request \$20,000 per project)	20%
November 2	America Walks Community Change Grants	projects creating healthy, active, and engaged places to live, work, and play	\$1,500	none
December 1	Statewide STP TAP	trails, pedestrian, bicycle improvements, safe routes to schools, access to transit	None specified	20%
December 7	DMAMPO TAP	trails, pedestrian, bicycle improvements, safe routes to schools, access to transit	None specified	20%
December 7	Surface Transportation Block Grant Program (STBG)	federal-aid routes, bridges, public roads, pedestrian and bicycle infrastructure, transit capital improvements	None specified	20%

Maintenance Guidelines

- Trail Inspections
- Plowing/Sweeping/Blowing
- Pavement Markings
- Riding/walking surface
- Gutter to Pavement Transitions
- Drainage Grates and Culverts
- Drainage
- Pavement Overlays
- Signage
- Landscaping



Upcoming Meeting

Finalize Document

- Implementation Plan
- Edits as necessary

City Council

- November 5, 2018



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Meeting Notes

To: Johnston Walkability Study Steering Committee

Date: 10/03/2018

From: Mindy Moore, AICP, Project Manager

CC: Mark Perington, PE

RE: JOHNSTON WALKABILITY STUDY STEERING COMMITTEE MEETING #3

The third Johnston Walkability Study Steering Committee met on October 2, 2018 at 5:30 pm at Johnston City Hall. The following members were in attendance:

Community Representatives			
Last	First	Representing	October 2, 2018
Dierenfeld	Paula	Mayor	
Cope	Tom	City Council Member	
Martin	Rhonda	City Council Member	x
Andrews	Lindsey	Heartland Soles & event planner	x
Clark	Kelsey	Johnston Chamber of Commerce	
Danielson	Lyle	Johnston Park Board	x
Dockum	Greg	School Board	x
Kacer	Laura	Johnston School District	x
Morrill	Jill	JCSD	
Scholbrock	Jason	Pioneer	
Soelberg	Ginger	Trails Committee	x
City of Johnston Staff			
Last	First	Title	
Sanders	Jim	City Administrator	
Greiner	Matt	Public Works Director	x
McDaniel	Dennis	Police Chief	x
Schmitz	John	Parks Director	x
Wilwerding	David	Community Development Director	x
Snyder & Associates, Inc.			
Last	First	Title	
Perington	Mark	Principal In Charge	x
Moore	Mindy	Project Manager/Planner	x

Steering Committee Meeting #3 Notes
October 3, 2018
Page 2 of 3

The following is a compilation of the presentation along with questions and comments the committee had throughout the presentation.

Scooters and Mobility

Electric scooters and similar devices, include electric assist bicycles, are making their way into our communities. Scooter share businesses have led to problems in larger cities across the country, often with scooters left in pedestrian walkways.

Current ordinances which prohibit motorized devices would make these types of devices in violation when used on our trail and sidewalk networks. The City may want to assess regulations related to where these devices may be used, and how they should operate (speed, yield to pedestrians, trail etiquette, etc.). Devices may be used as mobility device for persons with mobility disabilities without any changes to ordinances.

Policies

For policies that were discussed at the prior meeting, we have assigned a timeframe and responsible party. This needs to be reviewed by staff.

Map.Social Recommendations

A master map shows all of the locations for gaps, hazards, and crossings and recommendations for each item. Snyder will revise the exhibit to be sure to display the connection between the sidewalk that dead ends from Prairie Place to NW 51st Street. (This is in the data set, but too small to appear on exhibit.)

The data is also displayed by Urgency and Justification. Separate maps display the items that are not currently in the CIP.

Priorities

A set of three maps depicts the urgency of each trail, sidewalk, crossing, or hazard. Urgency levels are high, medium, or low. High urgency items may be already programed within the coming year, related to safety, have a high number of public comments, or related to ADA compliance.

Intersection/Crossings

For recommendations that indicate to “Review for Crossing Improvements” guidance can be provided by the FHWA chart for uncontrolled intersections. Some of these items may apply to controlled intersections as well. A summary of these intersection treatment is provided. Many of these treatment are already in place in Johnston.

Funding

Heuristic cost estimates of trail/mile, sidewalk/foot, and a range for various types of intersection enhancement is provided. There is a funding table of public and private sources. Different funding sources have different priorities, such as health, safety, economic development, transportation, recreation, etc. Projects may be able to receive funding from a variety of sources.

Steering Committee Meeting #3 Notes
October 3, 2018
Page 3 of 3

A new program to look into is the Urban Wildlife Refuge Partnership. Contact person is Cheryl Groom from the USE Fish and Wildlife Service (Cheryl_groom@fws.gov).

General Q&A

Can we develop a cost opinion for implementing the overall plan (or each urgency level)?

We could develop a heuristic cost for the trails and sidewalk elements. Some of these would also be funded by the adjacent property owner. It would be more difficult to establish a cost for the crossings. While there is a table which provides potential crossing treatment, there is still a lot of variability in which treatment may be implemented. Further, multiple intersections should be reviewed in relation to each other along the same corridor.

For the priorities, can we identify the “low hanging fruit,” items that are easier or less costly to achieve, but that will make a positive impact and show progress? Possibly, from within the items that are identified as high or medium urgency, we could create a subset of items that could be considered “low hanging fruit.” Snyder will discuss with staff.

Items in the CIP get re-adjusted each year as priorities shift over time. This plan may help keep some items from being delayed within the CIP.

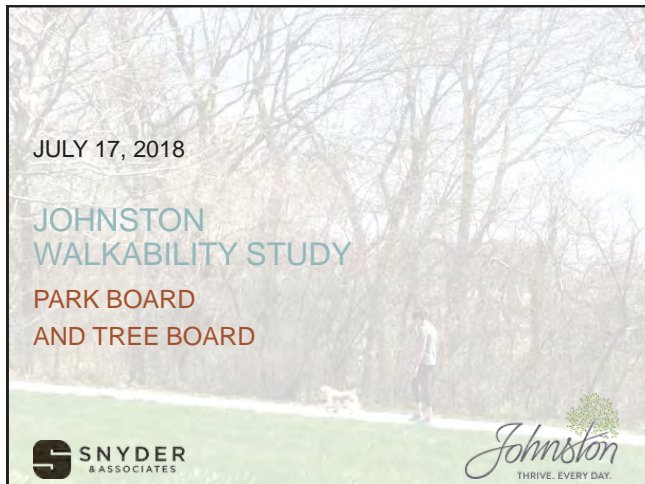
Can we create a table of each item in addition to the maps? The maps are in GIS, which uses an attribute table to describe each feature. This can be exported into an Excel spreadsheet for further manipulation or display. We would need to add a description of the location for each item (e.g. Intersection of Merle Hay Road and Pioneer Parkway) for the table to make sense on its own. Since this takes some time, we’d prefer that staff review the details of the maps first, we can make final edits, and then export the data to Excel. Ultimately, staff will take ownership of the GIS data upon completion of the project and be able to manage the data however necessary.

Particular crossings mentioned:

- 86th & Newgate
- Pioneer Parkway (various)

Next Steps

- Review Implementation Plan and Final Document layout
 - Staff review and comment
 - Draft to Committee
- Meetings
 - November 5, 2018 City Council



Agenda

SCOPE OF WORK & WALKABILITY

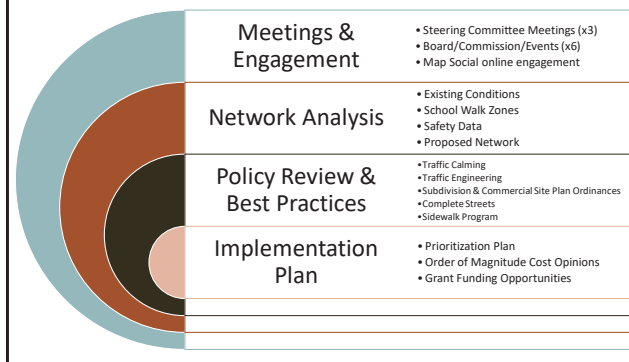
EXISTING CONDITIONS

MAP.SOCIAL RESULTS

ADDRESSING THE FINDINGS

ORDINANCE AND POLICY REVIEW AND RECOMMENDATIONS

Scope of Work



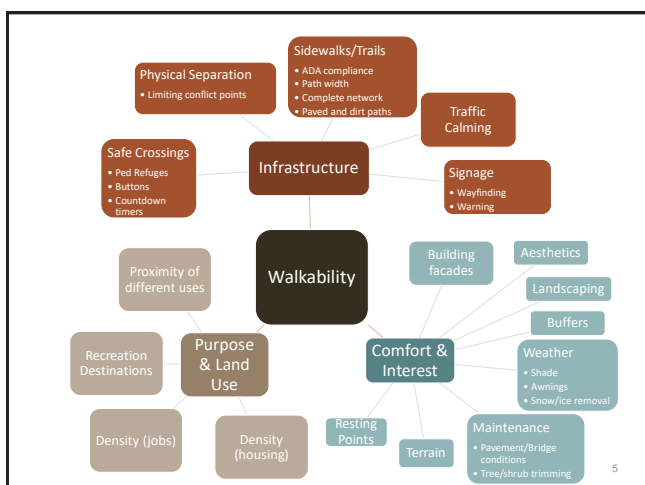
Walkability and Scope

What makes a community walkable?

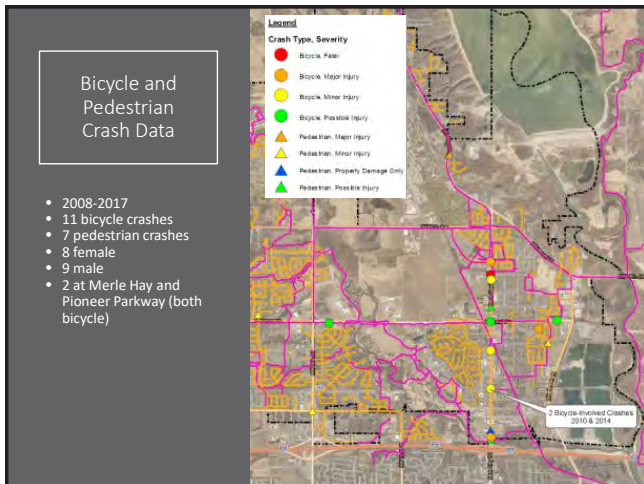
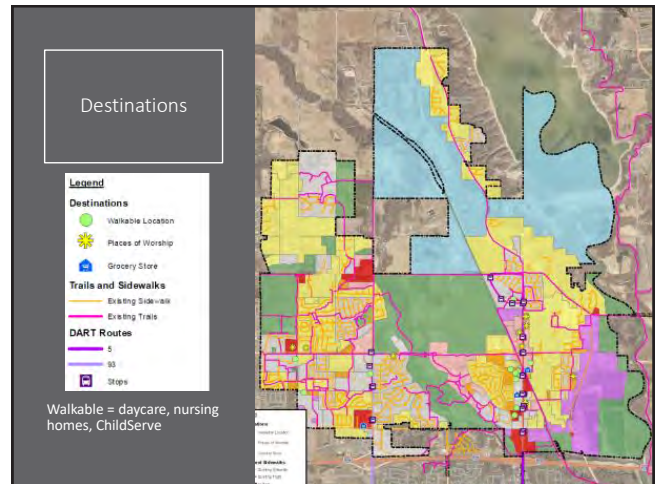
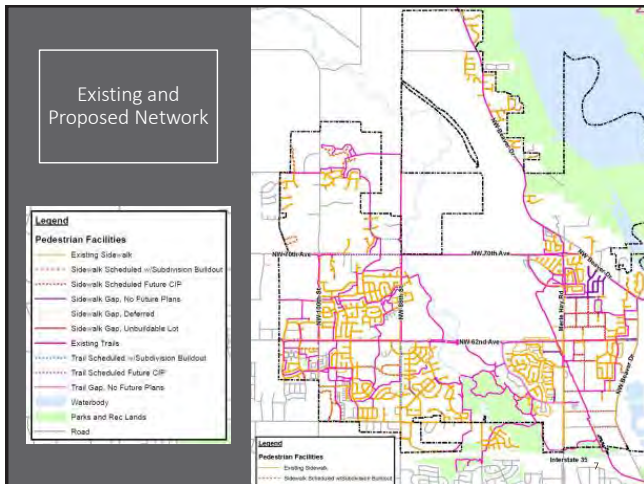
What can we improve through this project?



4



EXISTING CONDITIONS



Map.Social Outreach Summary

- Open May 11 – June 18
- 500 business cards
- Committee members
- Community email newsletters
- Johnston Living magazine
- Johnston Register
- Business Record
- Social Media
 - Facebook – 838 views; 5 shares; 3 comments; 16 reactions
 - Twitter – 5 retweets; 6 likes
 - YouTube – 37 views
- Events
 - Mayor's Ride
 - Coffee with a Cop
 - Farmer's Market
 - Green Days

Johnston seeks comments in walkability study

BY BRYANNE BUCKINGHAM

Johnston has asked citizens and businesses to help them to make a study to get around town. The City of Johnston has created an open-ended survey where you can rank your favorite routes, share information about the city, and address the study. The study will be in full swing from June 11 to June 18.

Walkability study starts in Johnston

Special to the Register

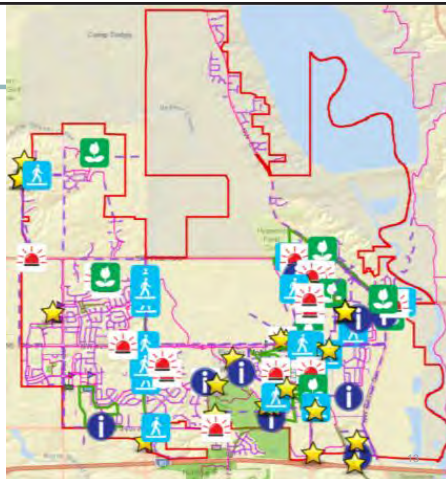
The City of Johnston is conducting a community-wide study to see how walkable the city really is. The walkability study looks to address the overall connectivity of the sidewalk and trail network between neighborhoods, schools, parks and business destinations to see how accessible it is for walkers and bicyclists. The city is working with Snyder & Associates to complete the study. Goals include developing priorities for

<h3>Pedestrian Destination</h3> <p>Places I would like to walk to</p> <p>36 Features</p> <p>View Map</p>	<h3>Favorite Pedestrian Routes</h3> <p>Places I like to walk</p> <p>15 Features</p> <p>View Map</p>	<h3>Gaps in Pedestrian Routes</h3> <p>Areas needing a sidewalk or trail to complete a connection</p> <p>102 Features</p> <p>View Map</p>
<h3>Problematic Intersection or</h3> <p>Intersections or mid block crossings that are difficult for pedestrians</p> <p>23 Features</p> <p>View Map</p>	<h3>Pedestrian Safety Hazard</h3> <p>Areas that pose a safety concern to people walking</p> <p>21 Features</p> <p>View Map</p>	<h3>DART Stops Needed</h3> <p>DART stops that need a better waiting area or route to/from</p> <p>0 Features</p> <p>View Map</p>
<h3>Beautification Needed</h3> <p>Areas that are aesthetically unappealing to walk by</p> <p>8 Features</p> <p>View Map</p>	<h3>Other</h3> <p>All other points</p> <p>9 Features</p> <p>View Map</p>	<h2>Input Options</h2>

Results

51 + 16 (admin) =
67 contributors

214 features



Gaps in Routes

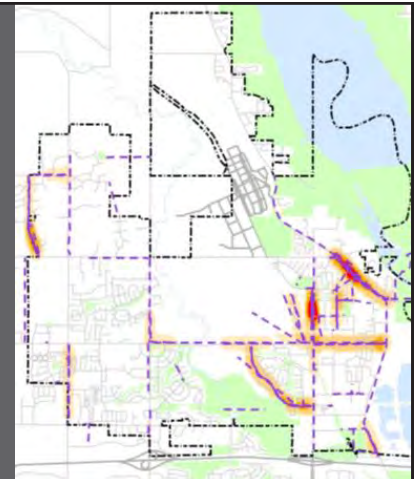
102 FEATURES

Merle Hay Rd-west side
• x6 + 14 likes

NW Beaver Dr
• x6 + 7 likes

Pioneer Pkwy
• x4 + 15 likes

NW 107th St
• x5 + 7 likes



Pedestrian Safety Hazard

21 FEATURES

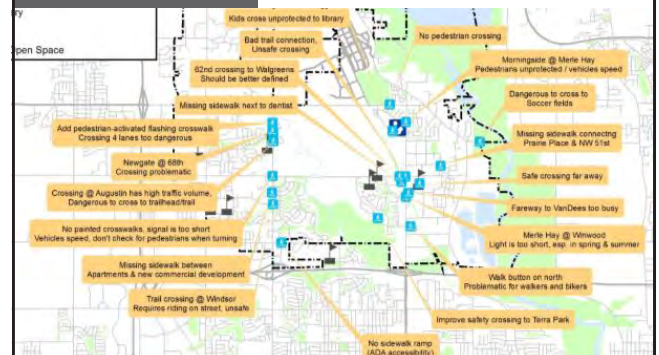
- Lack of Sidewalks
 - West Merle Hay Road ~ 21 likes
- Pavement/Bridge Maintenance
 - x7 + 7 likes
- Crossings
 - x5 + 11 likes
- Behavior (mopeds; alertness; pick up after pet)
 - 3 likes
- Speed limit
 - 3 likes



Problematic Intersection or Crossing

23 FEATURES

- Crossing 86th St north of 62nd Ave
 - x4 + 12 likes
- Crossing Merle Hay Rd @ Pioneer Pkwy (button north/ trail south)
 - 7 likes
- Missing Sidewalk @ NW 86th St
 - 8 likes



ADA Compliance

Miss Wheelchair Iowa: Accessibility Map

Please take into consideration the importance of sidewalks, and their quality, to people in your community with disabilities. Without properly maintained sidewalks and curb cutouts access is limited for these individuals.

by LAURA HARTER

CREATED 2018-05-18
MODIFIED 2018-05-18

0
Features

ChildServe Accessibility

As an employee of ChildServe, it is important that the children, specifically ones in wheelchairs, are able to access parks, stores, and neighborhoods in the Johnston area.

by KELLYRIFFLE

CREATED 2018-05-29
MODIFIED 2018-05-29

0
Features



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ADDRESSING THE FINDINGS

Organizing the Data

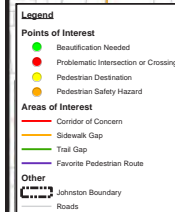
General vs. Specific
Enforcement Issues
Education Issues
Policy Related
Minor Maintenance Issues
Major Maintenance Issues
Capital Improvements



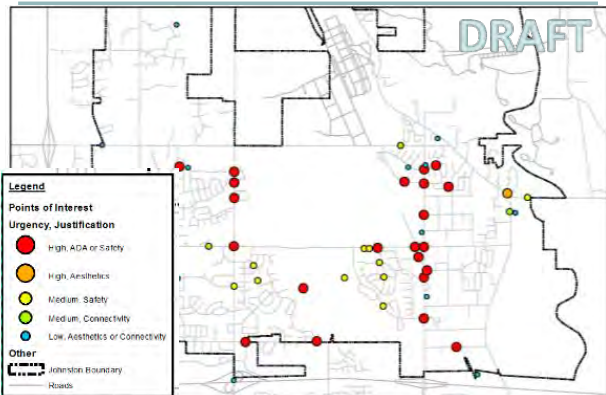
19

Engagement Results

214 features
+
Staff
+
Steering Committee
=
147 unique features



Example – Problematic Point Urgency & Justification



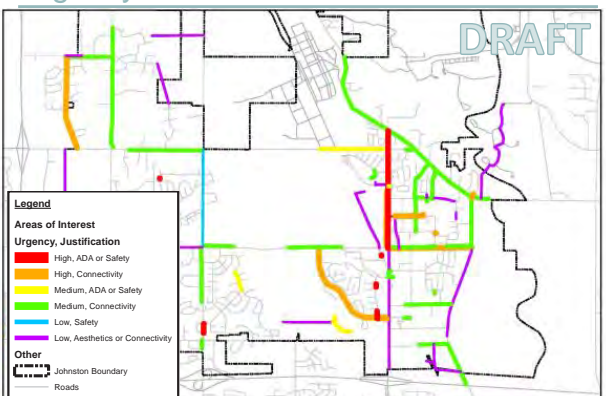
62nd & Merle Hay Intersection

- 17 “likes”
- Comments:
 - dangerous
 - no clear crossing
 - many accidents
 - poorly designed for bikes/peds
- 1 bike crash reported
 - possible injury



22

Example – Problematic Corridor Urgency & Justification



Merle Hay Corridor

- 40+ “likes”
 - Trail Gap
 - Favorite Route
- Comments:
 - Concern about safety (children’s safety)
- 3 bike crashes – fatal, major and minor injury
- 1 ped crash – possible injury
- Future Trail Planned



23

CITY OF JOHNSTON, IOWA

TABLE OF CONTENTS

GENERAL CODE PROVISIONS

CHAPTER 1 - CODE OF ORDINANCES

CHAPTER 2 - CHARTER

CHAPTER 3 - MUNICIPAL INSTRUCTIONS

CHAPTER 4 - OPERATING PROCEDURES

CHAPTER 5 - CITY ELECTIONS

CHAPTER 6 - FISCAL MANAGEMENT

Traffic Safety Facts

2015 Data

NHTSA Pedestrians

RESOLUTION 16-02

A RESOLUTION OF THE CITY COUNCIL ADOPTING A COMPLETE STREETS POLICY

WHEREAS, The City of Johnston wishes to ensure that all users of our transportation system are able to travel safely and conveniently on all streets and roadways within the public right-of-way in Johnston; and,

WHEREAS, a street is defined as one which provides a safe, convenient, and context-of travel, for users of all ages and all abilities; and,

WHEREAS, streets better serve the needs of those who use transit by providing access to transit; and,

WHEREAS, streets have public health benefits, such as encouraging physical activity and providing the opportunity for more people to bike and walk safely; and,

WHEREAS, complete streets improve access and safety for those who cannot or choose not to drive motor vehicles; and,

Safe Routes to School Briefing Sheet

Reduced School Area Speed Limits

ORDINANCE & POLICY RECOMMENDATIONS

Ordinance And Policy Review

Trail Definition	• consistency
Trails	• alcohol • tobacco
Speed Regulation	• school zones
Bicycle Regulations	• bike lane vs. shared lane
Sidewalk Regulations	• responsibility • detours • merchandise display
Zoning - General Regulations	• fences • bicycle parking
Zoning - Site Plan Requirements	• path from sidewalk to door
Subdivision Regulations	• criteria for waivers • easements
Complete Street Policy	• guidance document • committee review
Sidewalk Trail vs. Sidewalk Installation	• issues • what to consider



26

Trails – Alcohol and Tobacco

48.03 ALCOHOLIC BEVERAGES PROHIBITED

Wine, beer, and any other alcoholic beverages or drinks shall not be brought, transported or otherwise carried upon or consumed upon any greenbelt, open space areas or recreation trails.

RECOMMENDATION

- Allow unopened alcohol along trail
- Prohibit tobacco usage



SHAUN STANLEY/Durango Herald file photo

Sidewalk Regulations - Detours

136.09 BARRICADES AND WARNING LIGHTS

...it shall be the duty of all persons ...to put in conspicuous places at each end of such sidewalk and at each end of any pile of material deposited in the street, a sufficient number of approved warning lights or flares, and to keep them lighted during the entire night and to erect sufficient barricades both at night and in the daytime to secure the same.

RECOMMENDATION

When a sidewalk is blocked such that pedestrian passage is not safe or ADA compliant, a detour route should be provided.



28

Zoning - Site Plan Requirements

171.05 DESIGN STANDARDS

Shall have such pedestrian walkways as are necessary for safety and general the welfare

RECOMMENDATION

Requires pedestrian walkways that:

- Are separate from vehicular drive aisles
- Connect between adjacent sidewalks and trails to the front entrance(s)



Complete Streets Policy



Add National Association of City Transportation Officials (NACTO) Urban Bikeway Design Guide to the list of resources

Formalize a review process with staff

Creating a new volunteer board or commission to review traffic safety and active transportation issues (or expand duties of a current board)

30

Sidepath Trail vs. Sidewalk



SNYDER
ASSOCIATES

31

What is a Sidepath Trail?

Sidepaths Trails are bidirectional shared use paths that run adjacent to the roadway, often along busy roads deemed inhospitable for biking.



SNYDER
ASSOCIATES

Source: AASHTO (2012)

When Could a Sidepath Trail be Used?

Along high-speed/volume roads

Along roads with very few roadway/driveway crossings

For short distances to connect sections of a path in independent rights-of-way

Where their termination points sit at streets that are accommodating to bicyclists or other connecting paths

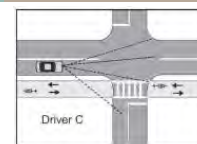
SNYDER
ASSOCIATES

Visibility Concerns

Right Turns onto Roadway

Left Turns off Roadway

Right Turn off Roadway



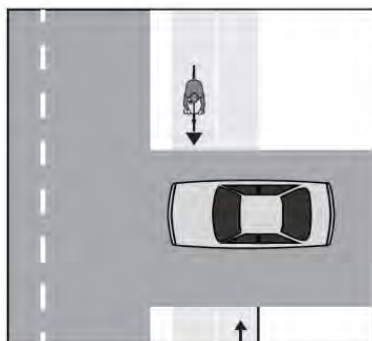
Source: AASHTO (2012)

SNYDER
ASSOCIATES

Vehicular Conflicts

Bicyclists cross faster than pedestrians

Attempts to get cyclists to stop are difficult and ineffective



Stopped motor vehicles on side streets or driveways may block the path.

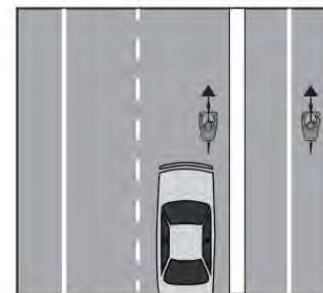
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Ups and downs of ramps

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Example: Highway Sidepath Trail



Limited driveway/roadway crossings

Wide separation from roadway

Only a two-lane roadway



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Space provided for both walkers and cyclists

Ability for children/less experienced riders to use the sidepath trail while more experienced cyclists have access to the bike lane



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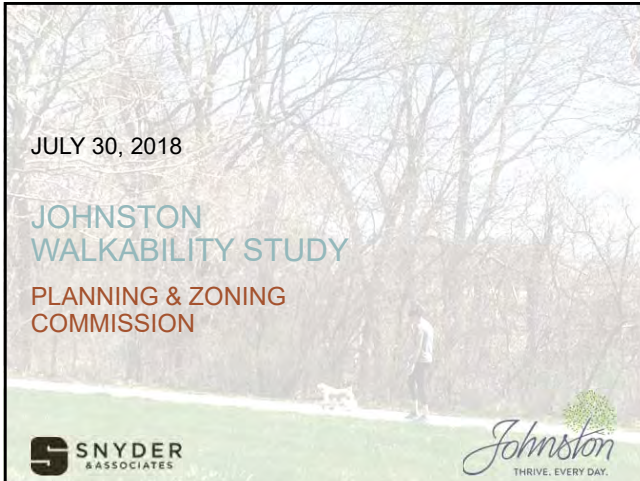


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QUESTIONS?





Agenda

SCOPE OF WORK & WALKABILITY

EXISTING CONDITIONS

MAP.SOCIAL RESULTS

ADDRESSING THE FINDINGS

ORDINANCE AND POLICY REVIEW AND RECOMMENDATIONS

Scope of Work



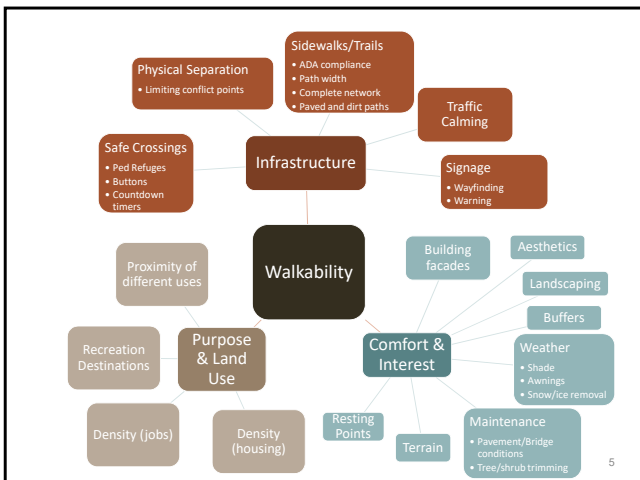
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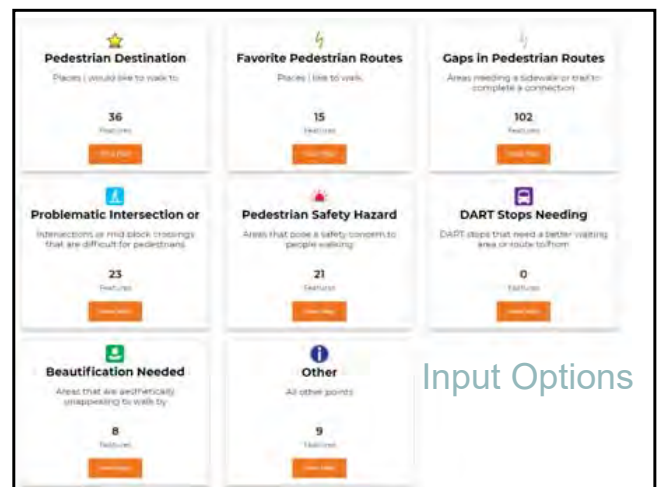
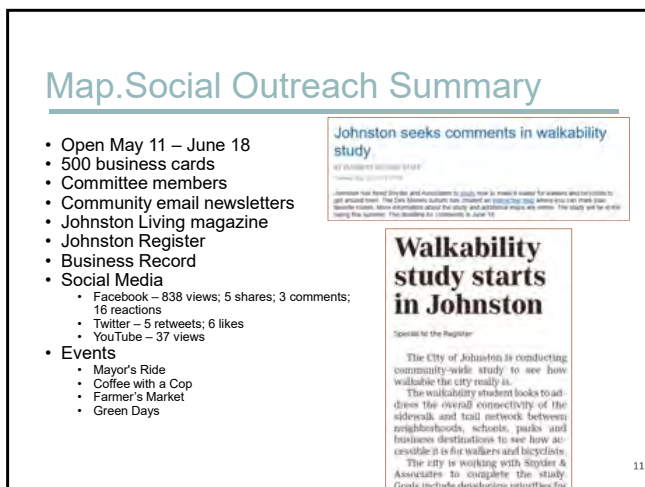
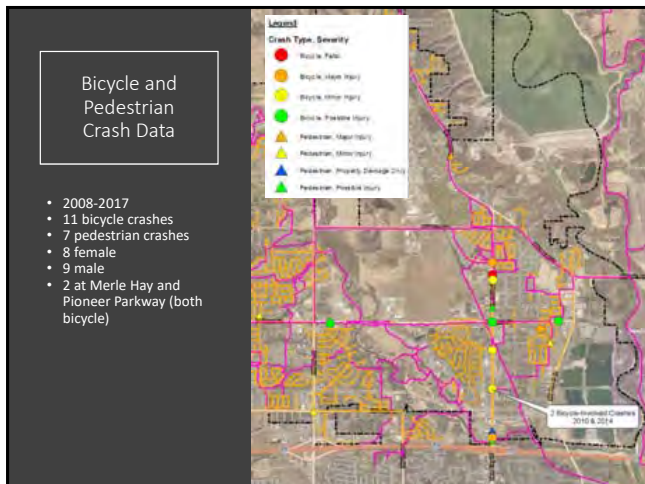
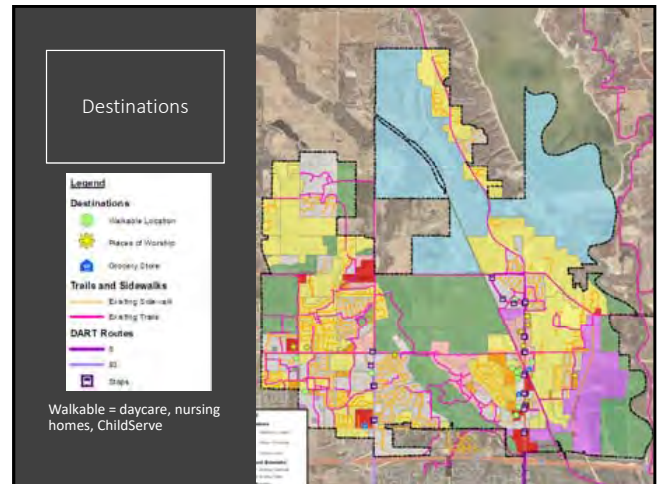
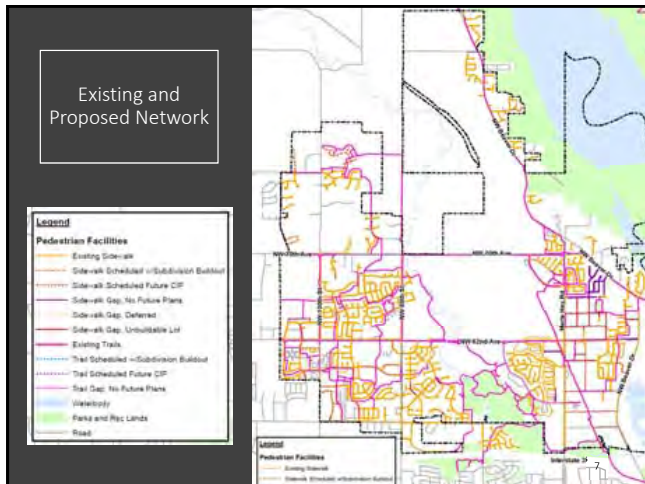


4



5

EXISTING CONDITIONS

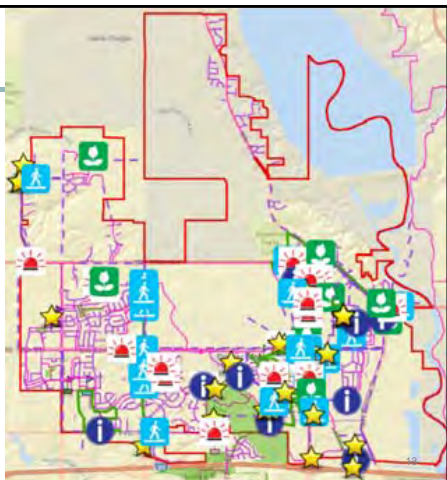


Results

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214 features

SNYDER
ASSOCIATES



Gaps in Routes

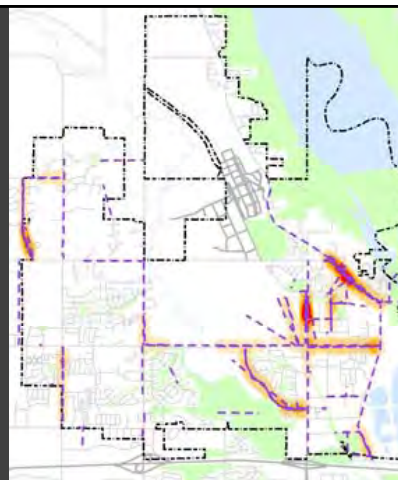
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Merle Hay Rd-west side
• x6 + 14 likes

NW Beaver Dr
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Pedestrian Safety Hazard

21 FEATURES

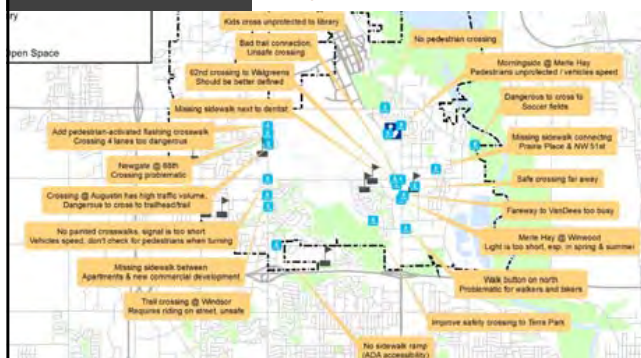
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Please take into consideration the importance of sidewalks, and their quality, to people in your community with disabilities. Without properly maintained sidewalks and curb cutouts access is limited for these individuals.

by LAURA HARTER

CREATED 2018-05-18
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As an employee of ChildServe, it is important that the children, specifically ones in wheelchairs, are able to access parks, stores, and neighborhoods in the Johnston area.

by KELLYRIFLE

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Features

SNYDER
ASSOCIATES

17



ADDRESSING THE FINDINGS

Organizing the Data

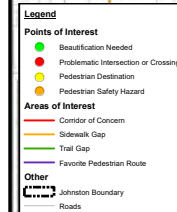
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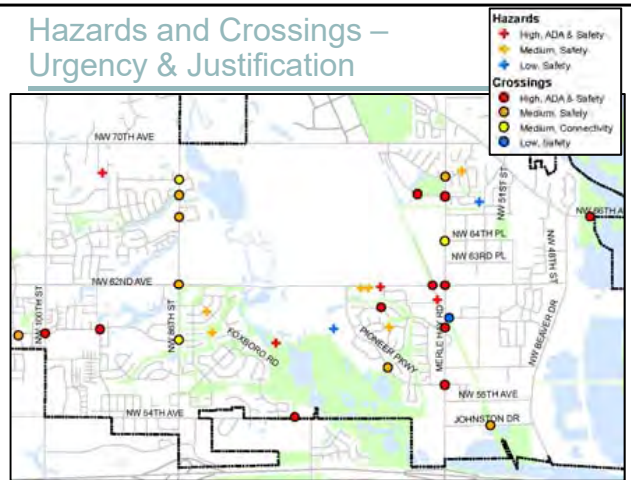
19

Engagement Results

214 features
+
Staff
+
Steering Committee
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2nd Staff Review
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166 unique features
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Hazards and Crossings – Urgency & Justification



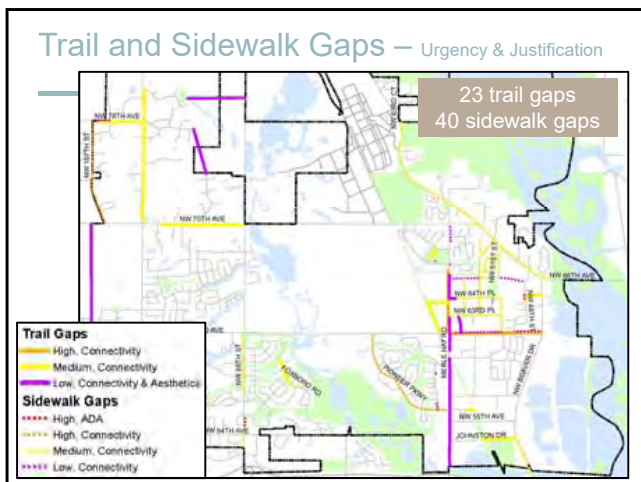
62nd & Merle Hay Intersection

- 17 “likes”
- Comments:
 - dangerous
 - no clear crossing
 - many accidents
 - poorly designed for bikes/peds
- 1 bike crash reported
 - possible injury

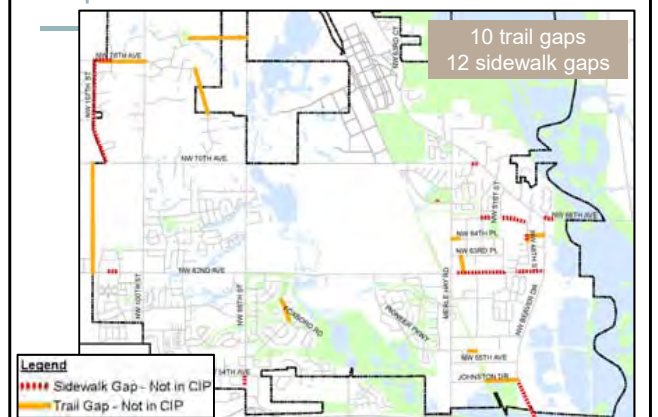


22

Trail and Sidewalk Gaps – Urgency & Justification



Gaps – Not in CIP



Merle Hay Corridor

- 40+ “likes”
 - Trail Gap
 - Favorite Route
- Comments:
 - Concern about safety (children’s safety)
- 3 bike crashes – fatal, major and minor injury
- 1 ped crash – possible injury
- Future Trail Planned



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CITY OF JOHNSTON, IOWA

TABLE OF CONTENTS

GENERAL CODE PROVISIONS

CHAPTER 1 - CODE OF ORDINANCES

CHAPTER 2 - CHARTER

CHAPTER 3 - MUNICIPAL INSTRUCTIONS

CHAPTER 4 - OPERATING PROCEDURES

CHAPTER 5 - CITY ELECTIONS

CHAPTER 6 - FINANCIAL MANAGEMENT

Traffic Safety Facts

2015 Data

NHTSA

Pedestrians

RESOLUTION 16-92

A RESOLUTION OF THE CITY COUNCIL ADOPTING A COMPLETE STREETS POLICY

WHEREAS, The City of Johnston wishes to ensure that all users of our transportation system are able to travel safely and conveniently on all streets and roadways within the public right-of-way in Johnston; and,

street is defined as one which provides a safe, convenient, and context-of-travel, for users of all ages and all abilities; and,

streets better serve the needs of those who use transit by providing access

streets have public health benefits, such as encouraging physical activity providing the opportunity for more people to bike and walk safely; and,

WHEREAS, complete streets improve access and safety for those who cannot or choose not to drive motor vehicles; and,

Safe Routes to School

Briefing Sheets

Reduced School Area Speed Limits

WEST

ORDINANCE & POLICY RECOMMENDATIONS

26

Ordinance And Policy Review

Trail Definition	• consistency
Trails	• alcohol • tobacco
Speed Regulation	• school zones
Bicycle Regulations	• bike lane vs. shared lane
Sidewalk Regulations	• responsibility • detours • merchandise display
Zoning – General Regulations	• fences • bicycle parking
Zoning – Site Plan Requirements	• path from sidewalk to door
Subdivision Regulations	• criteria for waivers • easements
Complete Street Policy	• guidance document • committee review
Sidewalk Trail vs. Sidewalk Installation	• issues • what to consider



27

Trails – Alcohol and Tobacco

48.03 ALCOHOLIC BEVERAGES PROHIBITED

Wine, beer, and any other alcoholic beverages or drinks shall not be brought, transported or otherwise carried upon or consumed upon any greenbelt, open space areas or recreation trails.

RECOMMENDATION

- Allow unopened alcohol along trail
- Prohibit tobacco usage



SHAUN STANLEY/Durango Herald file photo

Sidewalk Regulations - Detours

136.09 BARRICADES AND WARNING LIGHTS

...it shall be the duty of all persons ...to put in conspicuous places at each end of such sidewalk and at each end of any pile of material deposited in the street, a sufficient number of approved warning lights or flares, and to keep them lighted during the entire night and to erect sufficient barricades both at night and in the daytime to secure the same.

RECOMMENDATION

When a sidewalk is blocked such that pedestrian passage is not safe or ADA compliant, a detour route should be provided.



28

Zoning - Site Plan Requirements

171.05 DESIGN STANDARDS

Shall have such pedestrian walkways as are necessary for safety and general the welfare

RECOMMENDATION

Requires pedestrian walkways that:

- Are separate from vehicular drive aisles
- Connect between adjacent sidewalks and trails to the front entrance(s)



Complete Streets Policy



Add National Association of City Transportation Officials (NACTO) Urban Bikeway Design Guide to the list of resources

Formalize a review process with staff

Creating a new volunteer board or commission to review traffic safety and active transportation issues (or expand duties of a current board)

31

Sidepath Trail vs. Sidewalk



SNYDER ASSOCIATES

32

What is a Sidepath Trail?

Sidepaths Trails are bidirectional shared use paths that run adjacent to the roadway, often along busy roads deemed inhospitable for biking.



SNYDER ASSOCIATES

Source: AASHTO (2012)

When Could a Sidepath Trail be Used?

Along high-speed/volume roads

Along roads with very few roadway/driveway crossings

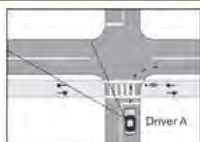
For short distances to connect sections of a path in independent rights-of-way

Where their termination points sit at streets that are accommodating to bicyclists or other connecting paths

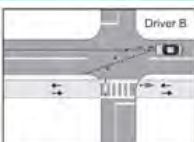
SNYDER ASSOCIATES

Visibility Concerns

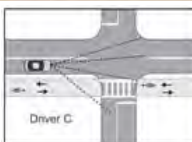
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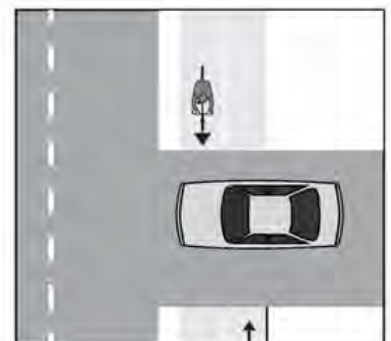
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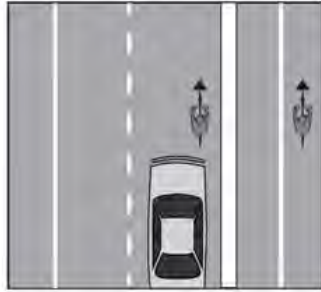
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- Priorities
- Funding & Implementation



42



QUESTIONS?



A person is walking a small white dog on a leash along a paved path in a wooded area. The trees are mostly bare, suggesting late autumn or winter. The scene is captured in a slightly desaturated, artistic style.

AUGUST 06, 2018


JOHNSTON
WALKABILITY STUDY

JOHNSTON COMMUNITY
SCHOOL BOARD

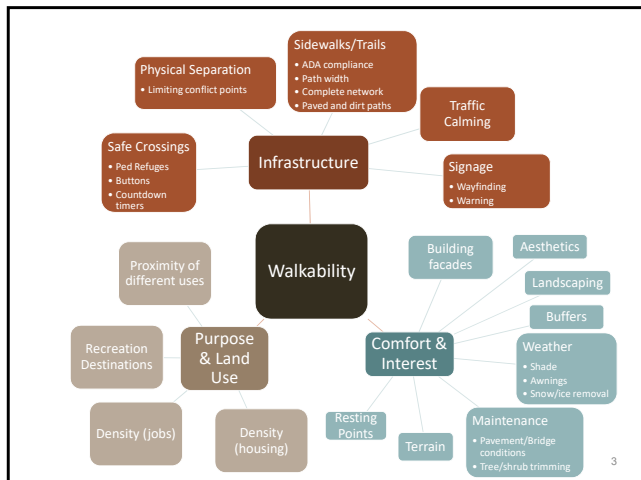
S SNYDER
& ASSOCIATES

Johnston
THRIVE, EVERY DAY.

Scope of Work



Meetings & Engagement	<ul style="list-style-type: none">• Steering Committee Meetings (x3)• Board/Commission/Events (x6)• Map Social online engagement
Network Analysis	<ul style="list-style-type: none">• Existing Conditions• School Walk Zones• Safety Data• Proposed Network
Policy Review & Best Practices	<ul style="list-style-type: none">• Traffic Calming• Traffic Engineering• Subdivision & Commercial Site Plan Ordinances• Complete Streets• Sidewalk Program
Implementation Plan	<ul style="list-style-type: none">• Prioritization Plan• Order of Magnitude Cost Opinions• Grant Funding Opportunities



Map.Social Outreach Summary

- Open May 11 – June 18
- 500 business cards
- Committee members
- Community email newsletters
- Johnston Living magazine
- Johnston Register
- Business Record
- Social Media
 - Facebook – 838 views; 5 shares; 3 comments; 16 reactions
 - Twitter – 5 retweets; 6 likes
 - YouTube – 37 views
- Events
 - Mayor's Ride
 - Coffee with a Cup
 - Farmer's Market
 - Round Days

Johnston seeks comments in walkability study

LET WALKABILITY BECOMING A HABIT

www.johnstonnh.com/news

Johnston has been thinking about becoming a walkable town in search of a way for citizens and businesses to get around town. The town knows citizens have shared an interesting idea: deliver your own mail, drop off your kids, walk to work, and more. Now, Johnston is looking for the right way to make this idea a reality. The town will be holding a public hearing this summer. This deadline is currently in April 14.

Walkability study starts in Johnston

Sponsored by the Register

The City of Johnston is conducting community-wide study to see how walkable the city really is.

The walkability student looks to address the overall connectivity of the sidewalk and trail network between neighborhoods, schools, parks and business destinations to see how accessible it is for walkers and bicyclists.

The city is working with Seidler & Associates to complete the study.

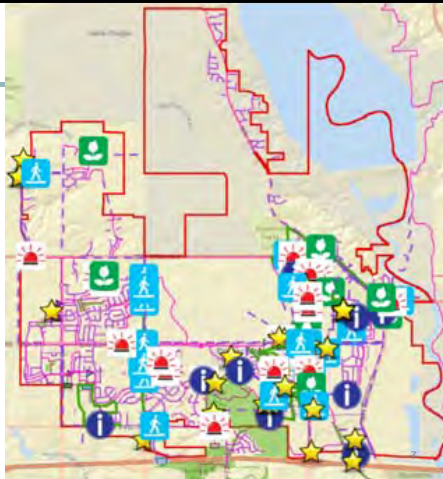
Category	Count
Pedestrian Destination	36
Favorite Pedestrian Routes	15
Gaps in Pedestrian Routes	102
Problematic Intersection or Interactions at Mid-Block Crossings	23
Safety Hazard	21
DART Stops Needed	0
Beautification Needed	8
Other	4
(Unlabeled)	9
(Unlabeled)	1

Results

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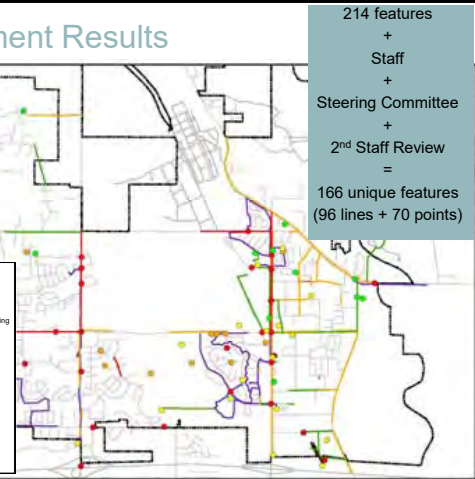
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SNYDER
ASSOCIATES



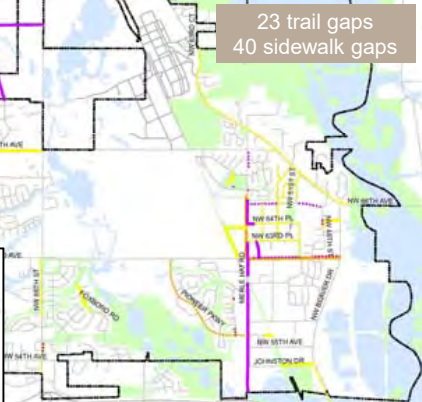
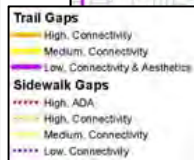
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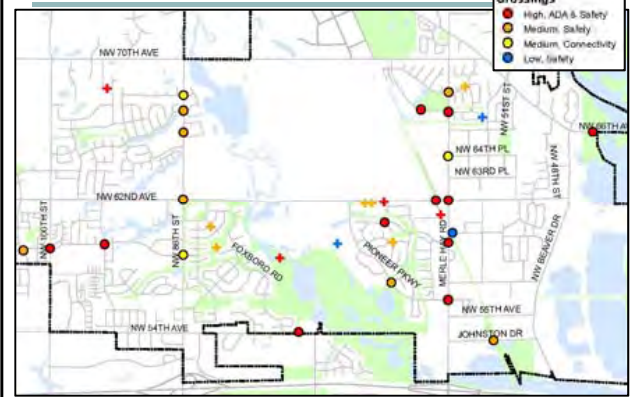


Trail and Sidewalk Gaps – Urgency & Justification

23 trail gaps
40 sidewalk gaps



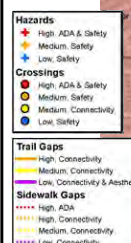
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Beaver Creek Walk Zone



Horizon Elementary and Summit Middle Walk Zone



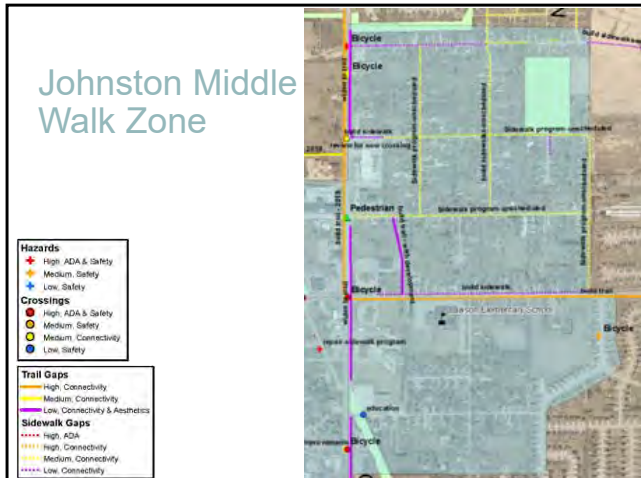
Timber Ridge Elementary Walk Zone



Wallace Elementary & Johnston Middle Walk Zone



Johnston Middle Walk Zone



High School Walk Zone



School Zone Speed Limits

63.02 STATE CODE SPEED LIMITS

The following speed limits are established in Section 321.285 of the Code of Iowa and any speed in excess thereof is unlawful unless specifically designated otherwise in this chapter as a special speed zone.

1. Business District – twenty (20) miles per hour.
2. Residence or School District – twenty-five (25) miles per hour.
3. Suburban District – forty-five (45) miles per hour.

RECOMMENDATION
- Reduce speed limit in school zones during before/after school hours



School Zone Speed Limits

Table 1. A Sample of School Speed Limit Zone Values

State	Speed Limit in School Zone
Arizona ¹	15 mph
Delaware ²	20 mph
Iowa ³	No fixed value. Locations are evaluated on a case-by-case basis, usually 10 mph below posted speed limit.
Massachusetts ⁴	20 mph
Minnesota ⁵	No more than 30 mph below the established speed limit and no lower than 15 mph.
Montana ⁶	No fixed value. Locations are evaluated on a case-by-case basis.
New Hampshire ⁷	10 mph under the posted speed limit.
New Jersey ⁸	25 mph
Ohio ⁹	20 mph
Oregon ¹²	20 mph
Pennsylvania ¹³	15 mph
South Dakota ¹⁴	15 mph
Texas ¹⁵	85 th Percentile Speed
	Below 55 mph
	Not more than 15 mph below 85th percentile speed or posted speed. Not to exceed a 35 mph school speed limit.
	55 mph
	10 mph below the 85th percentile speed or posted speed.
	Greater than 55 mph
	Use buffer zone to transition to a 35 mph speed limit.
Washington ¹⁶	20 mph

"Reduced School Area Speed Limits," Safe Routes to School Briefing Sheets, ITE

Speed vs Risk of Fatality

25 mph reduced to 20 mph
results in 5% less risk
(for ages 15+)

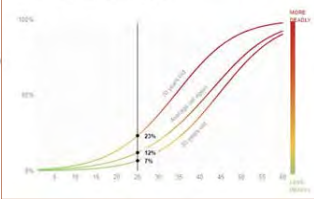
Considerations:

- Compliance and Enforcement
- Different from rest of metro
- Proactive
- Leader
- Transition - signage, education
- Potential of additional children walking

<https://www.monrovia.org/article/unsafe-at-many-speeds>
Data from: Tefft, Brian, *Impact Speed and a Pedestrian's Risk of Severe Injury or Death*. AAA Foundation for Traffic Safety. 2011.

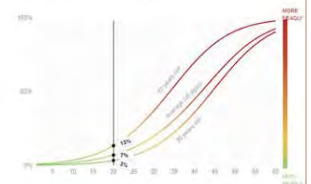
The Chance of Being Killed by a Car Going 25 mph

Roll over the curved lines to see the risk at any speed



The Chance of Being Killed by a Car Going 20 mph

Roll over the curved lines to see the risk at any speed



QUESTIONS?





Agenda

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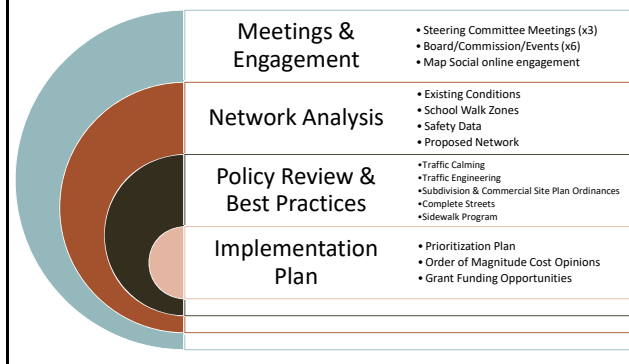
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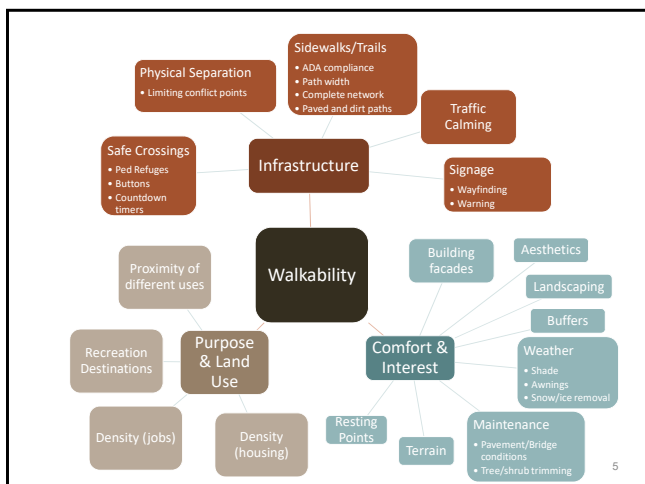
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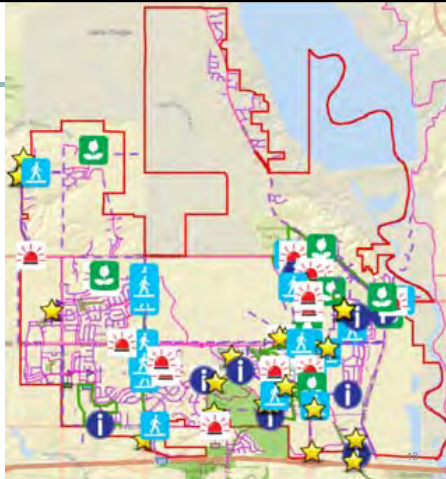
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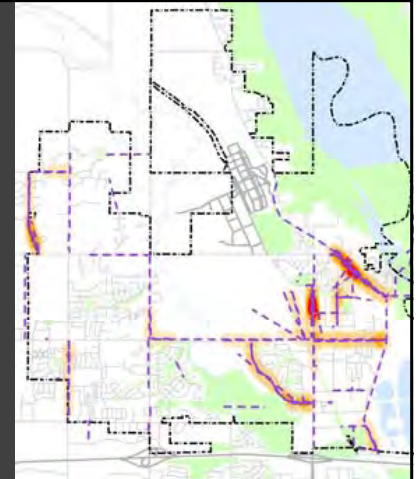
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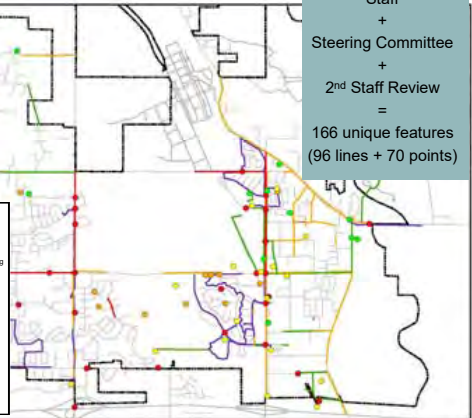


SNYDER ASSOCIATES

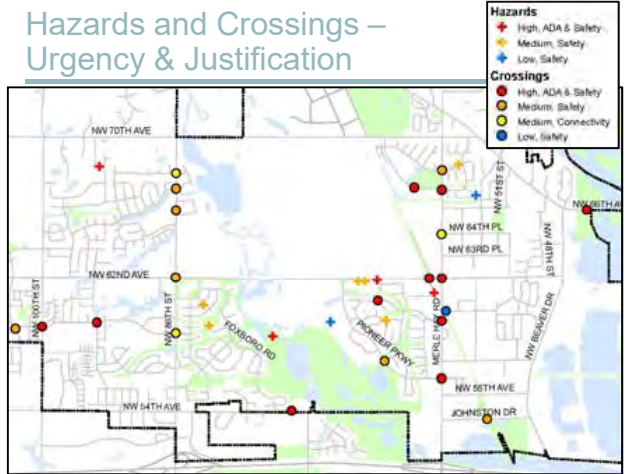
19

Engagement Results

214 features
+
Staff
+
Steering Committee
+
2nd Staff Review
=
166 unique features
(96 lines + 70 points)



Hazards and Crossings – Urgency & Justification



62nd & Merle Hay Intersection

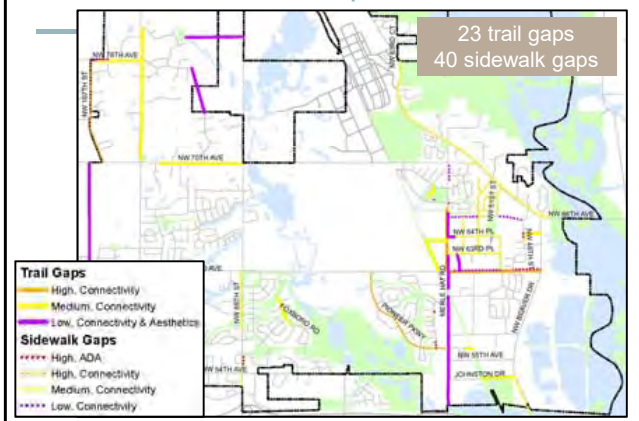
- 17 “likes”
- Comments:
 - dangerous
 - no clear crossing
 - many accidents
 - poorly designed for bikes/peds
- 1 bike crash reported
 - possible injury



SNYDER ASSOCIATES

22

Trail and Sidewalk Gaps – Urgency & Justification



Merle Hay Corridor

- 40+ “likes”
 - Trail Gap
 - Favorite Route
- Comments:
 - Concern about safety (children’s safety)
- 3 bike crashes – fatal, major and minor injury
- 1 ped crash – possible injury
- Future Trail Planned



CITY OF JOHNSTON, IOWA

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RESOLUTION 16-92

A RESOLUTION OF THE CITY COUNCIL ADOPTING A COMPLETE STREETS POLICY

WHEREAS, The City of Johnston wishes to ensure that all users of our transportation system are able to travel safely and conveniently on all streets and roadways within the public right-of-way in Johnston; and,

WHEREAS, a street is defined as one which provides a safe, convenient, and continuous path of travel, for users of all ages and all abilities; and,

WHEREAS, streets better serve the needs of those who use transit by providing access to public transit; and,

WHEREAS, streets have public health benefits, such as encouraging physical activity and providing the opportunity for more people to bike and walk safely; and,

WHEREAS, complete streets improve access and safety for those who cannot or choose not to drive motor vehicles; and,

Safe Routes to School

Reduced School Area Speed Limits

ORDINANCE & POLICY RECOMMENDATIONS

Ordinance And Policy Review

Trail Definition	<ul style="list-style-type: none"> consistency
Trails	<ul style="list-style-type: none"> alcohol tobacco
Speed Regulation	<ul style="list-style-type: none"> school zones
Bicycle Regulations	<ul style="list-style-type: none"> bike lane vs. shared lane
Sidewalk Regulations	<ul style="list-style-type: none"> responsibility detours merchandise display fences bicycle parking
Zoning - General Regulations	
Zoning - Site Plan Requirements	<ul style="list-style-type: none"> path from sidewalk to door
Subdivision Regulations	<ul style="list-style-type: none"> criteria for waivers easements
Complete Street Policy	<ul style="list-style-type: none"> guidance document committee review
Sidewalk Trail vs. Sidewalk Installation	<ul style="list-style-type: none"> issues what to consider

26

Trails – Alcohol and Tobacco

48.03 ALCOHOLIC BEVERAGES PROHIBITED

Wine, beer, and any other alcoholic beverages or drinks shall not be brought, transported or otherwise carried upon or consumed upon any greenbelt, open space areas or recreation trails.

RECOMMENDATION

- Allow unopened alcohol along trail
- Prohibit tobacco usage

SHAUN STANLEY/Durango Herald file photo

Sidewalk Regulations - Detours

136.09 BARRICADES AND WARNING LIGHTS

...it shall be the duty of all persons...to put in conspicuous places at each end of such sidewalk and at each end of any pile of material deposited in the street, a sufficient number of approved warning lights or flares, and to keep them lighted during the entire night and to erect sufficient barricades both at night and in the daytime to secure the same.

RECOMMENDATION

When a sidewalk or trail is impeded due to construction activities, temporary accommodations should be developed.

Iowa SUDAS, Chapter 12 provides guidance.

28

Zoning – General Regulations

166.32 OPEN SPACE AND LANDSCAPING REQUIREMENTS

Street trees planted in the public street right-of-way shall not be counted toward fulfillment of the minimum site requirements set forth below.

RECOMMENDATION

Copy section 169.09 Merle Hay Road Corridor Overlay –

In addition, street trees shall be required on all streets and paced at 50-foot intervals. The species selected should provide a shade canopy over the public right-of-way and shall be 2 to 2 ½ inches caliper or greater in size at the time of planting.

Zoning - Site Plan Requirements

171.05 DESIGN STANDARDS

Shall have such pedestrian walkways as are necessary for safety and general the welfare

RECOMMENDATION

Requires pedestrian walkways that:

- Are separate from vehicular drive aisles
- Connect between adjacent sidewalks and trails to the front entrance(s)

Complete Streets Policy



Add National Association of City Transportation Officials (NACTO) Urban Bikeway Design Guide to the list of resources

Formalize a review process with staff

Creating a new volunteer board or commission to review traffic safety and active transportation issues (or expand duties of a current board)

3

Sidepath Trail vs. Sidewalk



32

What is a Sidepath Trail?

Sidepaths Trails are bidirectional shared use paths that run adjacent to the roadway, often along busy roads deemed inhospitable for biking.



Source: AASHTO (2012)

When Could a Sidepath Trail be Used?

Along high-speed/volume roads

Along roads with very few roadway/driveway crossings

For short distances to connect sections of a path in independent rights-of-way

Where their termination points sit at streets that are accommodating to bicyclists or other connecting paths

Visibility Concerns

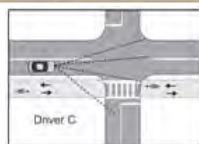
Right Turns onto Roadway



Left Turns off Roadway



Right Turn off Roadway

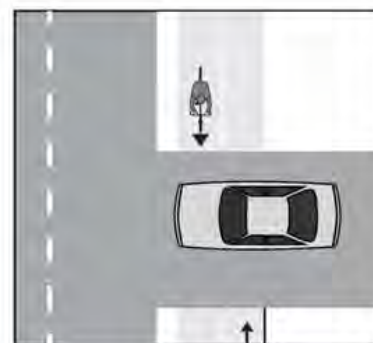


Source: AASHTO (2012)

Vehicular Conflicts

Bicyclists cross faster than pedestrians

Attempts to get cyclists to stop are difficult and ineffective



Stopped motor vehicles on side streets or driveways may block the path.

Source: AASHTO (2012)

Where Should Cyclists Ride?

- Ups and downs of ramps
- Conflict with pedestrians
- Conflict with slower cyclists



Some bicyclists may find the road cleaner, safer, and more convenient. Motorists may believe bicyclists should use a sidepath.

Source: AASHTO (2012)

When Considering a Sidepath...

Traffic volumes & speed	<ul style="list-style-type: none"> If high, facilities separated from the road are preferred Buffer between road and sidepath
Number/frequency of intersections & driveways	<ul style="list-style-type: none"> If high, move cyclists to street or other path Slow cyclists at intersections & notify drivers
Ability to accommodate bicyclists on the roadway	<ul style="list-style-type: none"> Shared lanes, bike lanes, separated lanes, etc. Number of travel lanes
Ability for cyclists to use alternative route/parallel streets	<ul style="list-style-type: none"> Consider bicycle facilities on parallel route
Number of pedestrians or bicyclists	<ul style="list-style-type: none"> If high, move cyclists to bike-only facility
Anticipated types of cyclists	<ul style="list-style-type: none"> Strong & Fearless, Enthusied & Confident, Interested but Concerned
Location of destinations	<ul style="list-style-type: none"> Consider need to cross the street

SNYDER & ASSOCIATES

Example: Highway Sidepath Trail



- Limited driveway/roadway crossings
- Wide separation from roadway
- Only a two-lane roadway

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Example: Sidepath and Bike Lane



- Space provided for both walkers and cyclists
- Ability for children/less experienced riders to use the sidepath trail while more experienced cyclists have access to the bike lane

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Upcoming Meetings

<p>July - August Boards and Committees</p> <ul style="list-style-type: none"> Park Board/Tree Board (7/17) Planning and Zoning Commission (7/31) School Board (8/6) Trails Subcommittee (8/7) Senior Citizens Advisory Board (TBD) 	<p>Steering Committee Meeting tentatively between Sept 17-18; or 24, 26-28</p> <ul style="list-style-type: none"> Network / improvement areas Priorities Funding & implementation
-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------	----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------

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42

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QUESTIONS?

[f](#) [in](#) [t](#) [G+](#)

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JOHNSTON WALKABILITY STUDY

City Council
November 5, 2018

Johnston
THRIVE. EVERY DAY.

Agenda

- SCOPE OF WORK & WALKABILITY
- EXISTING CONDITIONS
- MAP.SOCIAL RESULTS
- ADDRESSING THE FINDINGS
- INFRASTRUCTURE & COSTS
- ORDINANCE AND POLICY RECOMMENDATIONS


Scope of Work

Meetings & Engagement	<ul style="list-style-type: none"> Steering Committee Meetings (x3) Board/Commission/Events (x6) Map Social online engagement
Network Analysis	<ul style="list-style-type: none"> Existing Conditions School Walk Zones Safety Data Proposed Network
Policy Review & Best Practices	<ul style="list-style-type: none"> Traffic Calming Traffic Engineering Subdivision & Commercial Site Plan Ordinances Complete Streets Sidewalk Program
Implementation Plan	<ul style="list-style-type: none"> Prioritization Plan Order of Magnitude Cost Opinions Grant Funding Opportunities

Walkability and Scope

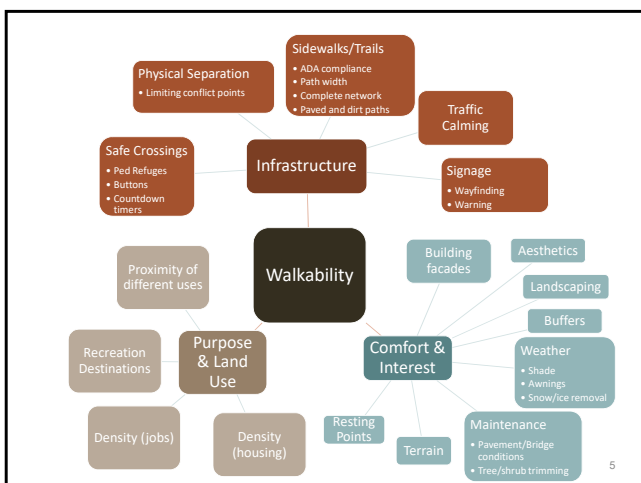

What makes a community walkable?

What can we improve through this project?

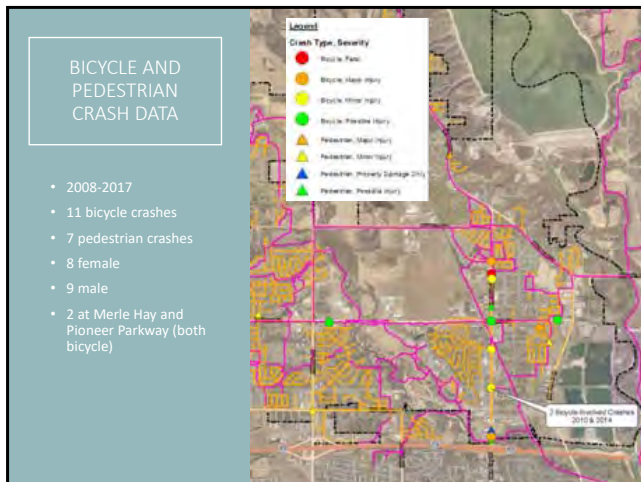
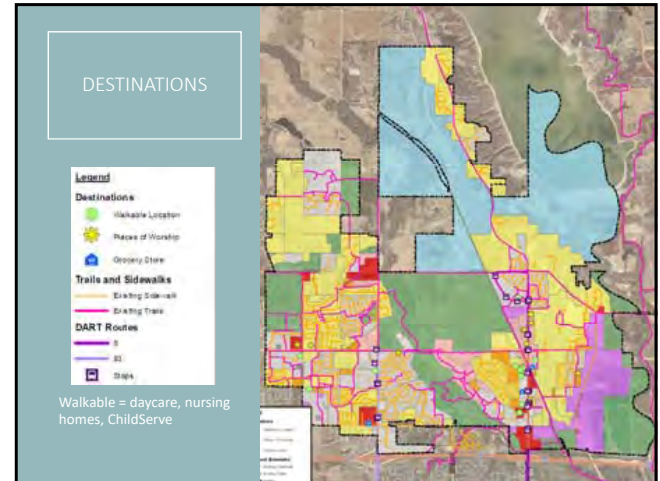
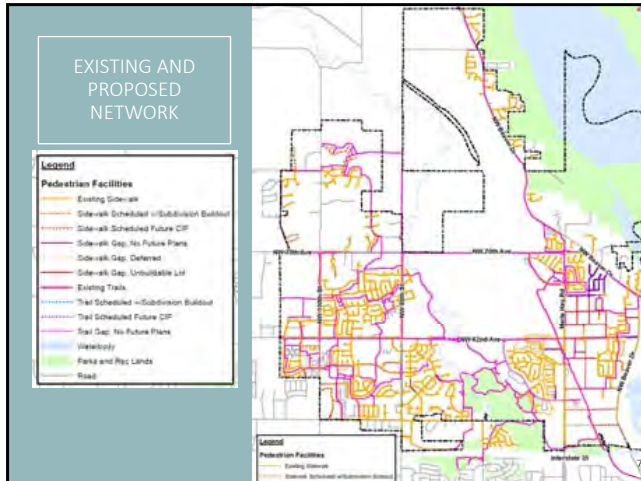


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4

EXISTING CONDITIONS



Map.Social Outreach Summary

- Open May 11 – June 18
- 500 business cards
- Committee members
- Community email newsletters
- Johnston Living magazine
- Johnston Register
- Business Record
- Social Media
 - Facebook – 838 views; 5 shares; 3 comments; 16 reactions
 - Twitter – 5 retweets; 6 likes
 - YouTube – 37 views
- Events
 - Mayor's Ride
 - Coffee with a Cop
 - Farmer's Market
 - Green Days

Johnston seeks comments in walkability study

By Elizabeth DeGroot Staff

Times Free Press

Johnston has hired Sholder Associates to study how to make it easier for walkers and bicyclists to get around town. The City of Johnston wants an ongoing map where you can mark down barriers, view recommendations about what changes should be made, and share your ideas during the summer. This deadline for comments is June 18.

Walkability study starts in Johnston

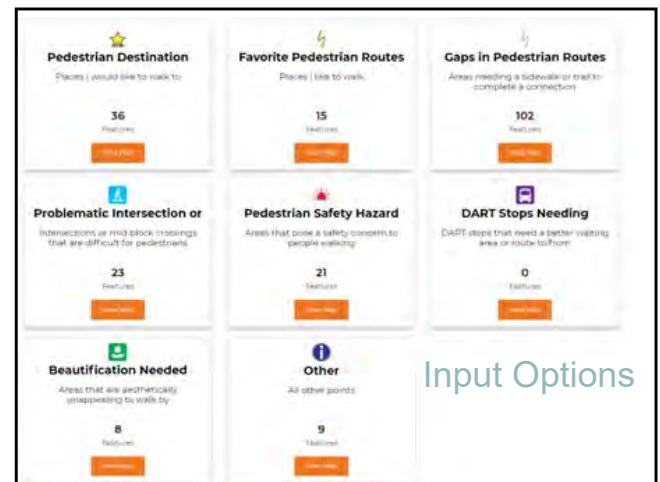
Special to the Register

The City of Johnston is conducting community-wide study to see how walkable the city really is.

The walkability study looks to address the overall connectivity of the sidewalk and trail network between neighborhoods, schools, parks and business destinations to see how accessible it is for walkers and bicyclists.

The city is working with Sholder & Associates to complete the study.

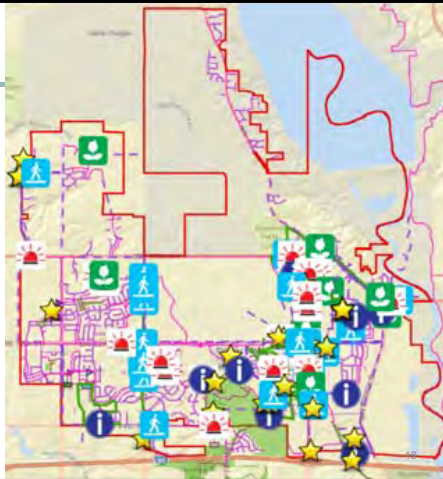
11



Results

51 + 16 (admin) =
67 contributors

214 features



GAPS IN ROUTES

102 FEATURES

Merle Hay Rd-west side

• x6 + 14 likes

NW Beaver Dr

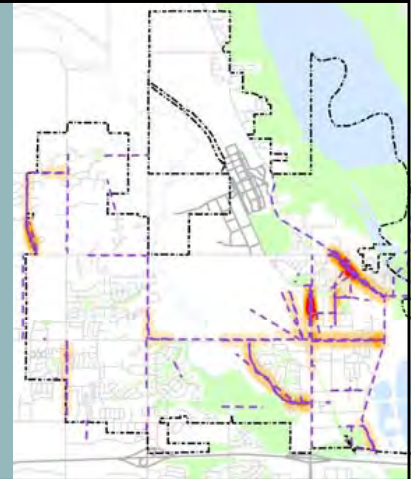
• x6 + 7 likes

Pioneer Pkwy

• x4 + 15 likes

NW 107th St

• x5 + 7 likes



PEDESTRIAN SAFETY HAZARD

21 FEATURES

- Lack of Sidewalks**
 - West Merle Hay Road – 21 likes
- Pavement/Bridge Maintenance**
 - x7 + 7 likes
- Crossings**
 - x5 + 11 likes
- Behavior**
 - mopeds; alertness; pick up after pet - 3 likes
- Speed limit**
 - 3 likes



ADA Compliance

Miss Wheelchair Iowa: Accessibility Map

Please take into consideration the importance of sidewalks, and their quality, to people in your community with disabilities. Without properly maintained sidewalks and curb cutouts access is limited for these individuals.

by LAURA HARTER

CREATED 2018-05-18
MODIFIED 2018-05-18

0
Features

ChildServe Accessibility

As an employee of ChildServe, it is important that the children, specifically ones in wheelchairs, are able to access parks, stores, and neighborhoods in the Johnston area.

by KELLYRIFFLE

CREATED 2018-05-29
MODIFIED 2018-05-29

0
Features



16



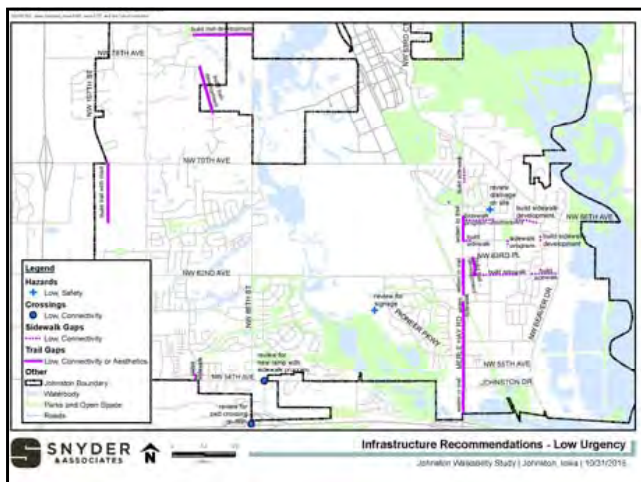
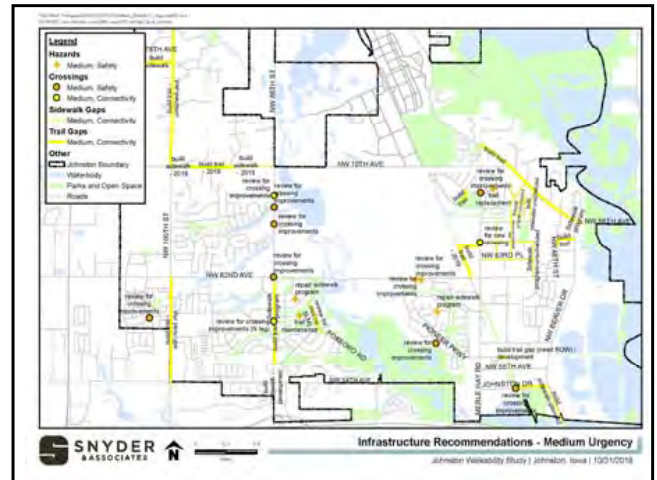
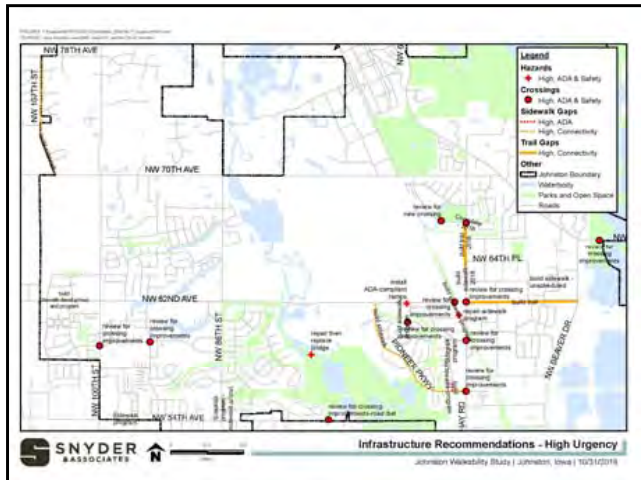
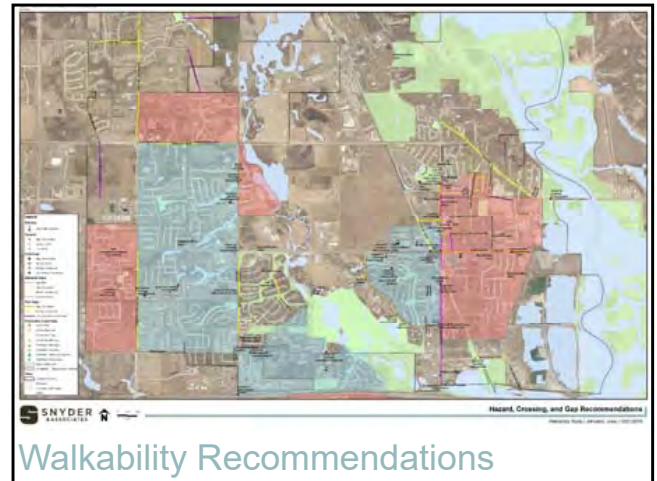
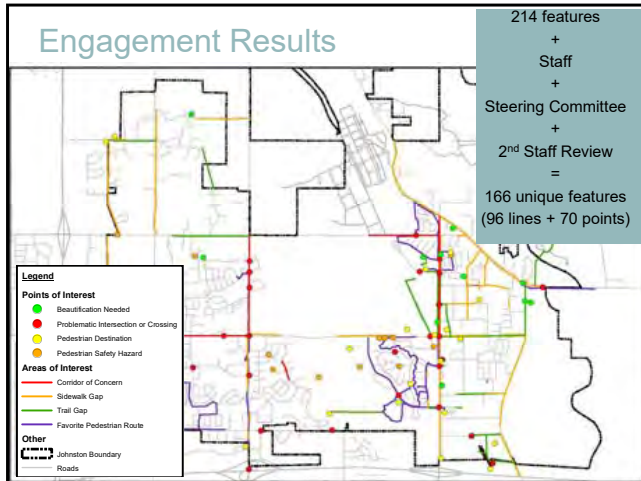
ADDRESSING THE FINDINGS

Organizing the Data

- General vs. Specific
- Enforcement Issues
- Education Issues
- Policy Related
- Maintenance Issues
- Capital Improvements



18



Trail and Sidewalk Costs

Trail Type	Heuristic Cost per Mile	Elements	Modification Factor	Resulting Cost per Mile
Paved Trail - 10' wide (independent alignment)	\$450,000	Former RR Grade	0.5	\$225,000
		Flat terrain	0.7	\$315,000
		Rolling terrain	1	\$450,000
		Hilly terrain	1.5	\$675,000
		Along streambank	1.8	\$810,000
Paved Sidepath - 10' wide	\$325,000	Along urban roadway	1	\$325,000
		Along rural roadway	1.6	\$520,000
Sidewalk	Heuristic Cost per Foot			
Paved Sidewalk - 5' wide	\$20			

25

Roadway Configuration	Speed Limit																	
	≤30 mph			35 mph			≥40 mph			≤30 mph			35 mph			≥40 mph		
	Vehicle AADT <9,000						Vehicle AADT 9,000–15,000						Vehicle AADT >15,000					
2 lanes*	1	2	3	4	1	2	1	2	3	4	1	2	3	4	1	2	3	4
3 lanes with raised median*	5	6	7	8	5	6	5	6	7	8	5	6	7	8	5	6	7	8
3 lanes with raised median*	1	2	3	4	1	2	1	2	3	4	1	2	3	4	1	2	3	4
3 lanes with raised median*	5	6	7	8	5	6	5	6	7	8	5	6	7	8	5	6	7	8
4+ lanes with raised median*	1	2	3	4	1	2	1	2	3	4	1	2	3	4	1	2	3	4
4+ lanes with raised median*	5	6	7	8	5	6	5	6	7	8	5	6	7	8	5	6	7	8
4+ lanes with raised median*	1	2	3	4	1	2	1	2	3	4	1	2	3	4	1	2	3	4
4+ lanes with raised median*	5	6	7	8	5	6	5	6	7	8	5	6	7	8	5	6	7	8

*One lane in each direction. **One lane in each direction with two-way left-turn lanes. ***Two or more lanes in each direction.

Given the set of conditions in a cell,

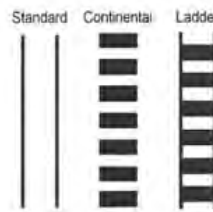
- 1 Signifies that the countermeasure should always be considered, but not mandated or required, based upon engineering judgment of a marked uncontrolled crossing location.
- 2 Signifies that the countermeasure is a candidate treatment at a marked uncontrolled crossing location.

The absence of a number signifies that the countermeasure is generally not an appropriate treatment, but exceptions may be considered following engineering judgment.

- High-visibility crosswalk markings, parking restriction on crosswalk approach, adequate nighttime lighting levels
- Raised crosswalk
- Advance Yield Here To (Stop Here For) Pedestrians sign and yield (stop) line
- In-Street Pedestrian Crossing sign
- Curb extension
- Pedestrian refuge island
- Pedestrian Hybrid Beacon
- Road Diet

This table was developed using information from: Ziegler, C. V., Stewart, J. R., Huang, H. H., Lagergren, P. A., Fitzgerald, J., & Campbell, E. J. (2003). Safety effects of marked versus unmarked crosswalks at uncontrolled locations: Final report and recommended guidelines (No. FHWA/HRT-04-103). Manual on Uniform Traffic Control Devices, 2009 Edition, Chapter 8B, Pedestrian Hybrid Beacons, The Crash Modification Factors (CMF) Clearinghouse website (<http://www.embarcadero.org>), and the Pedestrian Safety Guide and Countermeasure Selection System (PSSG42) website (<http://www.pedinfo.org/PSSG42/>).

Enhanced Visibility Crosswalks



Est Construction Cost:
\$100 - \$2,000 per crosswalk - standard
\$750 - \$1,500 per crosswalk - continental

Est. Construction Cost: \$1,000 - \$1,750
crosswalk warning signage

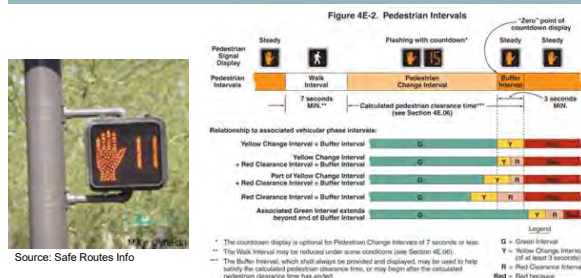
Lifecycle: 1 - 3 years

Lifecycle: 5 - 10 years



28

Pedestrian Countdown Timers



Source: Safe Routes Info

Est Construction Cost: \$1,500 - \$2,000 / signal

Lifecycle: 15 - 20 years



29

Rectangular Rapid Flashing Beacon (RRFB)



Texas

Source: Texas A&M Transportation Institute

Est Construction Cost: \$10,000 - \$20,000 / pair

Lifecycle: 5 - 10 years



Fort Dodge

30

HAWK Signals



Ankeny - High Trestle Trail

Est Construction Cost: \$90,000 - \$175,000
Lifecycle: 15 - 20 years



31

Raised Crosswalk

Midblock - Des Moines



Driveway - Minneapolis



Intersection - New York City



Est Construction Cost: \$10,000 - \$25,000

Lifecycle: 20 years



Source: New York City Streetsblog

32

Raised Intersection

Cambridge, MA



Source: NACTO

New Jersey



Source: New Jersey Bike Ped

Est Construction Cost: \$50,000 - \$100,000

Lifecycle: 20 years



33

Pedestrian Refuge Island



Est Construction Cost: \$5,000 - \$40,000

Lifecycle: 20 years



34

Curb Extensions

Mid Block - Johnston



Intersection



SOURCE: NACTO.ORG

Est Construction Cost: \$5,000 - \$20,000

Lifecycle: 20 years



35

Due Date	Program	Project Types	Max Award	Match Required
January 15 (quarterly thru year)	Community Attraction and Tourism (CAT)	trails, tourism	10-20% of the final cost, not to exceed \$1 Million	At least 65% of funds must be secured, grant is last dollar in
February	Prairie Meadows Community Betterment / Legacy Grants	trails, economic development	\$99,999 / \$1M	None / 75%
April and October	PeopleforBikes Community Grant	trails, bicycle infrastructure	\$10,000	50%
May	Wellmark MATCH Grant	safe, healthy, and active community improvements	\$75,000	100%
May 1	Iowa Great Places	trails, quality of life improvements	\$400,000 (\$185,000 average)	100%
May 16	AARP Community Challenge	transportation and mobility options; permanent and temporary improvements for connectivity, walkability, bikeability, and access to transit	several thousand for larger projects	none
July 1	State Recreational Trails	trails	None specified (highest award was \$780,000)	25%
August 15	Resource Enhancement and Protection (REAP) City Parks & Open Spaces	trails, restrooms, parkways	\$125,000 (for cities with populations between 10,001 and 25,000)	none
August 15	Traffic Safety Improvement Program (TSIP)	traffic safety improvements	\$500,000	none
October 1	Federal Recreational Trails	trails	\$5,000 min - no limit (highest = \$490,000)	20%
October 1	Iowa Clean Air Attainment Program (ICAAP)	highway/street, transit, bicycle/pedestrian	None specified (minimum request \$20,000 per project)	20%
November 2	America Walks Community Change Grants	projects creating healthy, active, and engaged places to live, work, and play	\$1,500	none
December 1	Statewide STP TAP	trails, pedestrian, bicycle improvements, safe routes to schools, access to transit	None specified	20%
December 7	DMAMPO TAP	trails, pedestrian, bicycle improvements, safe routes to schools, access to transit	None specified	20%
December 7	Surface Transportation Block Grant Program (STBG)	federal-aid routes, bridges, public roads, pedestrian and bicycle infrastructure, transit capital improvements	None specified	20%

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Traffic Safety Facts
2015 Data

NHTSA Pedestrians

Safe Routes to School
Briefing Sheets

Reduced School Area Speed Limits

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streets have public health benefits, such as encouraging physical activity providing the opportunity for more people to bike and walk safely; and;

WHEREAS, complete streets improve access and safety for those who cannot or choose not to drive motor vehicles, and;

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Trail Definition	• consistency
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Bicycle Regulations	• bike lane vs. shared lane
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Subdivision Regulations	• criteria for waivers • easements
Complete Street Policy	• guidance document • committee review
Sidewalk Trail vs. Sidewalk Installation	• issues • what to consider
Future Mobility Trends	• infrastructure needs • regulations of operation

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Zoning – General Regulations

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RECOMMENDATION

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Zoning - Site Plan Requirements

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Shall have such pedestrian walkways as are necessary for safety and general the welfare

RECOMMENDATION

Requires pedestrian walkways that:

- Are separate from vehicular drive aisles
- Connect between adjacent sidewalks and trails to the front entrance(s)



Sidewalk Trail vs. Sidewalk



Sidewalks Trails are bidirectional shared use paths that run adjacent to the roadway, often along busy roads deemed inhospitable for biking.



Challenges with Sidewalk Trails

Encourage wrong-way riding on streets where the path begins/ends

Additional road crossings may be required

Signage and signals are not oriented toward contra-flow cyclists

Left turns are difficult for cyclists

May require barriers if close enough to the roadway

Path width often constrained by existing objects

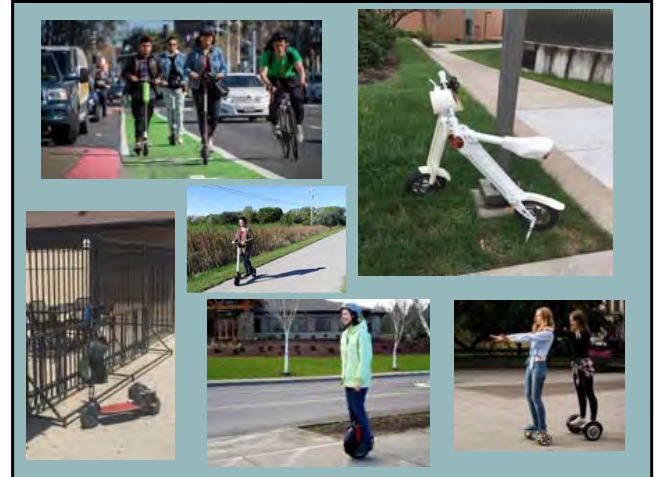
Bicyclists are not within normal visual scanning area of turning vehicles



Source: AASHTO (2012)

When Considering a Sidepath...

Traffic volumes & speed	<ul style="list-style-type: none"> If high, facilities separated from the road are preferred Buffer between road and sidepath
Number/frequency of intersections & driveways	<ul style="list-style-type: none"> If high, move cyclists to street or other path Slow cyclists at intersections & notify drivers
Ability to accommodate bicyclists on the roadway	<ul style="list-style-type: none"> Shared lanes, bike lanes, separated lanes, etc. Number of travel lanes
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Anticipated types of cyclists	<ul style="list-style-type: none"> Strong & Fearless, Enthusied & Confident, Interested but Concerned
Location of destinations	<ul style="list-style-type: none"> Consider need to cross the street



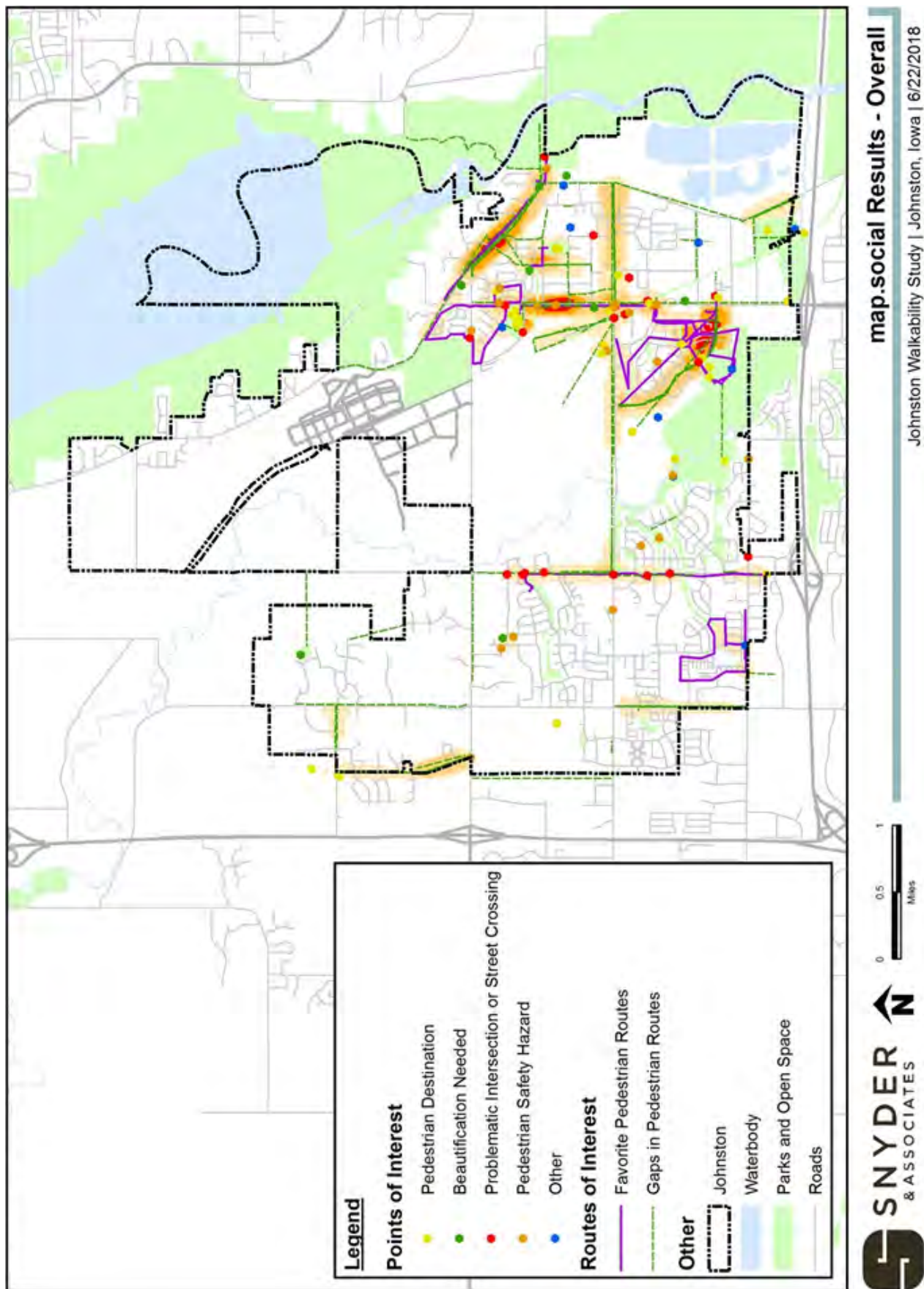
Maintenance Guidelines

- Trail Inspections
- Plowing/Sweeping/Blowing
- Pavement Markings
- Riding/walking surface
- Gutter to Pavement Transitions
- Drainage Grates and Culverts
- Drainage
- Pavement Overlays
- Signage
- Landscaping



QUESTIONS?

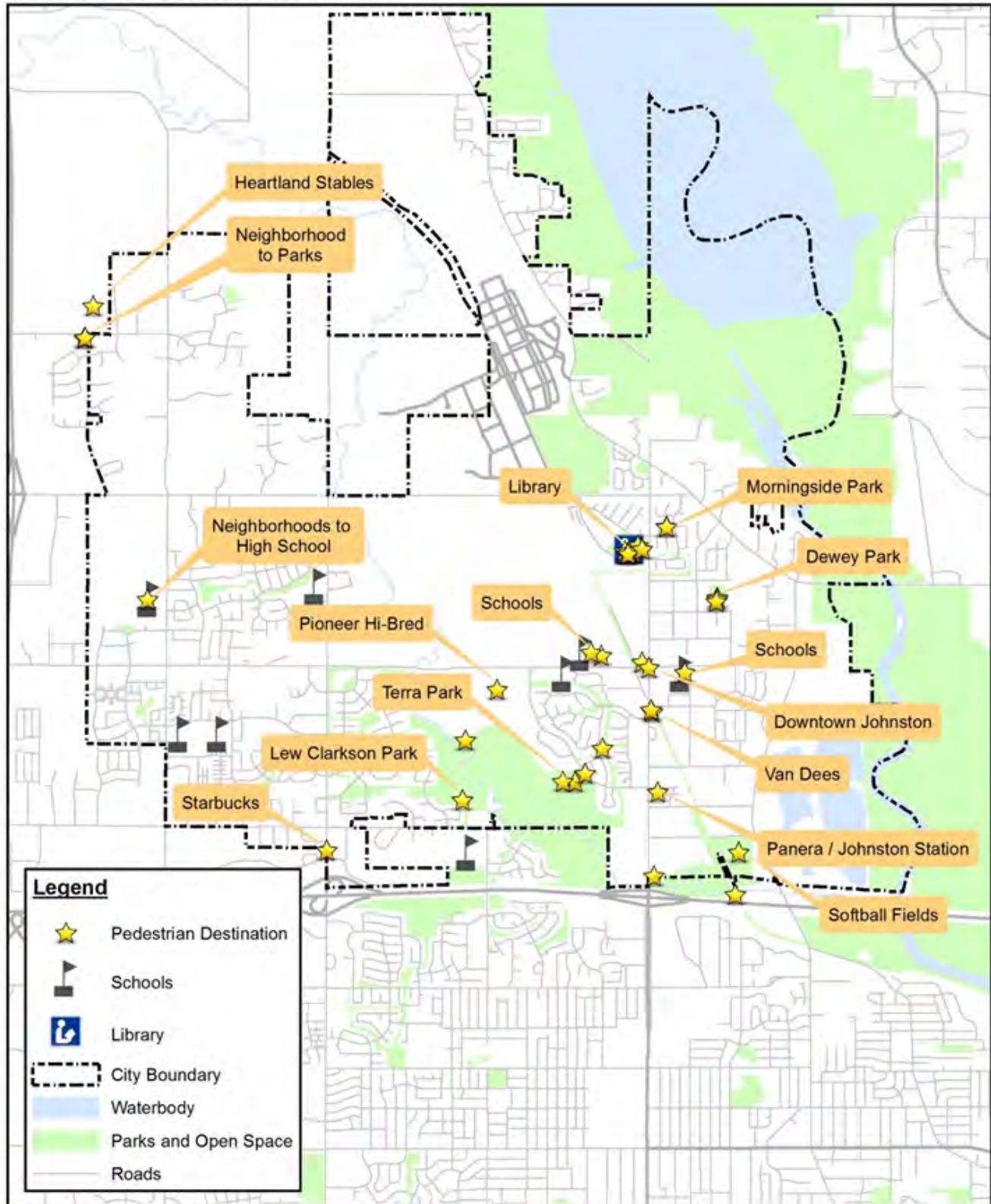




PEDESTRIAN DESTINATIONS

To first assess the network, we need a clear understanding of what types of destinations people are trying to reach. This also helps us understand if most walking is done for transportation or recreational purposes. The map.social results shows that most people were walking to parks (e.g. Terra, Dewy, Morningside, Lew Clarkson, Green Meadows) and many were walking to the library. Schools were also a popular destinations as were Van Dees Ice Cream, Starbucks, and Panera Bread.

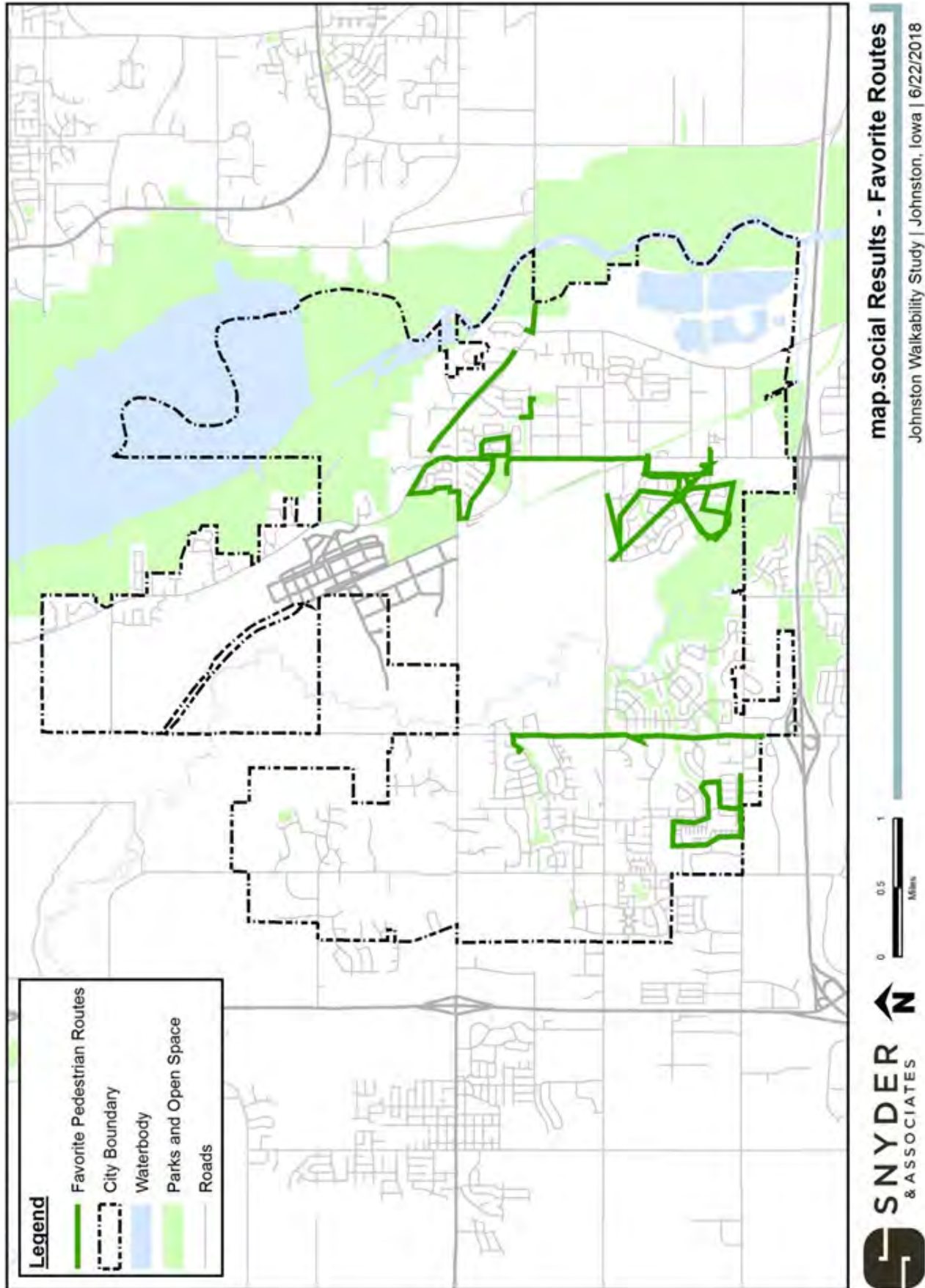
Destination	# of Mentions	# of Up Votes	# of Down Votes
Panera Bread / Johnston Station shops	1	5	1
Van Dees Ice Cream	2	5	1
Dewey Park	3	7	1
Park in Green Meadows	1	3	1
Schools	4	3	–
Public Library	7	15	1
Morningside Park	2	3	–
Walgreens	1	4	–
Downtown	1	3	–
Terra Park	3	24	–
Softball Fields	1	–	–
Bridge over Beaver Creek	1	1	–
Lew Clarkson Park	1	1	–
Starbucks	1	8	–
Parks near NW 107 th & NW 78 th	2	4	1
Heartland Stables	1	0	1
Pioneer Hi-Bred International	1	1	0



FAVORITE PEDESTRIAN ROUTES

In addition to destinations, the routes that people currently enjoy walking indicate the characteristics that create a pleasant walking route, including a combination of purpose and comfort. Most of the favorite routes are short, local routes. The reasons for walking varied – some were purely recreational, while others had a clear destination in mind. A couple of respondents noted the connection to the Neal Smith Trail for regional connectivity.

Title	Comment	# of Up Votes	# of Down Votes
Neighborhood	Neighborhood route	–	1
Pioneer Parkway	needs bike lanes and sidewalks now!	5	–
common route	wife and toddler do this weekly+ sadly most of it is on the road	1	–
winding, tree-shaded sidewalk	This is a great example of a good ped route, the sidewalk is set back from the street and it is well shaded with good tree cover. It is also fun since it winds through the trees, a real hidden gem	1	–
Home to Library	Bike/walk to Johnston Public Library	1	–
East side Beaver	Crucial to hooking up with Neil Smith and rest of Johnston	1	–
Bent Tree Loop	Sidewalk on Ridgeview dr to trail. Loop up to Horizon school and then return via NW 96th, NW 54th, NW 93rd to Bent Tree Villas' N. Entrance.	–	–
Eagle Ridge Development to Neal Smith Trail	We love the access over the Kempton Bridge for bikes now.	–	–
Terra Lake walk	Home to Terra Lake Park and back	–	–
Home to Panera Bread	Panera walk	–	–
Walking	Neighborhood Route	–	–
Wallace, Walgreens etc.	Walking	–	–
Van Dees Route	Ice Cream	–	–
Terra Park	Park	–	–
Starbucks walk	3-4 Times a week walk to Starbucks and back	–	–



GAPS IN PEDESTRIAN ROUTES

This topic had the most comments by far, with 102 individual lines added to the map.social platform. As such, the map does not have each comment listed on it, but a heat map has been added to identify areas of significance regarding pedestrian gaps.

The most common areas were the west side of Merely Hay Road (6 mentions, 14 likes), Pioneer Parkway (4 mentions, 15 likes), NW Beaver Drive (6 mentions, 7 likes), and NW 107th Street (5 mentions, 7 likes).

Title	Comment	# of Up Votes	# of Down Votes
Lack of Trail/Sidewalk	No trail along Pioneer Parkway	6	—
Pioneer Parkway	Sidewalk/Trail badly needed along Pioneer Pkway...very dangerous route!!	4	—
Anne's Trail Gap	Make a trail connection between Merle Hay and Beaver	5	—
Merle Hay Gap	Merle Hay Gap	5	—
trail gap	Lack of sidewalk on the west side of Merle Hay requires walking/running/biking on grass, snow, mud, or busy street	4	—
West Merle Hay Road	Sidewalks West Merle Hay	4	—
sidewalk gap 3	Anyone coming from Green Meadows development has to cross busy road or run/bike along road to get to Terra Park. Very Awkward and dangerous.	4	—
Trail System Access	Access to trail system without crossing Merle Hay Rd	4	—
Amy's Sidewalk Gap 2	Sidewalks needed from Crosshaven to JHS	3	—
Sidewalk/Bike Path needed	Sidewalk/Bike Path needed to connect 54th St to the bike path on 62nd. Also, 100th St towards Urbandale is a natural connector to the Inter-Urban and Walnut Creek bike trails. As the area construction completes, expect increased bicycle and pedestrian traffic.	3	—
No sidewalk	Busiest Street with out a sidewalk	3	—

Title	Comment	# of Up Votes	# of Down Votes
107th Street	Missing side walk	3	–
missing sidewalk	Sidewalk is incomplete (west side) or nonexistent (east side) of 86th	3	–
Missing bike path here	Need a sidewalk or bike path on Beaver please :) it would be nice to bike to lower beaver or to NW 70th paths.	3	–
Bike path here please!	It would be awesome to link up to the Neal Smith trails and soccer complex from Beaver. Thanks!	3	–
missing sidewalk north of horizon	include good setback from road 10ft+ where possible and include trees	2	–
random 10ft of missing sidewalk	this section is missing	2	–
Needs Sidewalk	Add a sidewalk along NW 107th St. to connect neighborhood to NW 70th Ave. It's dangerous to walk in the street.	2	–
no trail or sidewalk	can't safely come into Johnston over the bridge	2	–
trail dead ends	needs to connect	2	–
sidewalk gap 3	Coming from Merle Hay road to Terre Pkg no sidewalk or direct route to connect with Terre Park trailhead	2	–
No sidewalk near Lawson Elementary	How on earth is there no sidewalk next to an elementary school? This is absurd.	2	–
Amy's Sidewalk Gap 3	A direct sidewalk route on 107th Street from 70th Ave to 82nd St.	2	–
NW beaver drive sidewalks	No sidewalks to Dewey park or a associated bike or walking paths. Trail will be completed in a few years, but still no sidewalks for east of Merle Hay older neighborhoods and our taxes are the same as all of Johnston.	2	–
No sidewalks	No sidewalks	2	–
Beaver Drive Trail Extension	South/East of 70th St	2	–
NW 78 th Gap in Sidewalk 2	No sidewalk on either side of inclined road, ditch on one side of road forces people to walk/bike on street	2	–

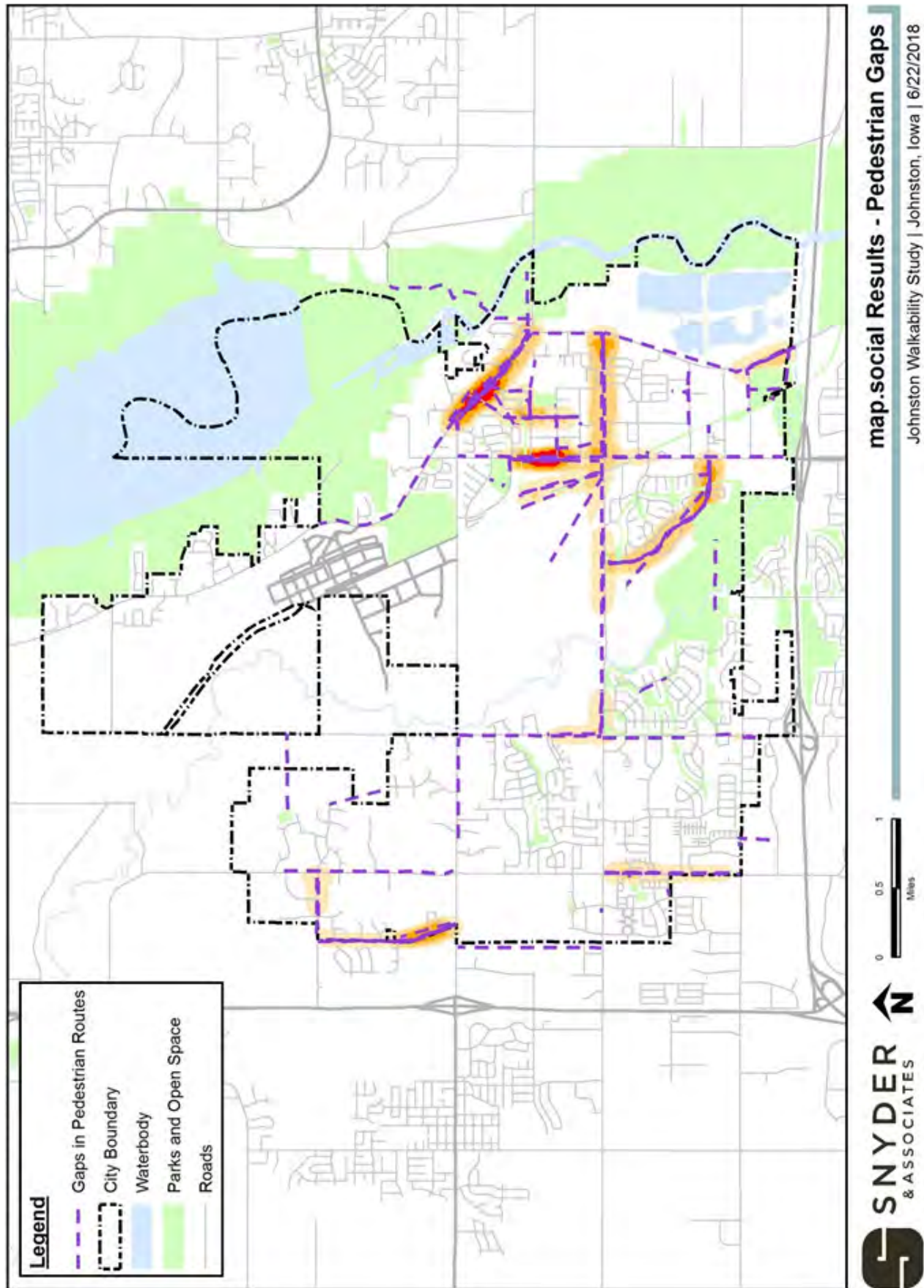
Title	Comment	# of Up Votes	# of Down Votes
NW 78th	Missing sidewalk	2	—
NW 78 th Gap in Side-walk	No Sidewalk on either side of rode	1	—
Sidewalk gap	A sidewalk is needed along 78th Ave to connect between Chesterfield Heights and the Crosshaven Development	1	—
gap in pedestrian route between trail/ park	have to walk 1 block of 54th ct (which needs policing on speed control, especially due to abundance of road parking just north of 64th. and then you have to walk another block east before being able to get to a sidewalk, again where there is an abundance of road side parking which means you are walking with your child in the middle of the road.	1	—
Add sidewalk	Sidewalk connection needed	1	—
missing sidewalk	Keep a good setback from the road and include trees with most on the south side	1	—
missing sidewalk	where possible, set back from road, 10+ feet or more, add trees	1	—
dead end trail from park	extend to future sidewalk on 100th north of horizon	1	—
JMS to Library	It would be really nice to connect Wallace/JMS to the library with a safer and more pleasant route.	1	—
Add Sidewalk	Connect neighborhood and allow safer access to trail that leads to park.	1	—
library access	sidewalk/bike trail needed to reach library	1	—
Missing sidewalk west side of 86th street	Sidewalknis missing on the west side of 86th street north of NW 53rd Place	1	—
Need sidewalk con- nection to NW Beaver	Need a connection from Northglenn Way to future NW Beaver trail. Currently the only connection is to walk west to intersec- tion with Merle Hay Road	1	—
Need Sidewalk on North Side	Sidewalk is Needed on the North Side of this Road to Prevent Unnecessary road crossings.	1	—
Sidewalk Needed	Sidewalk Needed on West Side of Road	1	—

Title	Comment	# of Up Votes	# of Down Votes
Sidewalk Needed on North Side of Road	Sidewalk Needed on North Side of Road	1	1
sidewalk gap	Lacking continuity along 70th between 86 th and 100th street. Maybe this will improve with road repairs but 70th must be crossed several times to keep on pavement. Many people run, walk and bike along this area. This am I saw four people the short time I was ran by the area.	1	–
Access from Merle Hay to city bike path	Merle Hay/Johnston Station route	1	–
Merle Hay to Johnston Library	No continuous sidewalk along Merle Hay to Johnston Library, very dangerous!!	1	–
Deb's sidewalk gap	no safe bike/ped connection to get to library	1	–
Amy's Sidewalk Gap	Need to connect Horizon to JHS	1	–
Sidewalk / Bike path needed	Some type of cyclist/pedestrian path is needed on NW Beaver between 70th and the bike trail on 66th towards Sycamore. There is an excellent path along 70th, but no protected path to connect to the Sycamore area...which then allows cyclists and pedestrians access to the broader network of trails	1	–
No Crosswalk	No crosswalk on southern side of road	1	–
No Trail	Trail has been “planned” for the 10 years i have lived here	1	–
No sidewalks	No sidewalks	1	–
Biking in street required	Trail dumps into street on Foxboro and cyclists must ride in street for several blocks to reconnect to trail. Sidewalk is quite narrow. Drivers very unfriendly and give very narrow width for cyclists. Several experiences with this area last summer!	1	–
86th Street	Needs connection to 86th	1	–
Green Meadows to Lew Clarkson	Softball	1	–
Green Meadows to Pioneer	Work	1	–
Missing Sidewalk	The Sidewalk runs directly into a wooden fence... No easy option to get to the street to continue to NW Beaver Dr.	1	1

Title	Comment	# of Up Votes	# of Down Votes
Dewey Park To Beaver Dr	Connect Dewey Park To Beaver Dr.	1	–
Route to Door - Library	need a pedestrian path across parking lot to front door	–	–
Sidewalk Gap	no sidewalk due to communications device. need a sidewalk to be ADA compliant	–	–
NW 107th	No sidewalk on NW 107th to connect to 70th ave	–	–
Needs to connect to Urbandale	incomplete unsafe area to travel	–	–
Incomplete unsafe area for pedestrians	really poorly laid out from a city perspective	–	–
Incomplete trails linking to each other	really poor planning from the city. Lots of cars and bikes travel on narrow sidewalk	–	–
How dumb is the city for not having sidewalks here	There is a school here with 0 sidewalks or bike path on a major connecting east west route.	–	–
A child died here.	This one is completely on poor planning with no connection from the library along a major north south intersection	–	–
this would greatly open up safety for access	likely private property, haven't looked at the assessors page. bad planning allowing that house to build on 66th there where a road/walkway would have been really nice to have to connect park to community to the north	–	–
Missing sidewalk	Difficult to get over to Green Meadows without this complete.	–	–
Neighborhood trail	Would be helpful to Horizon parents for walkers from this Johnston/Grimes neighborhood	–	–
Connection to Beaver Ave Bridge Trail	Connection to Beaver Ave Bridge	–	–
Connect Developments	Connection needs between developments	–	–
Connect Development trail to main trail	No safe route to travel between development trail and main bike trail	–	–

Title	Comment	# of Up Votes	# of Down Votes
Change Merle Hay/62nd Sidewalks to Bike Trail	Busy road esp with more school children walking to school, establishment of a bike trail on this corridor would promote safety	—	—
Extend Trail to Library	Extend trail to city hall and fire station with cross near library across Merle Hay	—	—
Connect Development Trail to Beaver Ave	Connect Development Trail to Beaver Ave	—	—
Pioneer Parkway to Trail	Connection to Pioneer Parkway, adds a safe connection for townhome and Pioneer Parkway residents to access main trail.	—	—
Connection to Beaver Ave from main trail	Connection to beaver Ave, would add safe bike route to softball fields	—	—
Softball Fields Loop	Loop around softball fields between Beaver Ave and Johnston Dr	—	—
Connection to Softball Fields	Extend trail to Softball fields	—	—
Beaver Ave Trail Extension	Continue Beaver Ave Trail southeast	—	—
Loop around Vandees and Cactus Bobs	Loop around food destinations	—	—
Connection to Dewey Park	Connection to Dewey Park Loop	—	—
Beaver to Dewey Park	Connection to Dewey Park from Beaver Ave	—	—
Beaver to Soccer Fields	Safe ravel to soccer fields	—	—
River Crossing	Add a bike bridge by soccer fields and connect to existing trail	—	—
Sidewalk needed	Gap in sidewalk on east side of street	—	—
sidewalk gap 2	62 nd between the fire station and the apartment complex on the the north side. Either have to cross the road or go around area through neighborhood with school buses and lots of traffic.	—	—

Title	Comment	# of Up Votes	# of Down Votes
Sue - sidewalk gap 3	Coming from Merle Hay road to Terra Pk no sidewalk or direct route to connect with Terra Park trailhead	–	–
sidewalk gap 4	Wish list would be some west connection between 62nd and 70th along 141 or at least west of high school.	–	2
Sidewalk gap 2	connection to Heartland Stables	–	–
No Sidewalk	There is no sidewalk to get out of the Eagle Ridge neighborhood. When my husband takes our children in a bike trailer, he has a very hard time getting to the sidewalk at Beaver and Eagle Ridge Dr to press the signal button.	–	–
Gaps in sidewalk on Greendale Rd	Greendale Rd/Pioneer Pkwy	–	–
Missing sidewalk	54th Street Sidewalk Gap	–	–
NW 54th Ct Sidewalk	NW 54th Ct Sidewalk	–	–
NW Beaver	Missing sidewalk	–	1
Valley Pkwy	Needs connection to north	–	–
Missing Sidewalk	The Sidewalk come to an end without any notice.	–	–
Johnston Commons Trail	Trail access from North Johnston Commons	–	–
Dewey Park Trail	Dewey Park Trail Connection	–	–
No sidewalk	No sidewalk on west side of 86th	–	–
No sidewalk	No sidewalk	–	–
Highland Summit	Our neighborhood (off NW 107th Street) is relatively new and small. It's not connected to any other sidewalks outside of the neighborhood. The pedestrian and bicycle mobility is virtually non-existent. We'd appreciate it very much if the connectivity and mobility for our neighborhood can be improved soon.	–	–



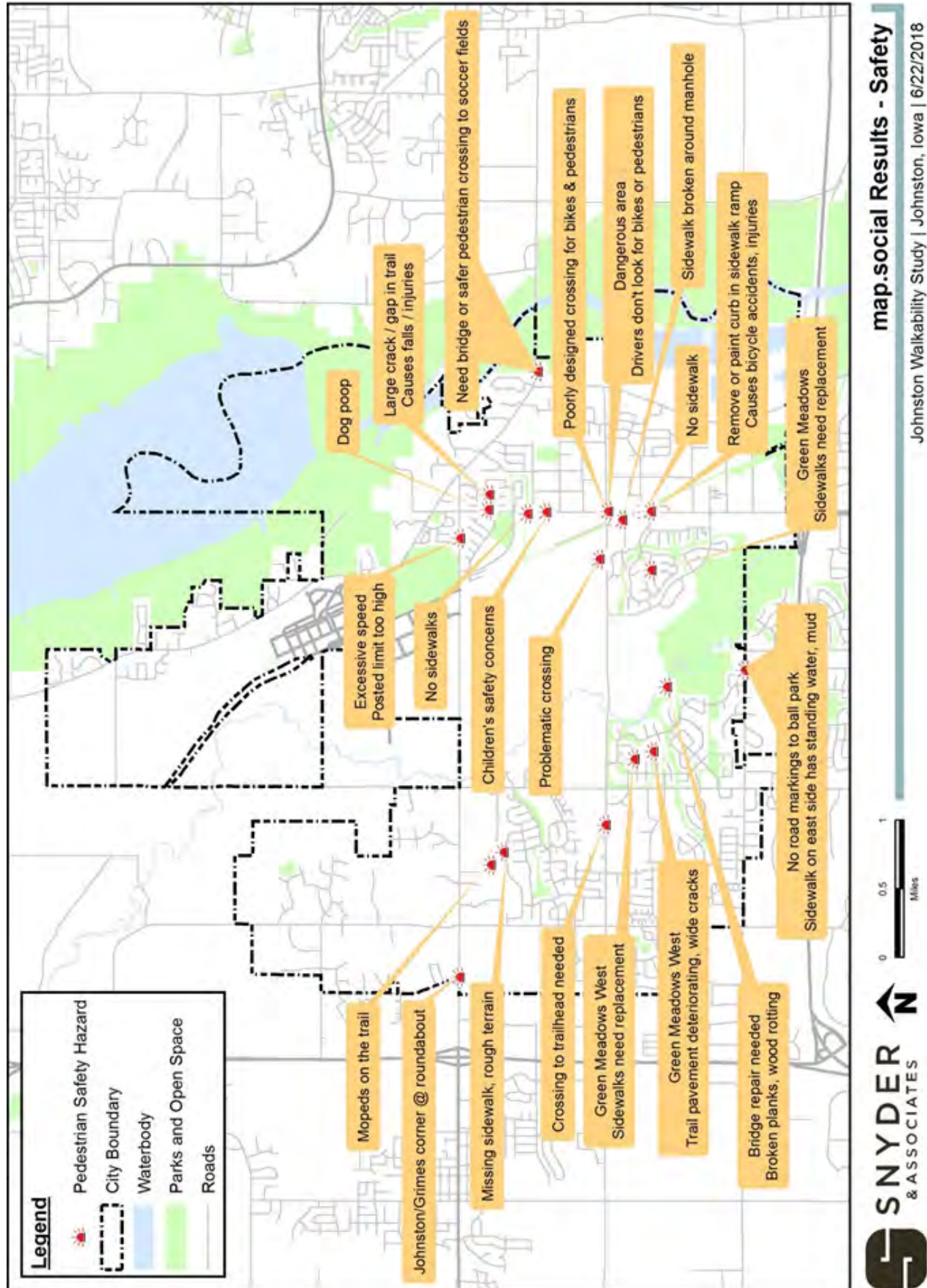
PEDESTRIAN SAFETY CONCERNS

The safety concerns addressed different types of issues and fell into a few categories:

- Infrastructure – Items related to presence of pedestrian facilities. For example, lack of sidewalks along the west side of Merle Hay Road was considered a safety hazard as well as a “gap” as noted in the prior map. Crosswalks were also a noted concern.
- Maintenance – Items related to condition of existing infrastructure. Comments were particularly related to pavement conditions and bridge maintenance.
- Behavior – Items related to behavior of individuals. This included a variety of behaviors, such as mopeds on the trail, motorist alertness at intersection, and responsibility for picking up after one’s pet.
- Policy – Items related to city policy or ordinance. For example, one comments noted a speed limit concern.

Title	Comment	# of Up Votes	# of Down Votes
Excessive Speed	This is a residential neighborhood. Speed Should be 35 until you get west to Camp Dodge Entrance.	3	2
No markings	No markings on the road going across road to ball park. The sidewalk on east side does not drain water. have to walk through the mud.	3	1
Grimes/Johnston corner	Round-about	0	1
West Merle Hay Road	No sidewalks	21	–
fixit	no sidewalk (Merle Hay Rd)	4	–
problematic crossing	62nd and Merle Hay poorly designed crossings for bikes and pedestrians	3	–
bridge maintenance	Very poor repair with broken planks and rotten wood. Very scary to run can not imagine getting a bike across.	3	–
Broken sidewalk	The sidewalk is broken around the manhole	3	–
Merle Hay/62nd: Improve driver alertness	I've witnessed many near accidents involving bikers and pedestrians. Drivers don't seem particularly alert or watchful. Many don't even turn their heads to look for oncoming traffic.	2	–
Crossing Needed	Those on the South Side of 62nd Do Not Have a Safe Crossing Point to Get into the Trail Head on the North Side of the Road.	2	–

Title	Comment	# of Up Votes	# of Down Votes
Soccer Fields	Wondering why a bridge wasn't created when Beaver Ave/ Kempton Bridge was re-constructed to allow for pedestrians to cross the soccer fields. Instead we have police officers directing traffic every weekend.	2	—
Missing Sidewalk w rough terrain	I have fallen here, my son has fallen off his bike here. This section could cause a serious injury. The ground is uneven, and if you do not know the sidewalk has a random section missing, it's hard to see.	1	—
Mopeds on the Trail	I often see you people driving mopeds on the bike trails. This section is especially bad.	1	—
problematic crossing	by feed store and sr. housing, no clear crossings, People walking to Walgreens, etc.	1	—
Green Meadows	neighborhood sidewalks needing replacement	—	—
Green Meadows West	neighborhood sidewalks needing replacement	—	—
Merle Hay - children's safety	concern about children's safety along Merle Hay	—	—
Curb in sidewalk ramp	It's a split walk with a divider curb about 2 feet long in between the entrance. I've witnessed 2 accidents there, where they thought the whole entrance was open. I had to call an ambulance for the one guy. Bikers come across the street & hit that divider head on. It needs to be removed or painted yellow	—	—
GreenMeadowsWest_pavement	There is a bike trail that runs thorough the big prairie area in Green Meadows West. The trail is asphalted. This may be low on city priorities, but sealing cracks and seal coating the path might help to delay its deterioration. Some of the cracks are growing quite wide. I hope this helps.	—	—
large gap in trailway	have caught stroller wheel on this many times and even fell over with toddler once. near top of hill by sidewalk	—	—
dog poop	neighbors around here could use some policing...	—	—
5766 Northglenn Dr, Johnston	The bike trail just West of the Mid American Compound was badly damaged by heavy equipment and needs repaired for safety reasons. Thanks (Note: This item was added as a comment without an associated feature on the map)	—	—

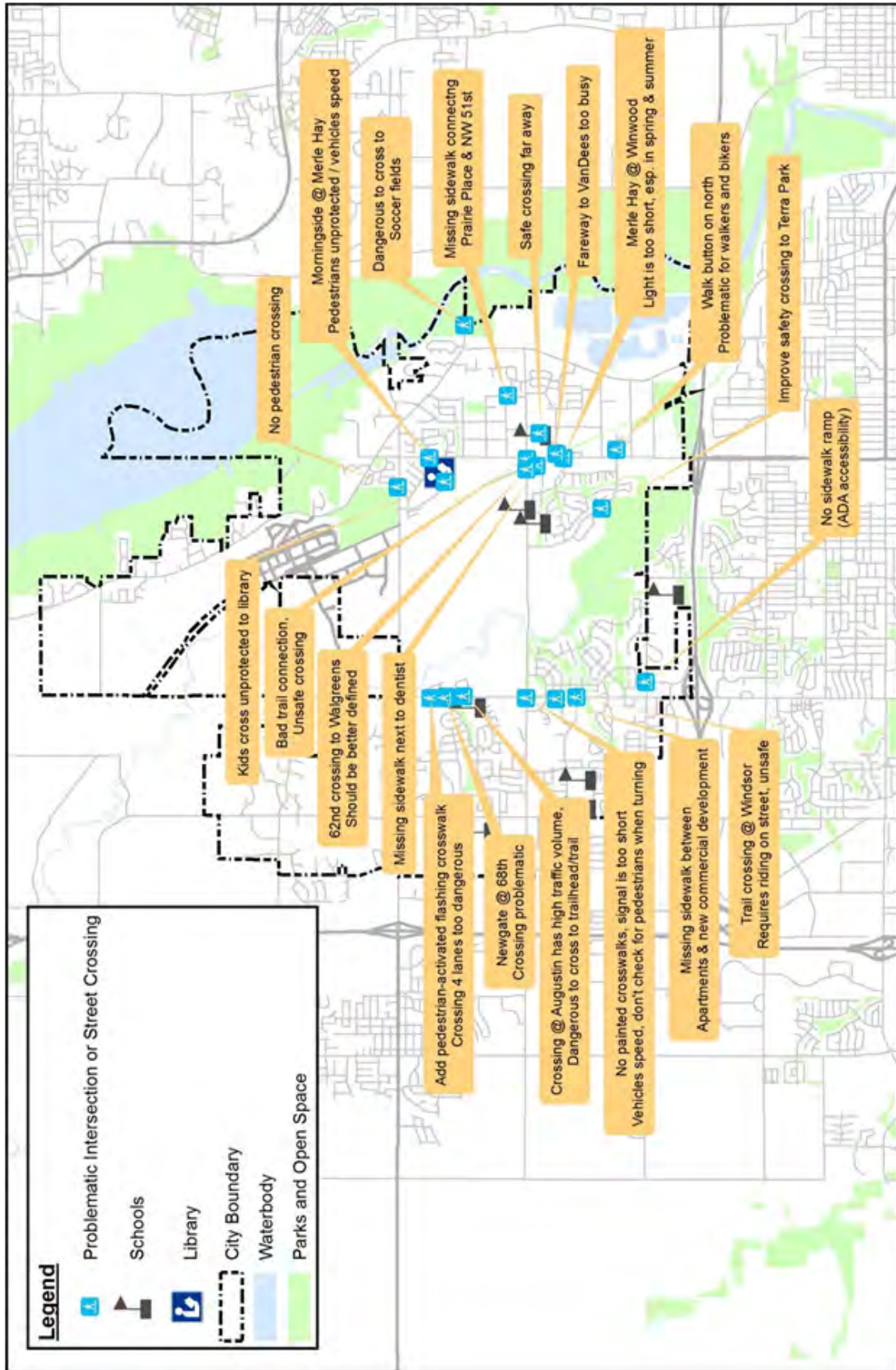


PROBLEMATIC INTERSECTION OR STREET CROSSING

There were several crossing locations noted as problematic. Many of these points were associated with crossing Merle Hay Road and NW 86th Street.

Title	Comment	# of Up Votes	# of Down Votes
Newgate & 86th Crossing	Crossing 86th street	5	2
Crossing 62nd/86th street any direction	No cross walks...crossing signal too short (and we are fast walkers)...cars turning not looking	5	1
Missing sidewalk	Sidewalk is missing between the apartments and new commercial development	8	—
problematic crossing	walk button is on north. Problematic for walkers and bikers.	7	—
Bad intersection for bicycles	This doesn't connect to the trails well. No way to safely get to Dewey park or Library	7	—
Must ride in street	Crossing eastbound on Windsor Pkwy to reconnect with trail at park on Windsor Dr requires riding on street	6	—
Missing sidewalk	A section of the sidewalk is missing next to Johnston dentist	5	—
Missing sidewalk connection	Missing sidewalk connecting Prairie Place and NW 51st Street	4	—
Morningside & Merle Hay	closest park to Johnston Commons is an unprotected intersection. To make things worse cars are often traveling 10 mph over the posted speed of 35.	4	—
crossing at Augustin	Crossing between Green Meadow north, Beaver Creek grade school to Augustin development and Beaver Creek trail head along river. There is a lot of traffic esp with 70th being torn up. VERY dangerous but only way to connect to beautiful trail and for school kid in Augustin development to cross for school.	3	—

Title	Comment	# of Up Votes	# of Down Votes
Heidi's Comment	The cross walk at Merle Hay Road and Winwood Drive as you leave Bishop Drumm, heading across the street to go to VAN DEES! The timer for the walk is not long enough for families to cross to go get ice cream. The light turns to Don't Walk about midway through and everyone panics...the adults, the kids, etc. It's very dangerous for walking families and bike riding families. The time needs to be doubled during the spring and summer when Van Dees is open.	3	—
No pedestrian Crossing	No crossing if going west. (NW 70 th Ave trail)	3	—
No sidewalk exit/ramp	There is no ramp/exit in the sidewalk here in order to cross the street on a bike, wheelchair or stroller	3	—
Add pedestrian activated flashing crosswalk	four lane road difficult for safe pedestrian crossing (Wooded Point Dr @ NW 86 th)	2	—
add pedestrian activated flashing ped crossing	wide four lane road difficult to cross safely (Newgate @ NW 86 th)	5	2
faraway crossing	dangerous crossing for bikes (@ Lawson?)	2	—
Soccer fields	dangerous crossing with new trail coming soon	2	—
Crossing between Fareway and VanDees	Adding a Ped Crossing light would be helpful esp in summer months	1	—
Pioneer Pkwy Crossing	Crossing to get to Terra park needs safety improvement	—	—
North Glen Drive-Library	kids run across the street in a random path to get to library; add painted crosswalk?	—	—
62nd Crossing to Walgreens	people crossing from apartments to Walgreens need better delineated crossing point	—	—



map.social Results - Crossings

Johnston Walkability Study | Johnston, Iowa | 6/21/2018

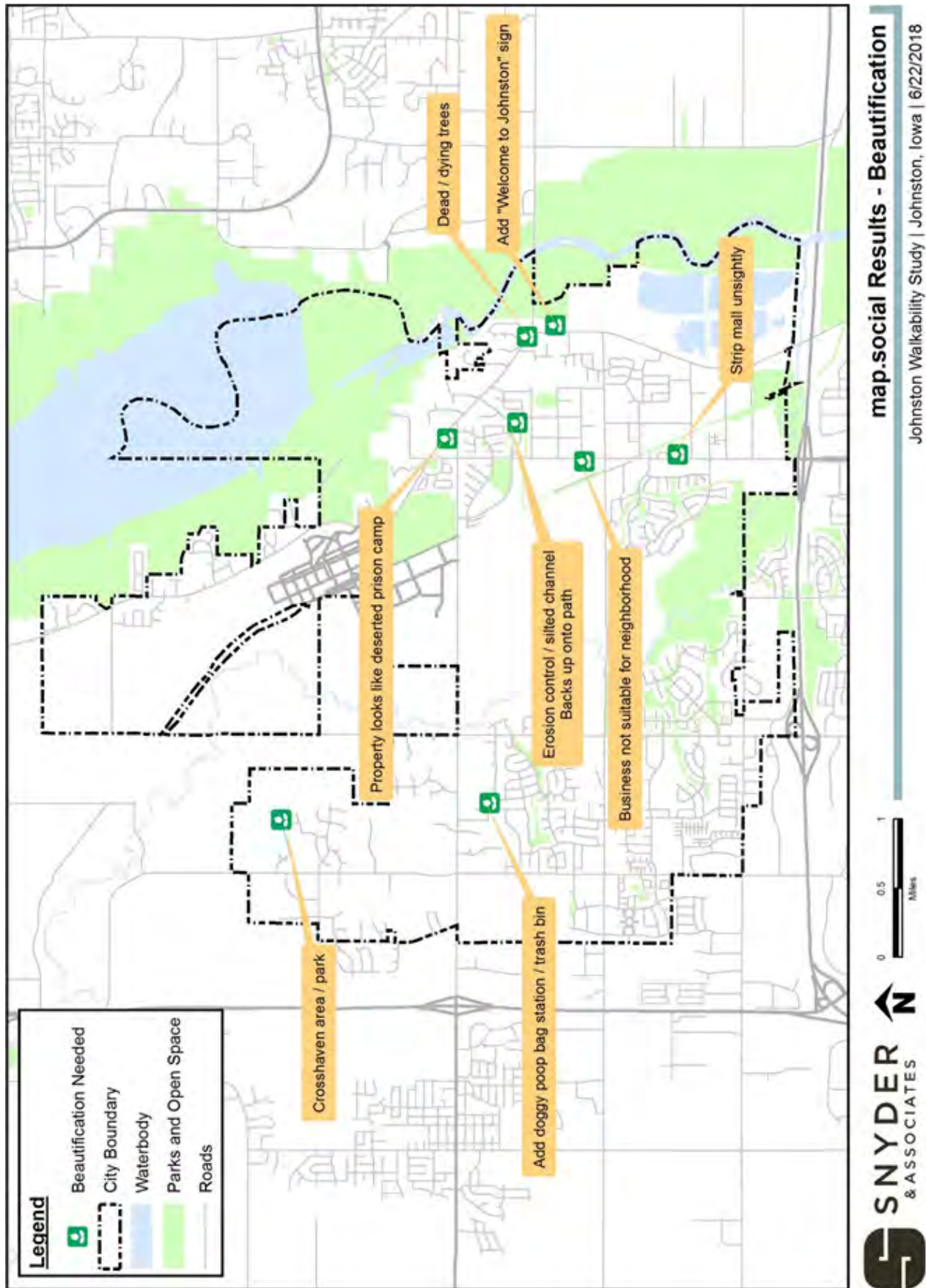
BEAUTIFICATION NEEDED

Recognizing that aesthetics contributes to walkability, the survey allowed comments regarding areas needing beautification.

Some of these comments were related to the land use of the area, such as the strip mall, an unwelcome business, and an unsightly fenced yard.

Other comments were related to landscaping, signage, and maintenance.

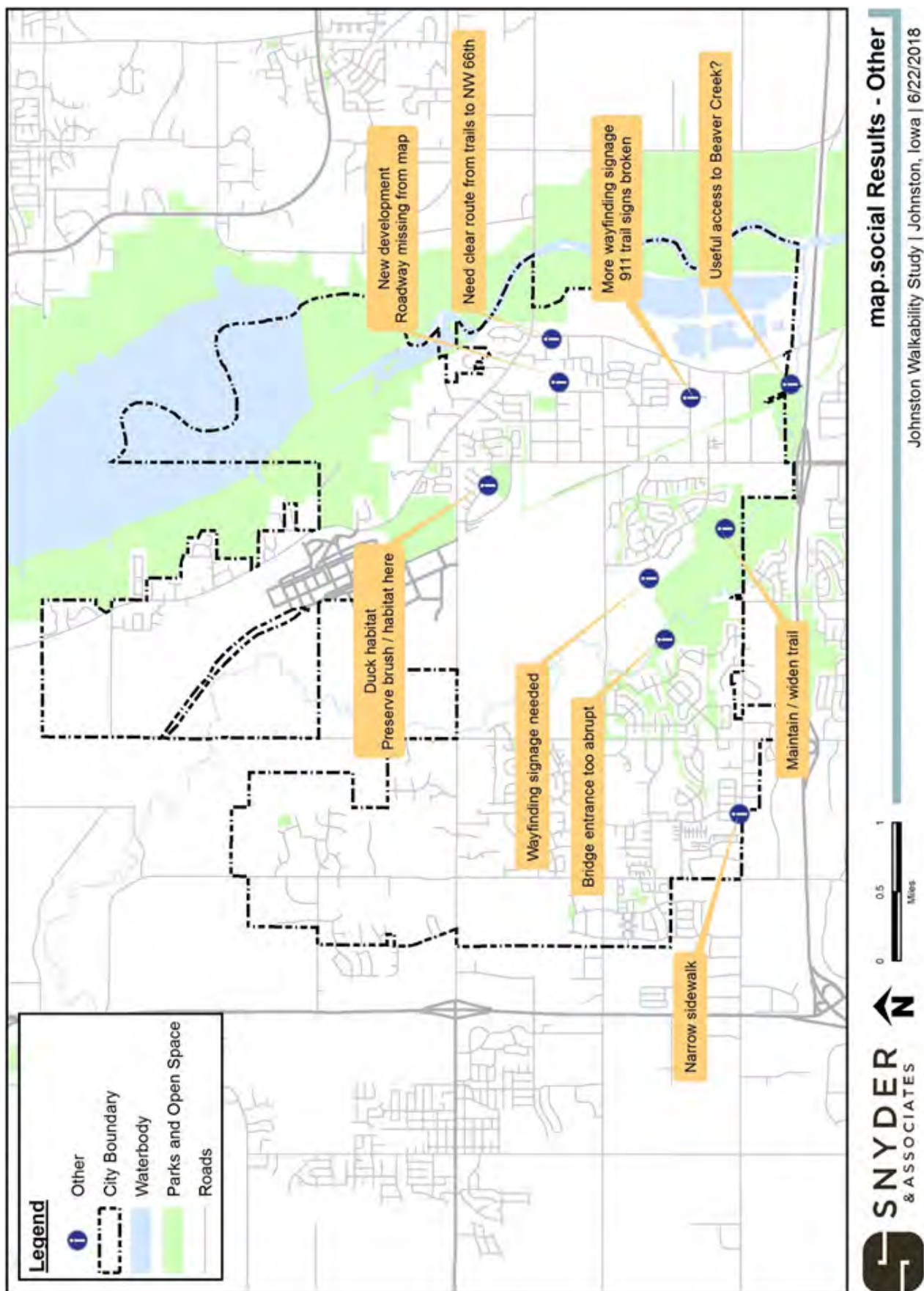
Title	Comment	# of Up Votes	# of Down Votes
Dead Trees	Trees planted by Soil Tec (contracted by Snyder & Associates/ City of Johnston) after construction last year are crooked and dying.	1	2
Not Suitable for Neighborhood	Out of town guests always laugh at this business. Probably better suited for NW Beaver Industrial area.	1	1
Strip Mall	Very unsightly stripmall, pole signs, etc.	4	—
Add Doggy Poop Bag Station and Trash Bin	This would be a good place to add a pick up after your dog sign and poop trash bin	1	—
eroision control	water channel has silted in and been filled in for years causing water to enter pathway and continue south until roughly 66th pl T. known issue that public works is aware of.	—	—
prison yard	Property at NW70th and NW Beaver Drive, looks like an deserted prison camp.	—	—
Crosshaven area	Back corner park	—	—
welcome to johnston sign	Would be good to have a nice “Welcome to johnston” sign here at this intersection and then down beaver.	—	—



OTHER

A few items did not seem to fit in the pre-defined categories. This included comments on routes, wayfinding signage, creek access, and habitat protection.

Title	Comment	# of Up Votes	# of Down Votes
Duck Habitat	Stop cutting back the brush here as ducks raise young here every year.	2	1
Safe bike route to NW 66th	Need clear route from trails north to NW 66th	5	—
Very Abrupt bridge entrance	Eastbound bridge entrance is unsafe and quite abrupt.	3	—
maintain	trail needs to be repaired and widened	2	—
no signs nor routes clear	throughout the city more signage is needed and several 911 trail signs are broken.	1	—
new development here	roadway missing fro map.	—	—
Narrow Sidewalk	Sidewalk is very narrow.	—	—
Directional Sign	This map is a little confusing - a pointing sign would help avoid walking/riding on Pioneer. (personal experience)	—	—
south of Johnston Drive	A useful access to Beaver Creek?	—	—



OVERALL COMMENTS

There were two particularly noteworthy comments that did not point to a particular location. Both of these comments relate to the importance of providing accessible routes for individuals of all ages and abilities.

Miss Wheelchair Iowa: Accessibility Map

Please take into consideration the importance of sidewalks, and their quality, to people in your community with disabilities. Without properly maintained sidewalks and curb cutouts access is limited for these individuals.

by **LAURA HARTER**

CREATED 2018-05-18

MODIFIED 2018-05-18

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Features

ChildServe Accessibility

As an employee of ChildServe, it is important that the children, specifically ones in wheelchairs, are able to access parks, stores, and neighborhoods in the Johnston area.

by **KELLYRIFFLE**

CREATED 2018-05-29

MODIFIED 2018-05-29

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Features