

Ashworth Road Improvements

1st Street to 50th Street

City Council Workshop

November 7th, 2022



TOPICS COVERED

- EXISTING CONDITIONS
- RECOMMENDATIONS
- NEED FOR CHANGE/BENEFITS
- DRAWBACKS
- DESIGN GUIDANCE AND DETAILS
- WHAT ELSE WAS CONSIDERED?
- PUBLIC MEETINGS
- WORKSHOP





EXISTING ROADWAY CONFIGURATION



RECOMMENDED CONFIGURATION



WHY CHANGE ANYTHING?



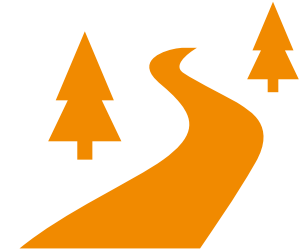
Aging
Infrastructure



Safety



Lane Width



Path
Connectivity

An aerial photograph of a residential neighborhood. A central road with double yellow lines runs vertically through the middle. On either side are houses with lawns and trees. Some trees are bare, suggesting a cooler season. A few cars are visible on the road. The entire image is framed by a white border.

AGING INFRASTRUCTURE

INFRASTRUCTURE NEARING END OF USEFUL LIFE

- Originally constructed as early as 1920s
- Underlying pavement deteriorating
- Asphalt overlays extend life
 - 5 to 10 years
- Weather concerns
 - Water and snow in gutter can effectively shut down use of outside lanes



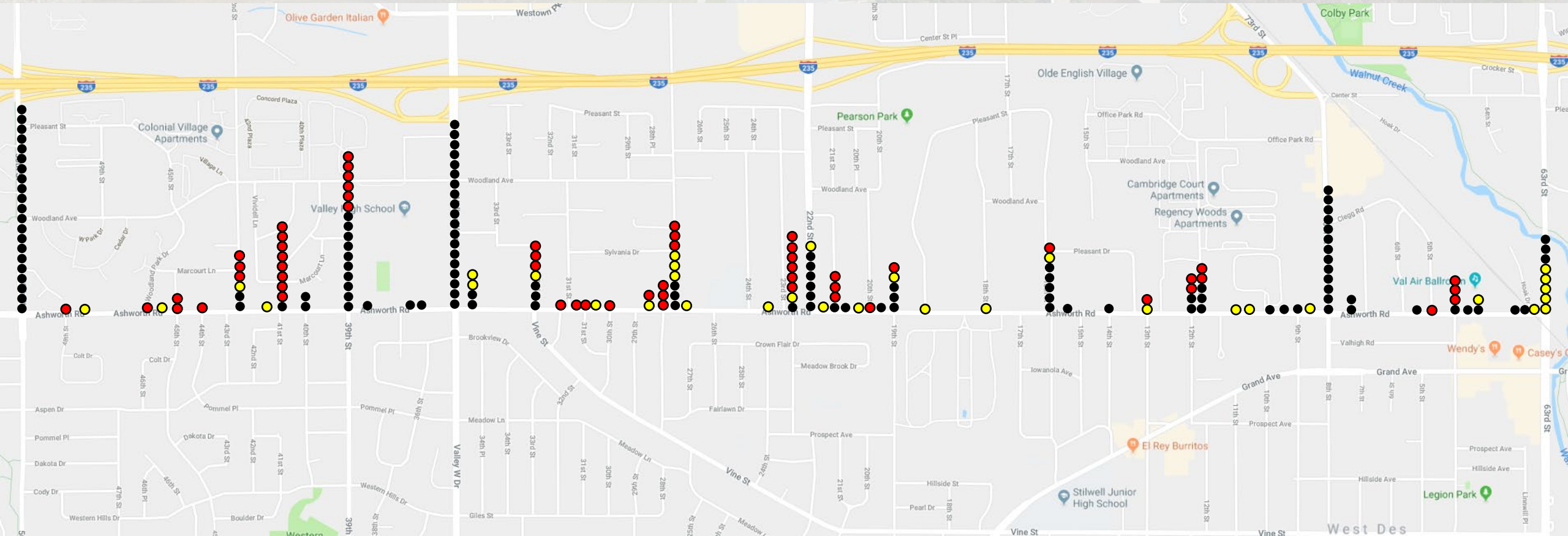


SAFETY

SAFETY



6 years of crashes (January 1, 2014 – December 31, 2019)



Red dots – crashes at intersections with no left-turn lanes that are of a type correctable by adding left-turn lanes
Yellow dots – lane departure crashes (sideswipe and run-off-road)
Black dots – all other crashes

Accident Analysis

173 total reported crashes from 1st to 50th over last 5 years

73 failure-to-yield-left turn collisions

23 collision where a non-contact vehicle blocked a drivers visibility

47 rear-end collisions

28 collisions involved stopped traffic in the inside lanes due to a left-turning vehicle

33 lane-departure collisions

17 sideswipe collisions, with most drivers changing lanes and not seeing adjacent vehicles

12 collisions where a vehicle (mostly large trucks) struck another vehicle while turning

4 collisions where a vehicle ran off the road

20 red-light-running collisions

Lack of left-turn lanes:

- Contributed to at least 30% of all crashes
- Could be up to 40% if sideswipe collisions were due to drivers avoiding stopped traffic in the inside lanes due to a left-turning vehicle

Excluding crashes at the intersections of 50th, Valley West, 8th, and 1st where left turn lanes have been provided:

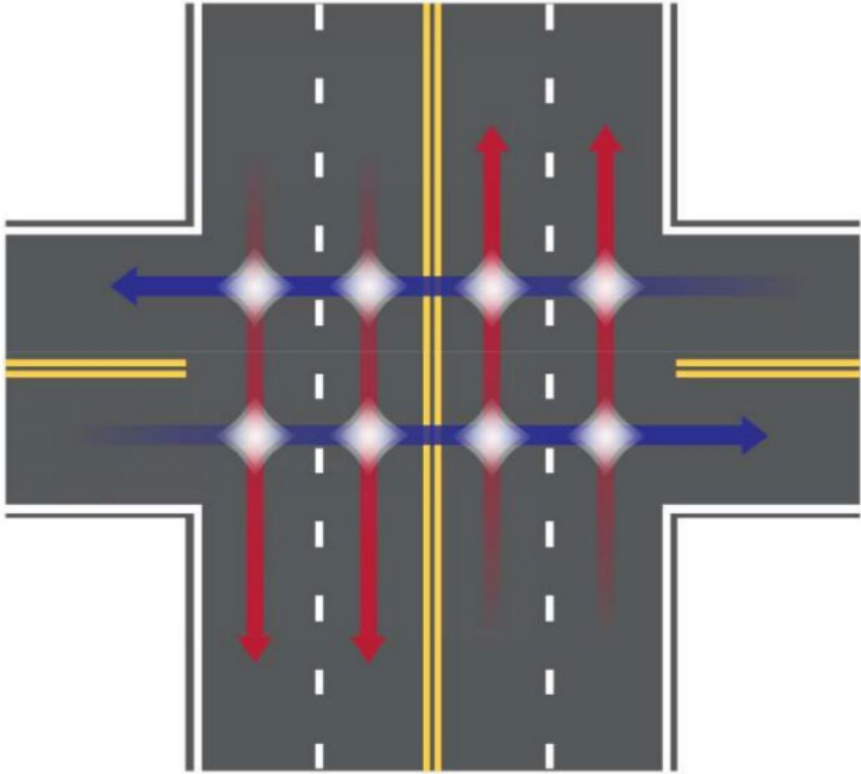
- Lack of left turn lanes contributed to at least 40% of all crashes
- Could be up to 60% if sideswipe collisions were due to drivers avoiding stopped traffic in the inside lanes due to a left-turning vehicle

An aerial photograph of a residential neighborhood. A central road with a double yellow line runs vertically through the center. On either side of the road are houses of various colors and styles, interspersed with trees. Some trees are bare, while others have green leaves. A few cars are visible on the road. The entire image is framed by a white border.

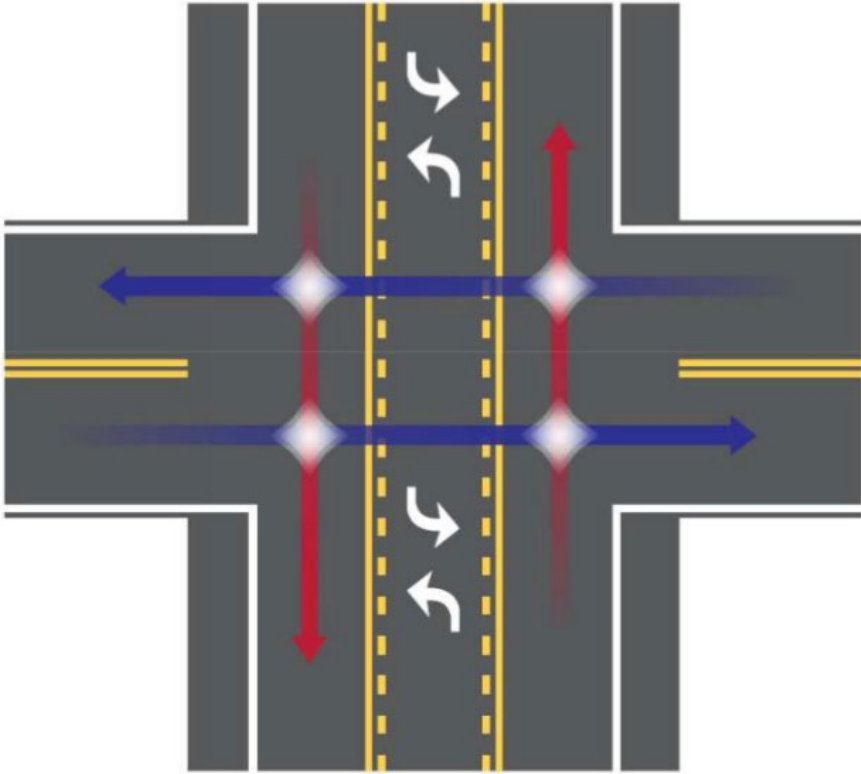
SAFETY BENEFITS

DECREASING CONFLICT POINTS

FOUR-LANE UNDIVIDED



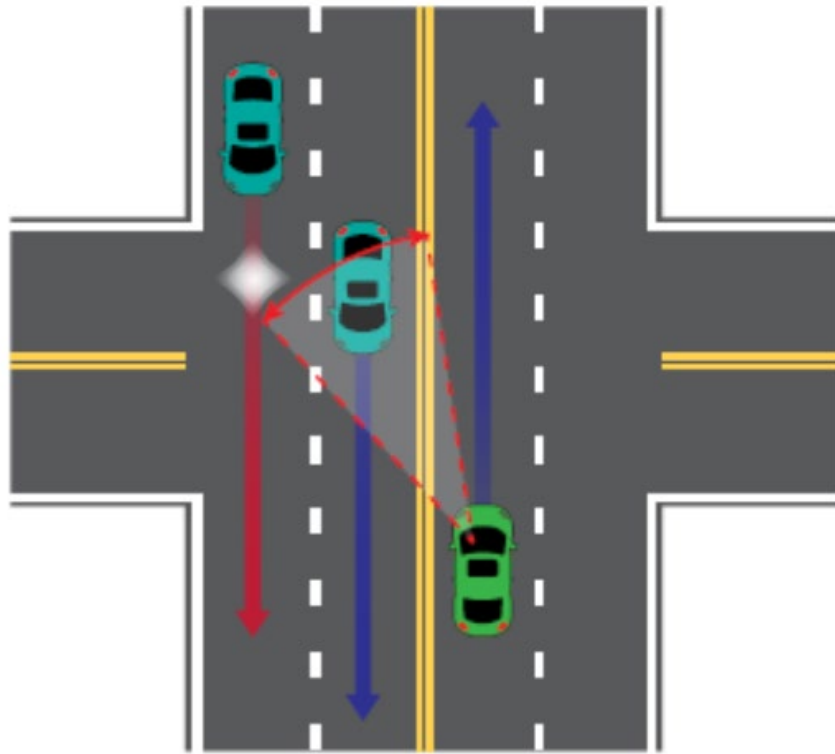
THREE-LANE



SEEING ON-COMING VEHICLES

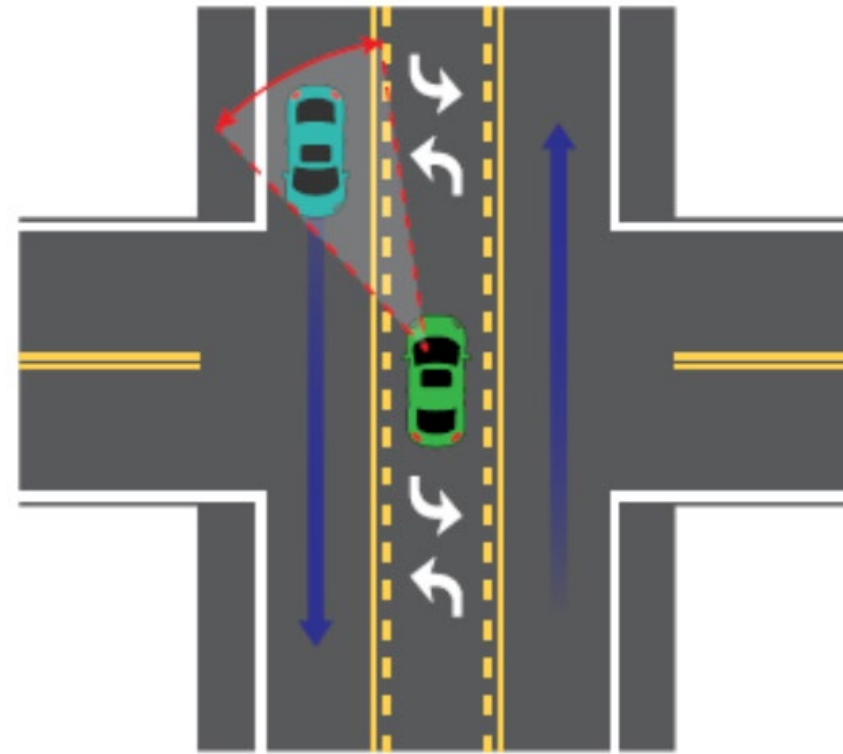
FOUR-LANE

Outside Lane Traffic Hidden
by Inside Lane vehicles



THREE-LANE

No Hidden Vehicles

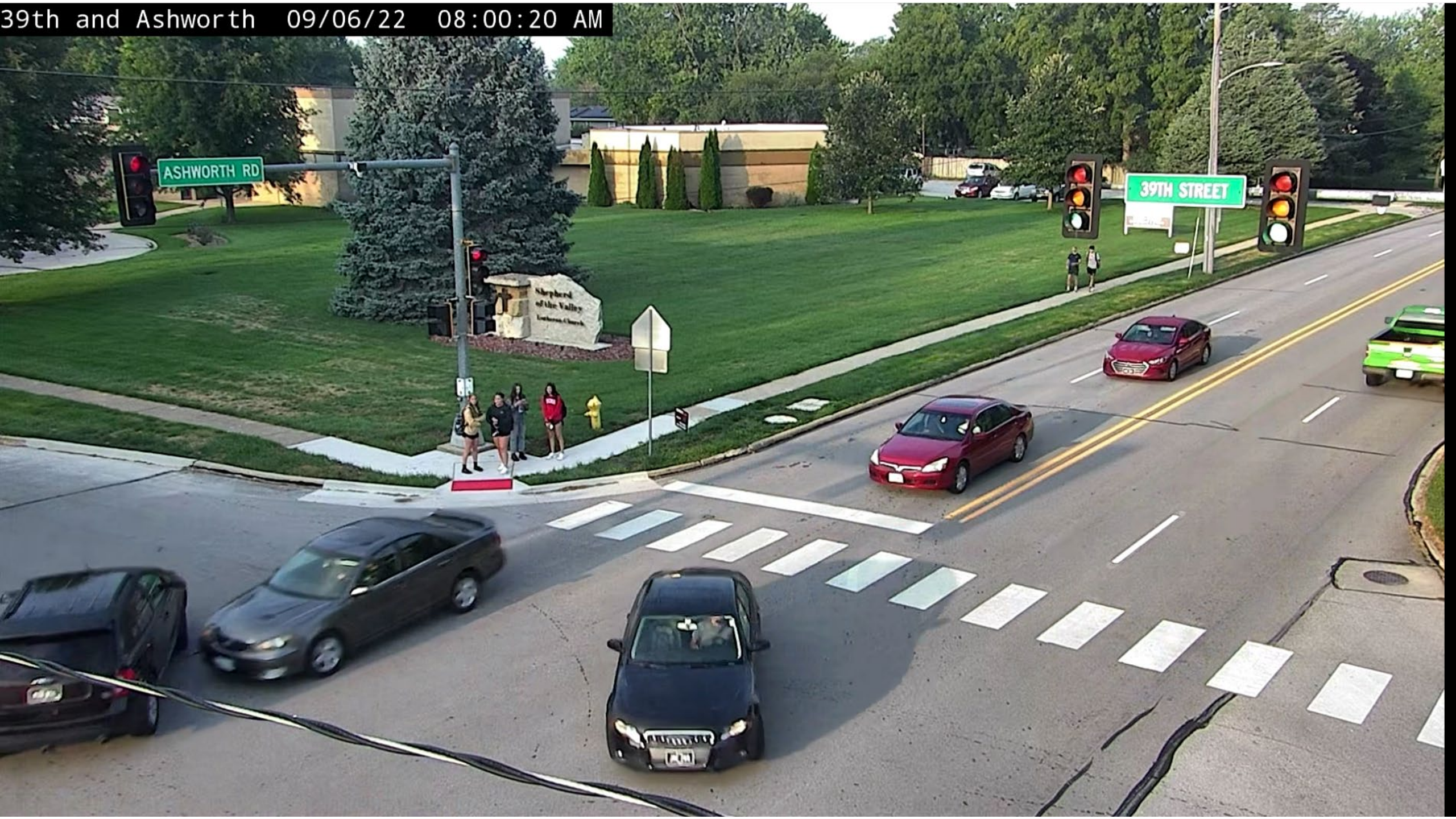




ASHWORTH RD

39TH STREET

Shepherd
of the Valley
Lutheran Church



ASHWORTH RD

39TH STREET

Shepherd
of the Valley
Lutheran Church

SAFETY

In 2010, FHWA conducted an empirical Bayes evaluation of total crash frequency before-and-after Road Diet implementation. Results indicated a statistically significant reduction in crashes due to the Road Diet treatment in two separate data sets (one data set for 15 sites in Iowa and one set for 30 sites in California and Washington), as well as for the results of all 45 sites combined. The Iowa data indicate a 47 percent reduction in total crashes while the California and Washington data indicate a 19 percent decrease. Combining both data sets results in an estimated 29 percent reduction in total crashes.¹⁰

Based on the history of safety studies presented in this section, installing a Road Diet can lead to an expected crash reduction of 19 to 47 percent. Variables affecting safety effectiveness include pre-installation crash history, installation details, traffic volumes, and the urban or rural nature of the corridor.

https://safety.fhwa.dot.gov/road_diets/guidance/info_guide/ch1.cfm

SAFETY



Safety | Livability | Low Cost

MYTH BUSTERS

Road Diets and Emergency Response: Friends, Not Foes

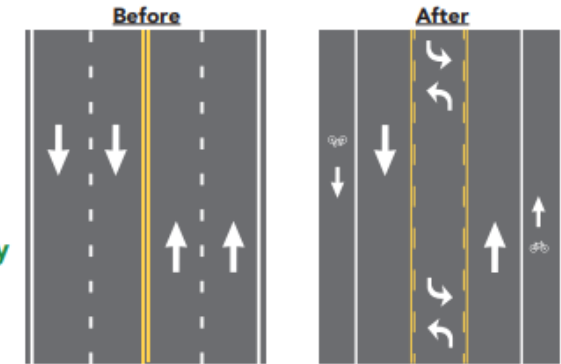
A typical Road Diet converts two-way, four-lane roads to two travel-lanes with a center two-way left-turn lane (TWLTL). Although studies have shown that this conversion can reduce motor-vehicle crashes by 19 to 47 percent,¹ emergency response personnel sometimes express concern that reducing the number of through lanes could increase emergency response times.

Myth: Road Diets Lead to Slow Emergency Response Times!

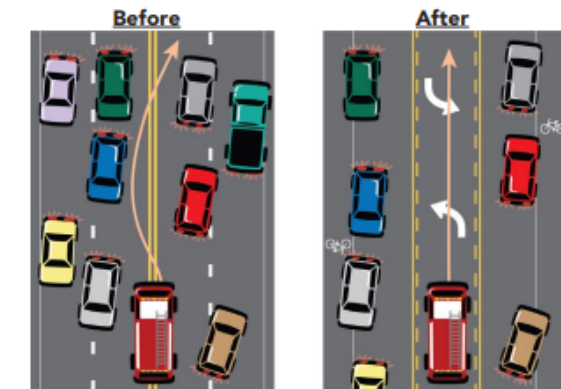
Contrary to popular belief, Road Diets do not degrade response times for law enforcement and emergency services. Instead, one simple Road Diet feature can actually improve response times: the two-way, left-turn lane.

Multi-lane undivided roads can be problematic for police and EMS responders, as drivers may not be aware of protocols for allowing emergency vehicles to pass. While drivers in the outside travel lane are typically able to pull over to the right edge, drivers in inside lanes often seem uncertain about where to go. Emergency responders may struggle to pass through traffic as they thread a path somewhere along the center of the roadway, leading to longer response times and increasing the opportunity for secondary incidents during response.

In contrast, three-lane roadways (including those in Road Diets) provide clarity in the event of an emergency. Road Diets can significantly improve response times by allowing emergency vehicles to bypass traffic by using the TWLTL. Drivers in through lanes can remain in place, leaving the TWLTL solely for emergency response vehicles.



Two travel lanes are removed to reallocate space for a TWLTL and bicycle lanes.



A fire truck struggling to find a path.

An easily navigable two-way left-turn lane.

“A Road Diet design opens a more predictable and practical path for emergency responders.”

https://safety.fhwa.dot.gov/road_diets/resources/pdf/fhwasa17020.pdf

A Road Diet design opens a more predictable and practical path for emergency responders.

SAFETY

“The West Des Moines Fire Department has examined the possible changes to the Ashworth Road corridor and support what City Engineering is proposing.”

-WDM Fire and EMS Chief, Craig Leu

An aerial photograph of a residential street. The street runs vertically through the center of the frame, with several cars driving on it. On either side of the street are houses of various styles, some with large lawns and trees. The overall scene is a typical suburban neighborhood. The text 'LANE WIDTH' is overlaid in the center of the image.

LANE WIDTH



Lane widths of 9'-10' are lower than standard – 12' is standard

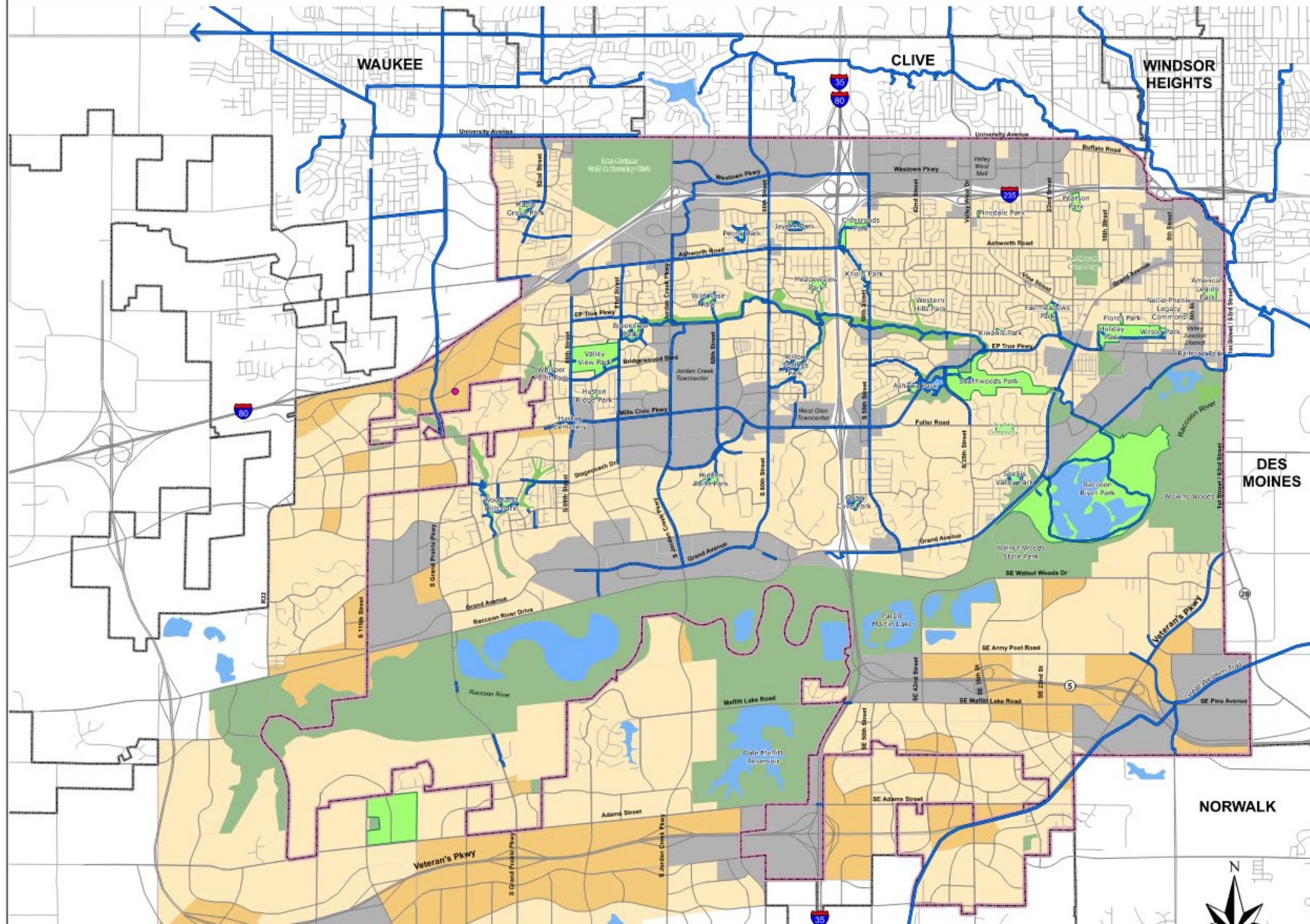


Staggered Driving –
Loss in street capacity
Unsafe Passing

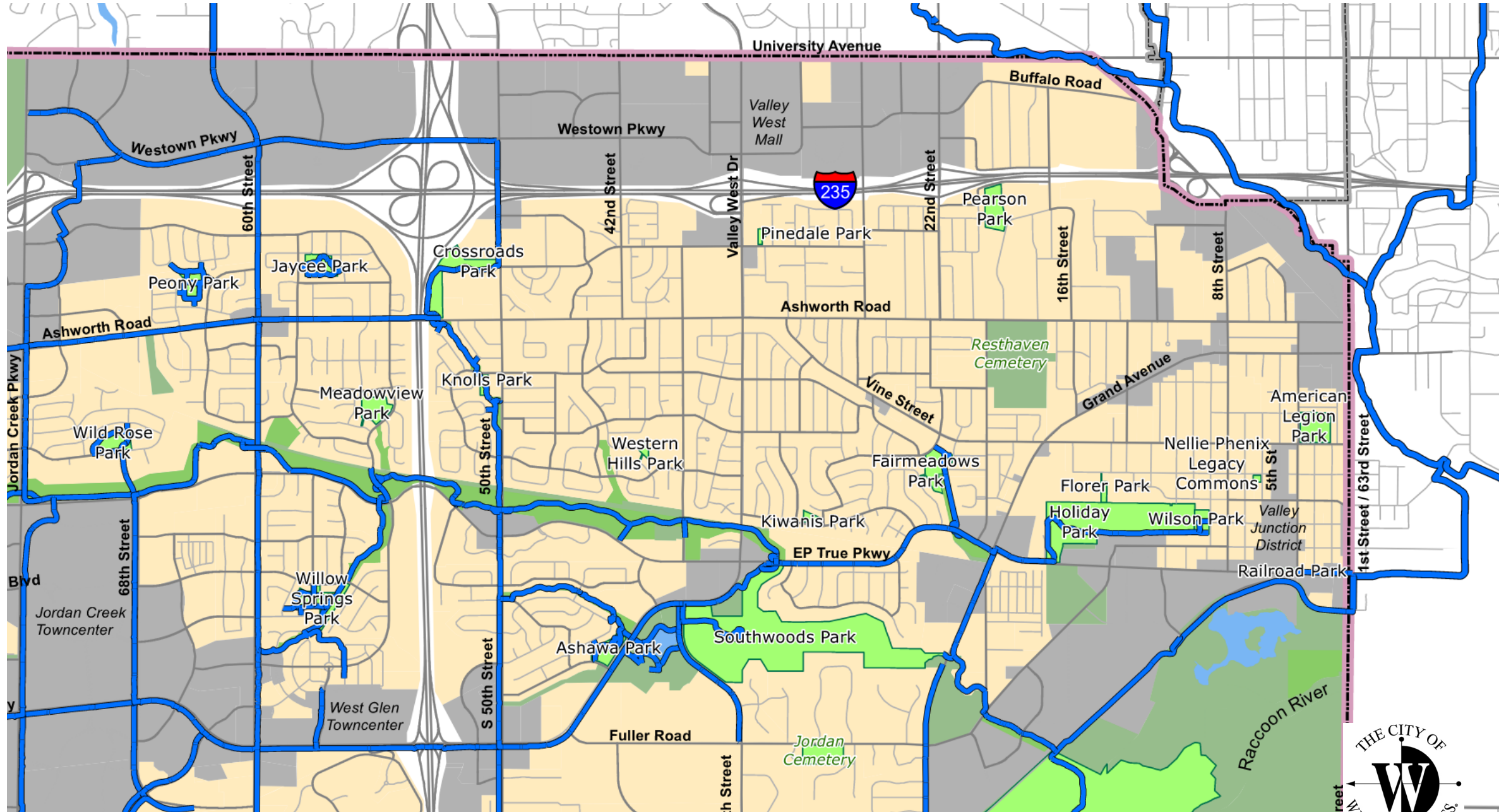
An aerial photograph of a residential street. The street is a two-lane road with a double yellow line down the center. On either side of the road are sidewalks and green lawns with houses. The trees are mostly bare, suggesting a cooler season. The text "SHARED USE PATH" is overlaid in large, bold, black letters across the center of the image.

SHARED USE PATH

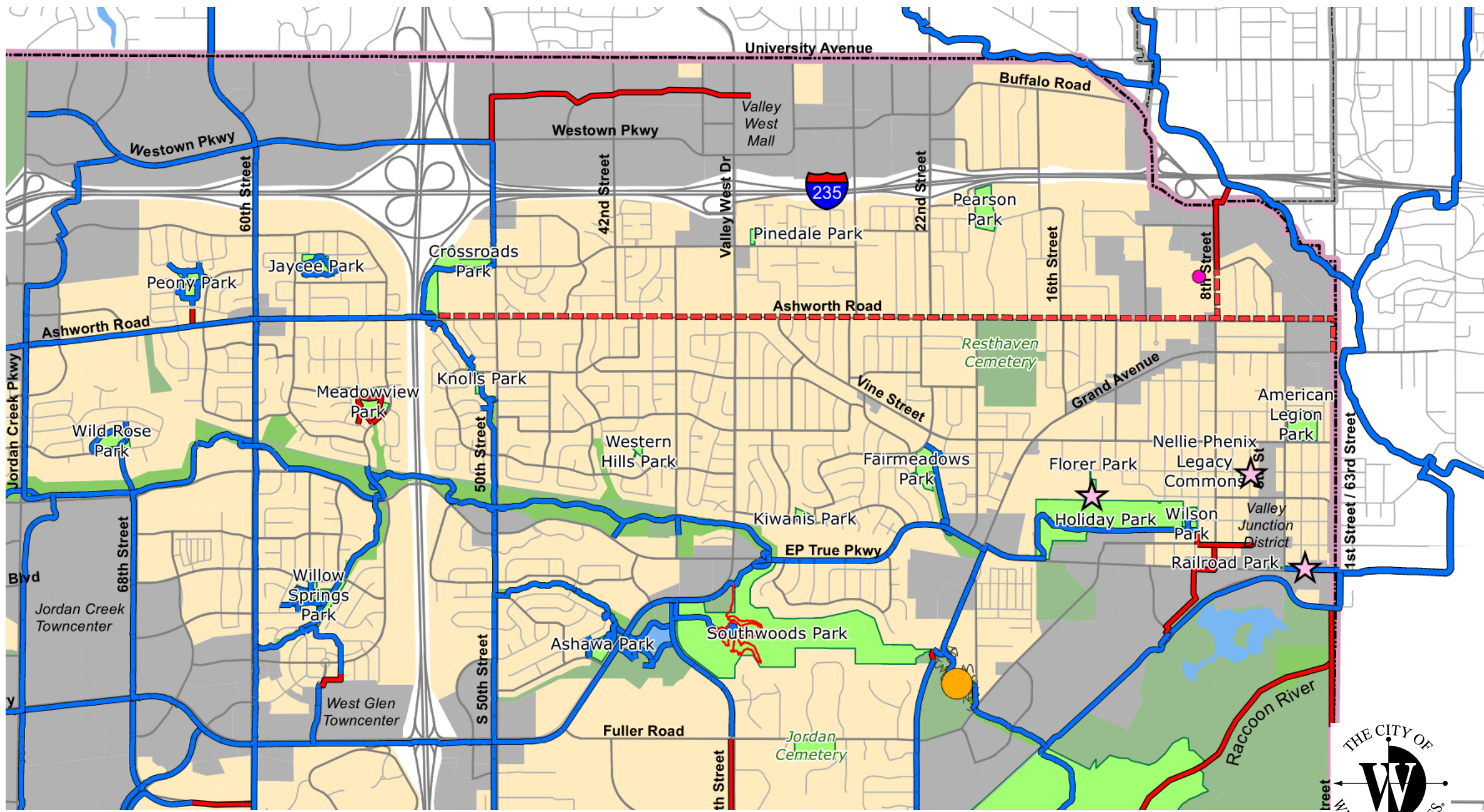
EXISTING SHARED USE PATH NETWORK



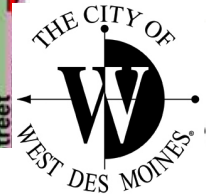
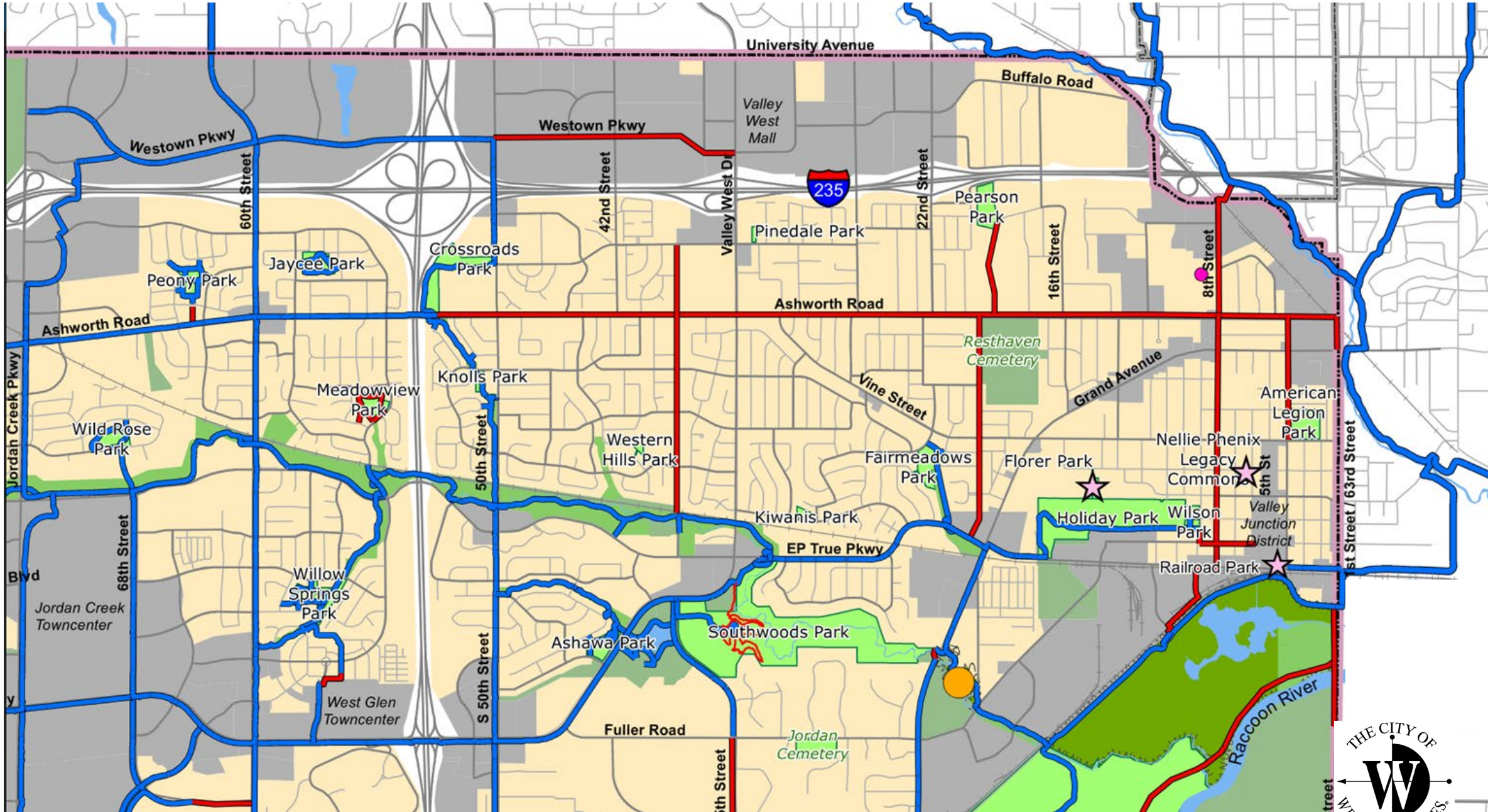
EXISTING SHARED USE PATH NETWORK



FUTURE SHARED USE PATH NETWORK



LONG TERM SHARED USE PATH VISION



West Des Moines is setting the standard for the delivery of City services. The City **rated significantly higher than the Plains regional average (5% or more above) in all 51 areas that were assessed.**

Priorities Within Departments/Specific Areas:

- **Maintenance of City streets**
- **No Other Department Priorities**

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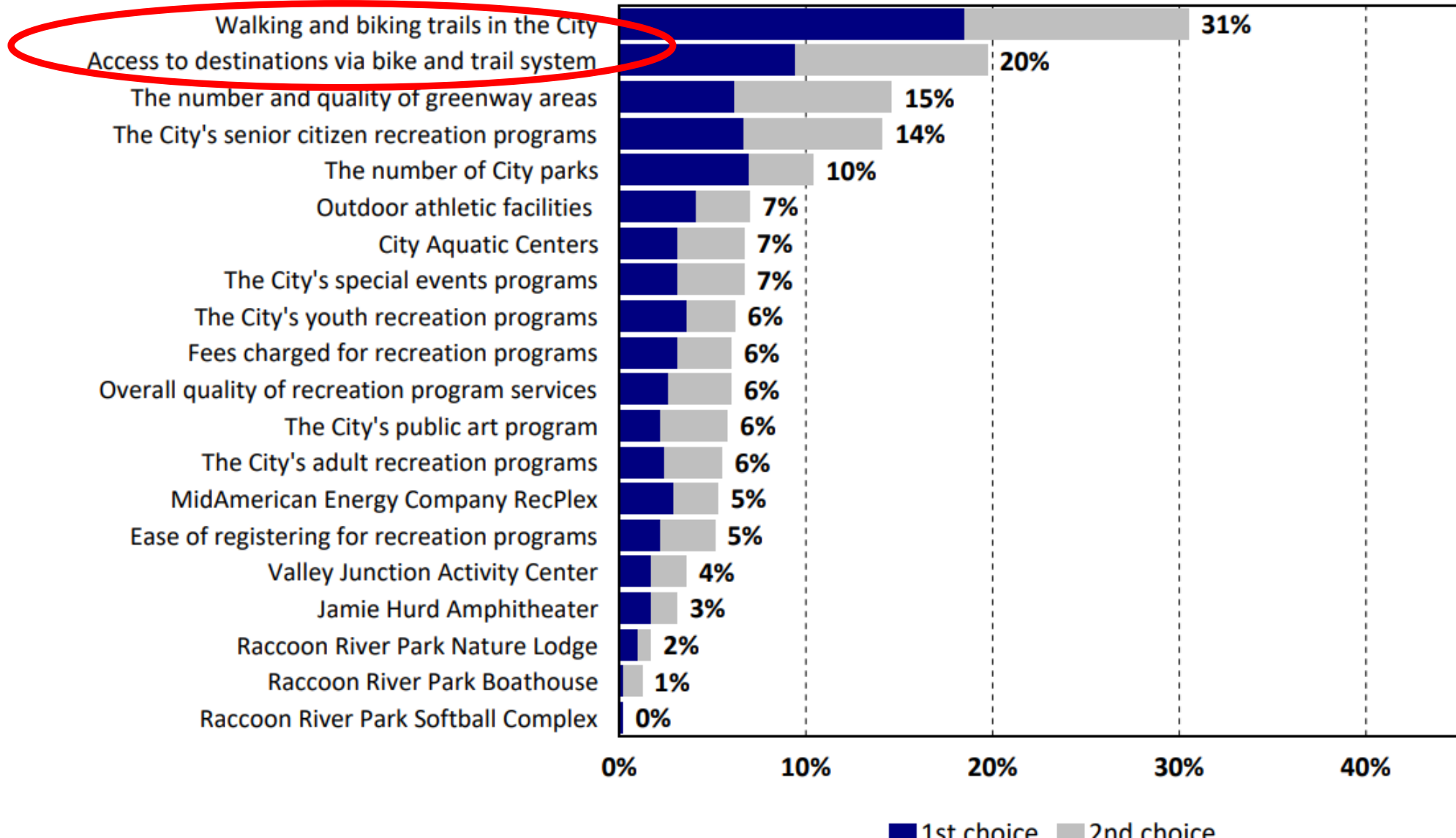
Parks and Recreation : Most Important Services to Emphasize

- 1. Walking and biking trails in the City**
- 2. Access to desired destinations via the bike and trail system**

Parks and Recreation Services That Are Most Important to Provide

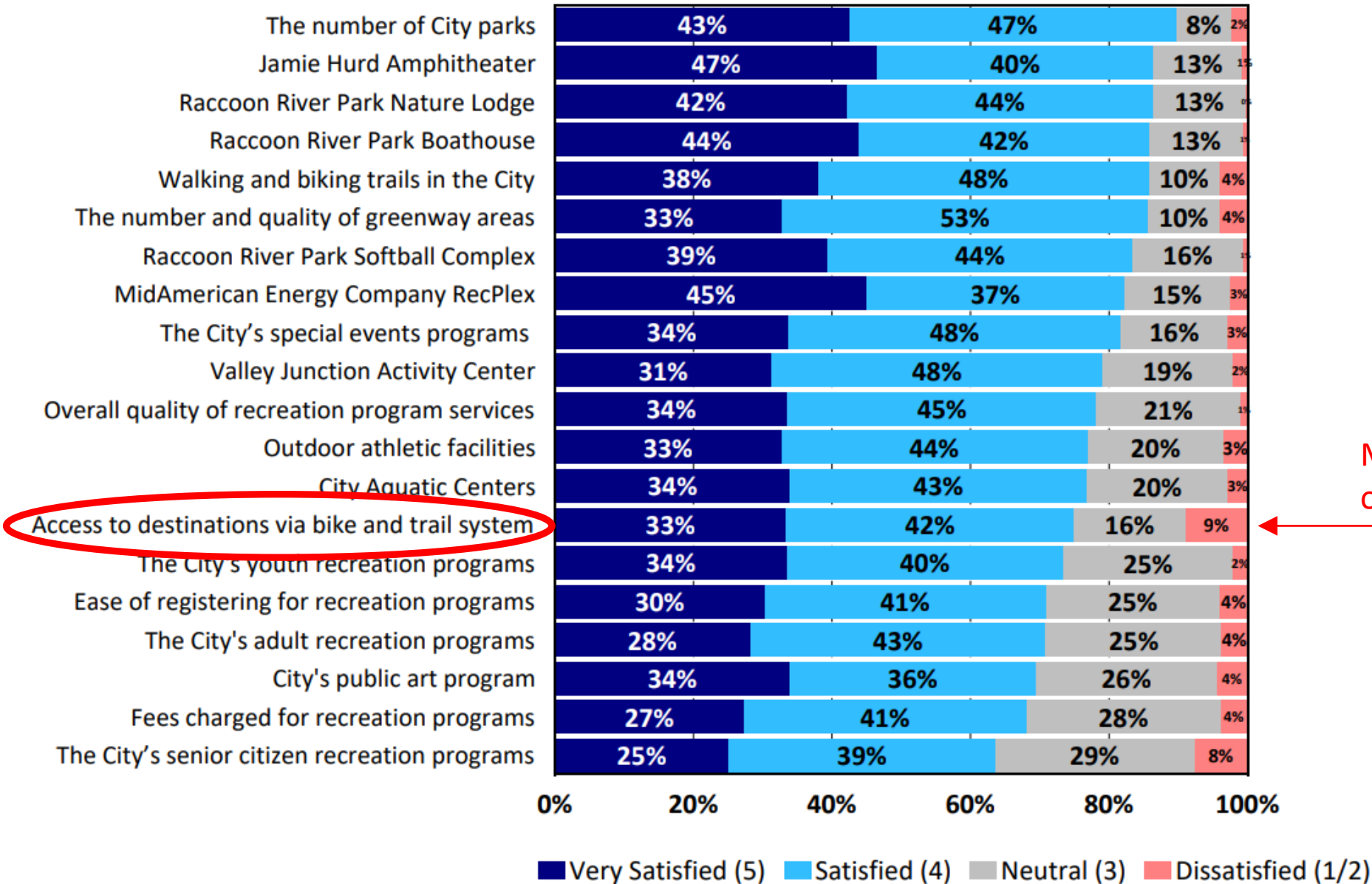
by percentage of respondents who selected the item as one of their top two choices

2022 CITIZEN SURVEY



Satisfaction with Parks and Recreation

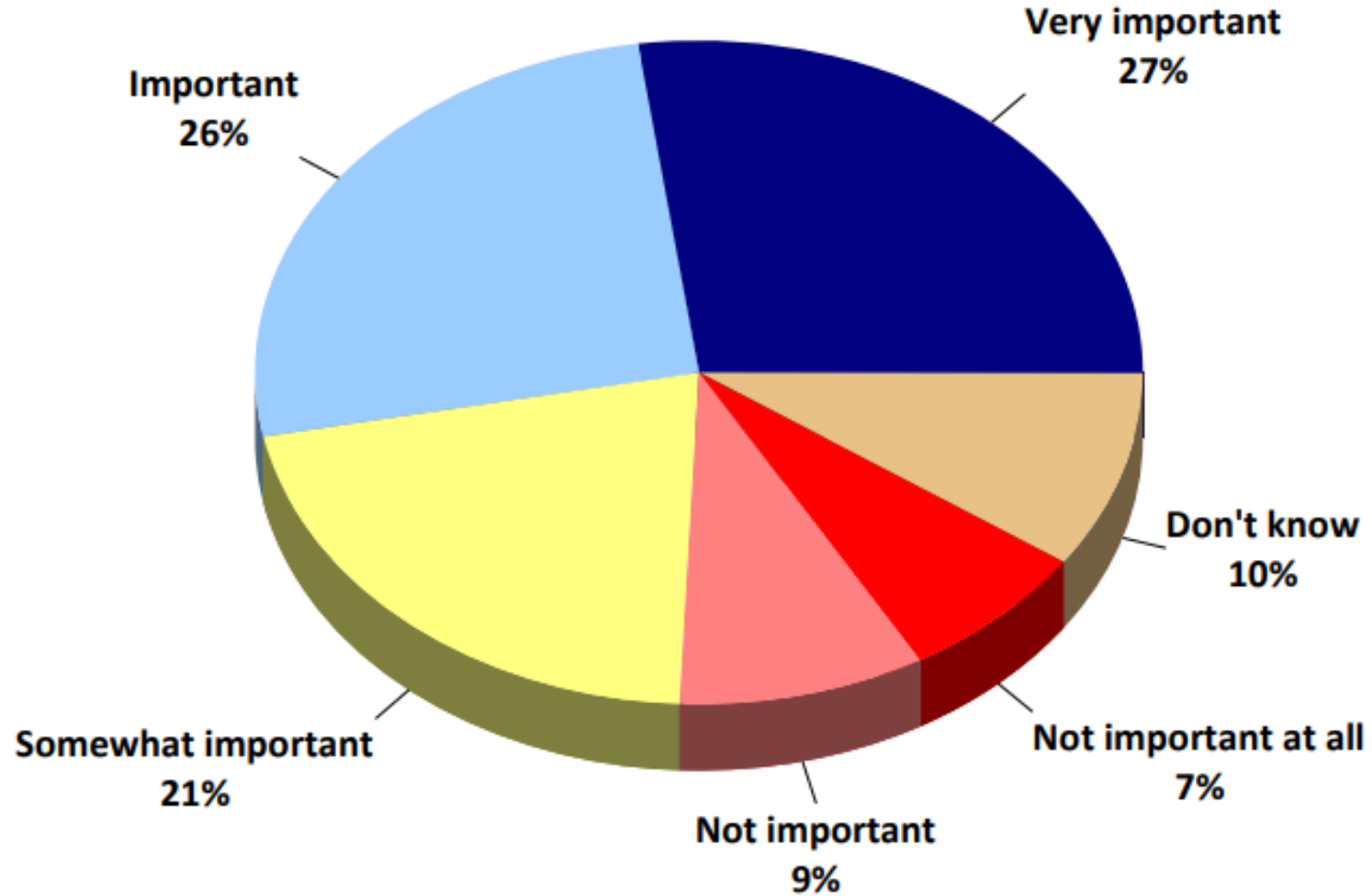
by percentage of respondents who rated the item as a 1 to 5 on a 5-point scale (excluding don't knows)



Most Dissatisfied of any category

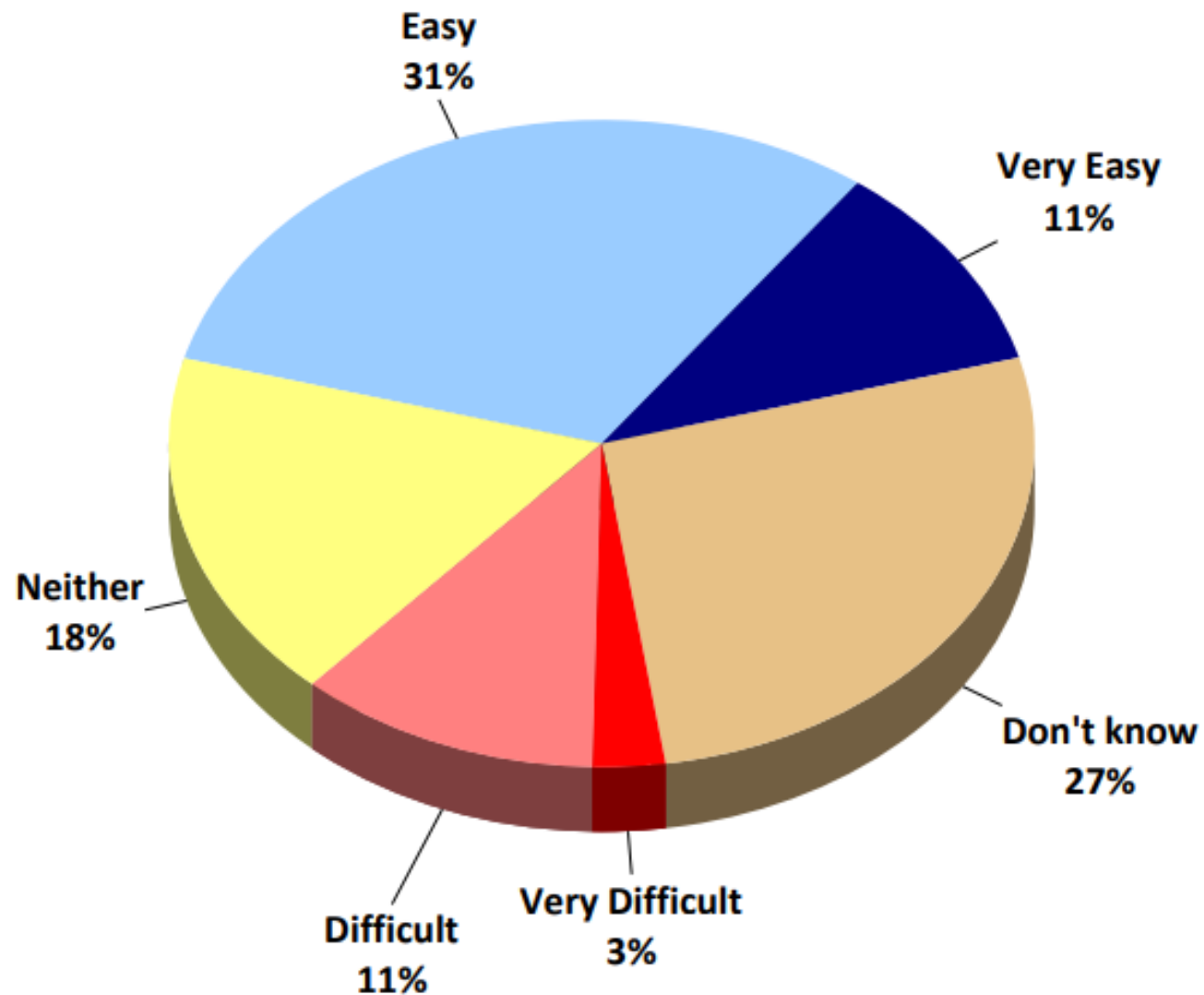
How important do you think it is for the City of West Des Moines to make it easier to travel by bicycle within the City?

by percentage of respondents



Overall, how easy/difficult do you think it is to travel by bicycle in the City of West Des Moines?

by percentage of respondents



Most important **Parks & Recreation** services to provide:

- *Walking and biking trails*
 2022-#1
 2020-#1
 2018-#1
 2016-#2
- *Access to destinations via bike and trail system*
 2022-#2
 2020-#2
 2018-#3
 2016-#3

Residents who think it is very easy or easy to travel by bike in West Des Moines

2022-42%
 2020-44%
 2018-46%
 2016-38%

Residents who think it is very important, important, or somewhat important for the City to make it easier to travel by bike within West Des Moines

2022-74%
 2020-77%
 2018-74%
 2016-73%

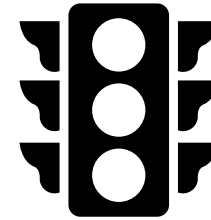
ARE THERE ANY DOWNSIDES?



Inclusion



Slow Vehicles



Traffic
Operations



Driveways







ONLY





RIGHT-OF-WAY ACQUISITION

NEXT STEPS

- Right-of-way and Easement Acquisition
 - Permanent Right-of-way
 - Permanent Easement
 - Temporary Construction Easement



DESIGN



APPRAISAL



NEGOTIATION
& ACQUISITION

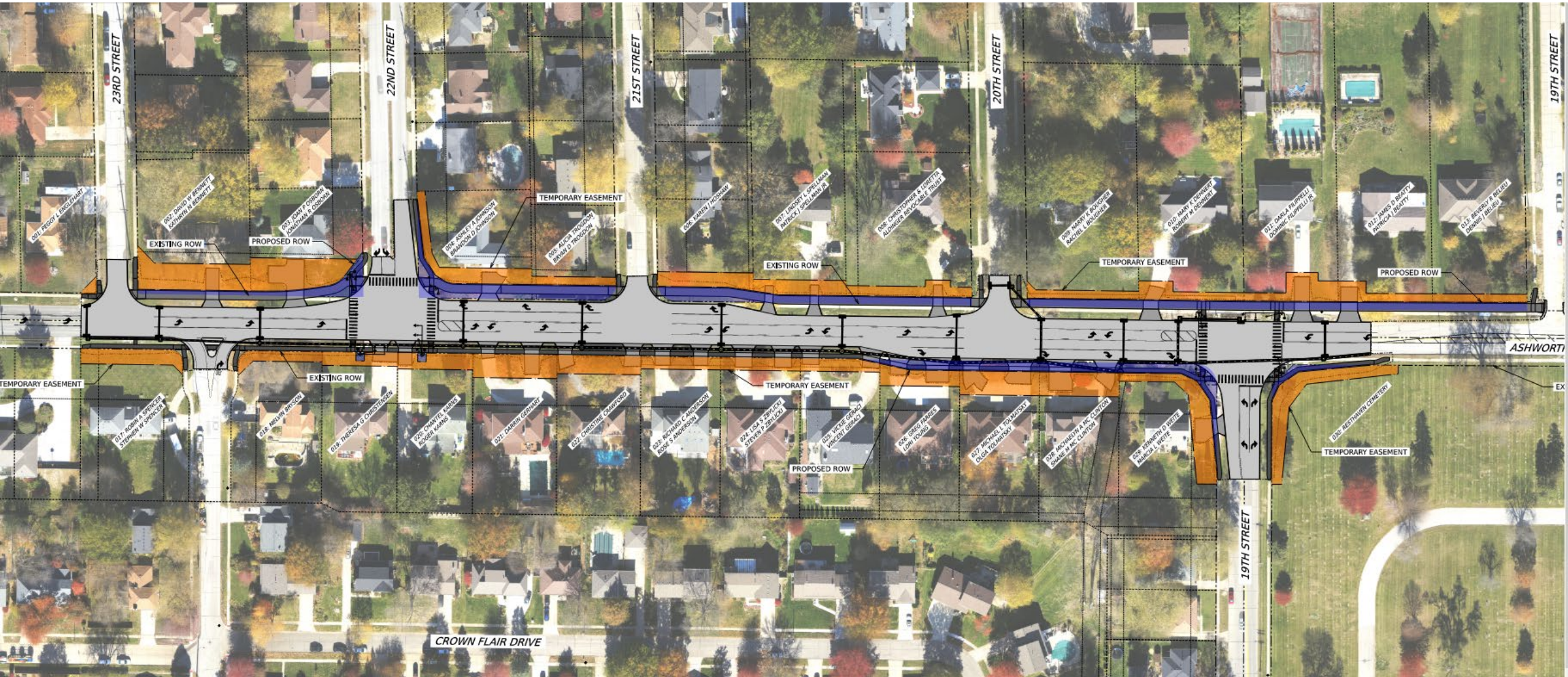


CLOSING, TRANSFER
OF TITLE & PAYMENT

WE ARE HERE



SHIVEHATTERY
ARCHITECTURE+ENGINEERING



RIGHT-OF-WAY ACQUISITION

“The good news is that recent studies have confirmed living near trails and greenways will likely raise your property value an average of 3-5% and sometimes even as high as 15%.” - National Association of Realtors <https://www.nar.realtor/trails-and-greenways>

“Property values increased 8 to 10 percent in residential areas and 1 to 2 percent for commercial areas.” – AARP https://cityofdefiance.com/wp-content/uploads/Road-Diets-Fact-Sheet_AARP.pdf

“Trails are the most desired community amenity that homeowners seek when buying a home.” – National Association of Home Builders, 2008

Quantitative data do not support the notion that road diets lower surrounding local businesses and property values. Opposition to road diets on economic grounds therefore appears unfounded. Still, popular support for converting auto lanes and on-street parking to bike lanes remains lukewarm. - NACTO, https://nacto.org/docs/usdg/yorkblvd_mccormick.pdf

“A 2002 survey of recent home buyers sponsored by the National Association of Realtors and the National Association of Home Builders, trails ranked as the second most important community amenity out of a list of 18 choices” - National Association of Realtors and National Association of Home Builders. (2002). Consumer’s Survey on Smart Choices for Home Buyers.

DESIGN DETAILS



Guidance



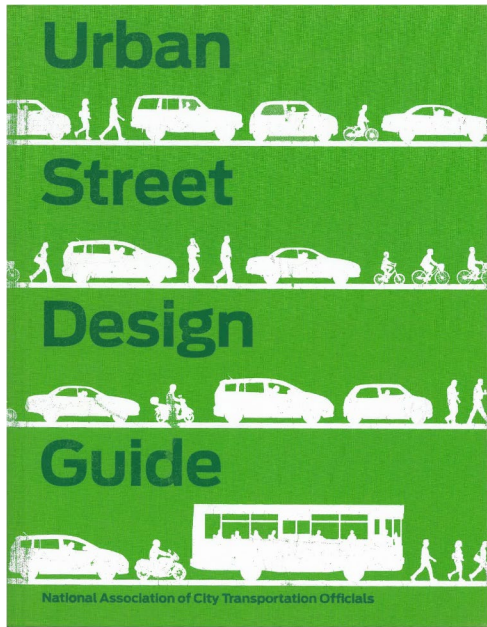
Width



Shared Use
Path

RECOMMENDED CONFIGURATION

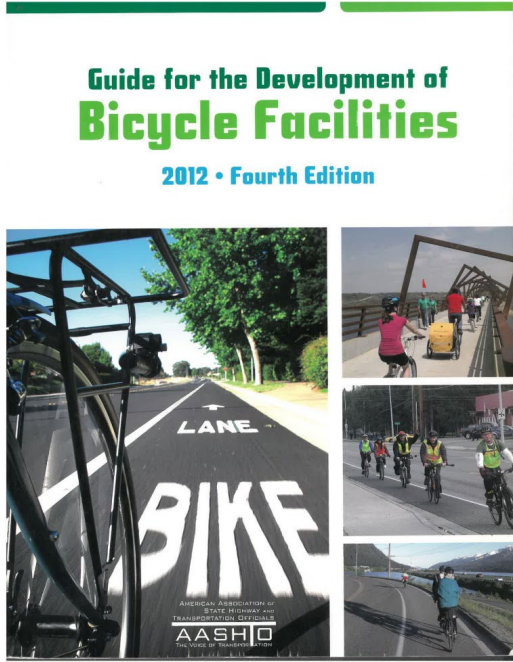
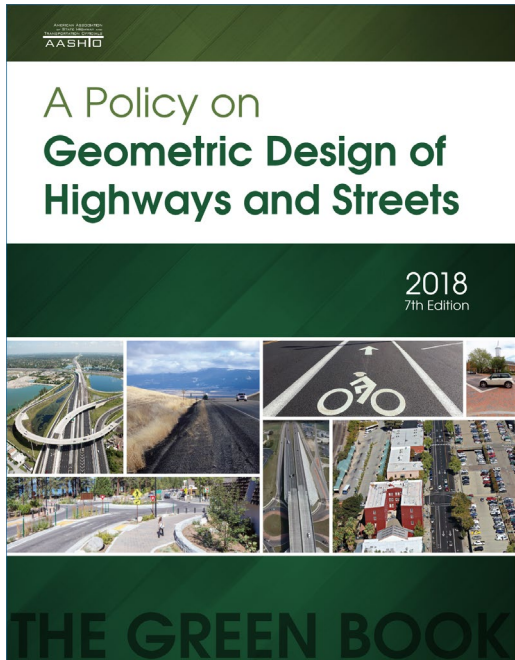




Iowa SUDAS
STATEWIDE URBAN DESIGN AND SPECIFICATIONS

Promoting uniformity of urban design and construction across Iowa.

[View the Design Manual](#) [View the Specifications Manual](#)



IOWADOT
Design Bureau

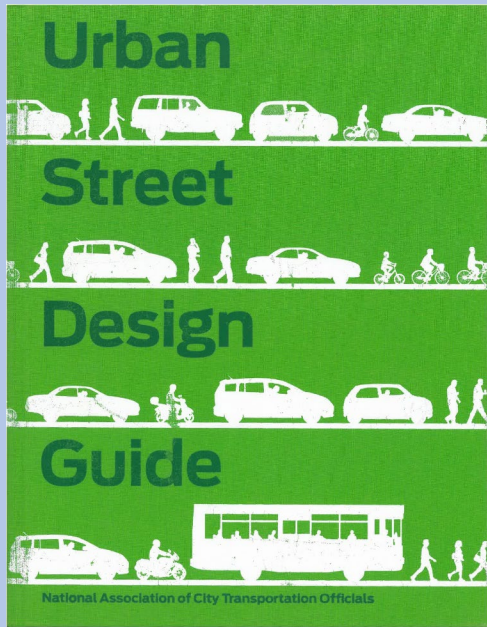
DESIGN

DESIGN HOME
DESIGN MANUAL
ROAD DESIGN DETAILS
STANDARD ROAD PLANS
DESIGN TABULATIONS
AUTOMATION TOOLS
SHELL LETTERS
STORM WATER PERMITS

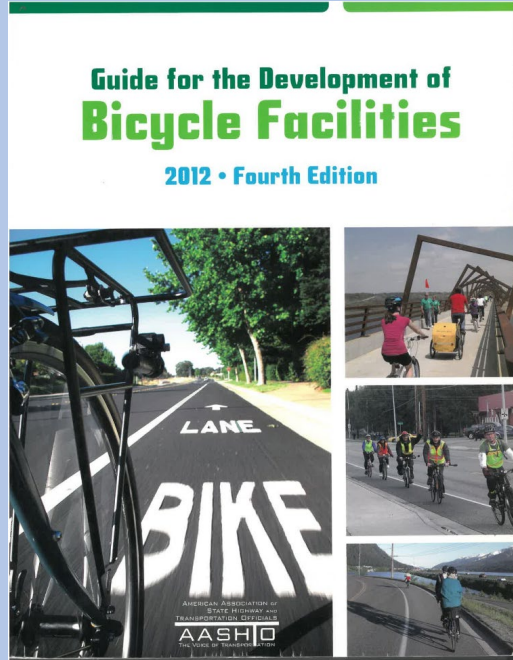
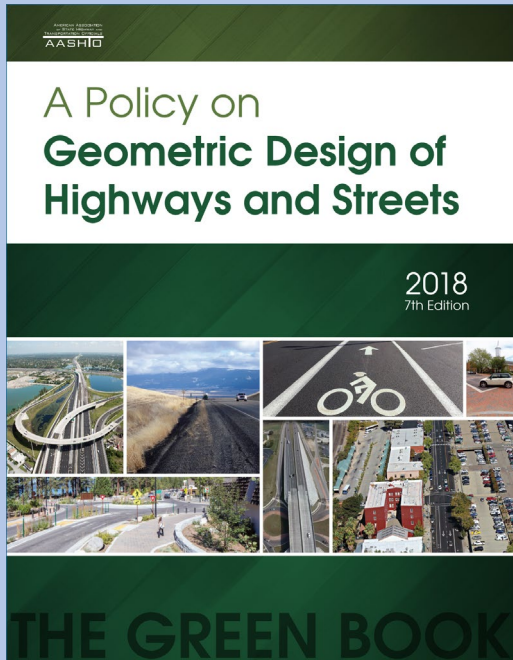
QUICK LINKS

DESIGN MANUAL
STANDARD ROAD PLANS
ROAD DESIGN DETAILS
PROJECT DESIGN TABULATIONS

DESIGN GUIDANCE



National



Promoting uniformity of urban design and construction across Iowa.

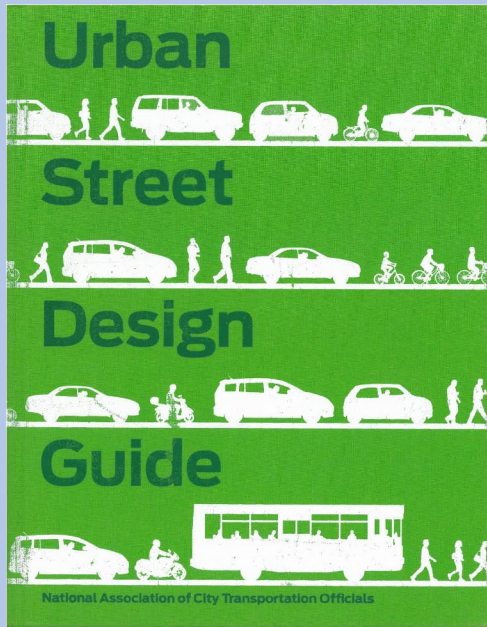
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Iowa



DESIGN GUIDANCE

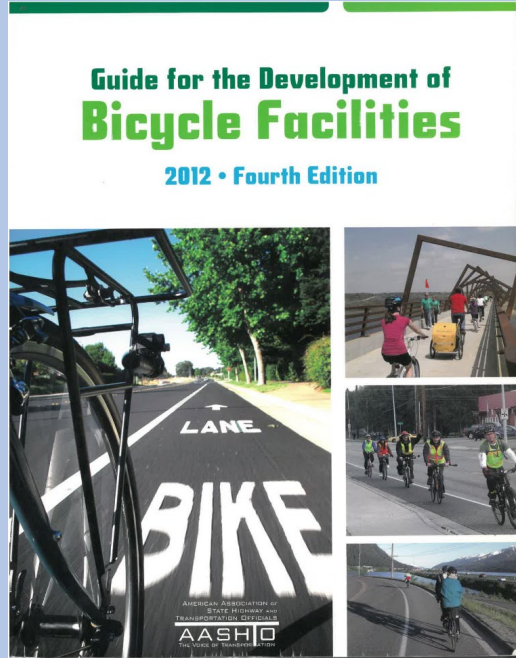
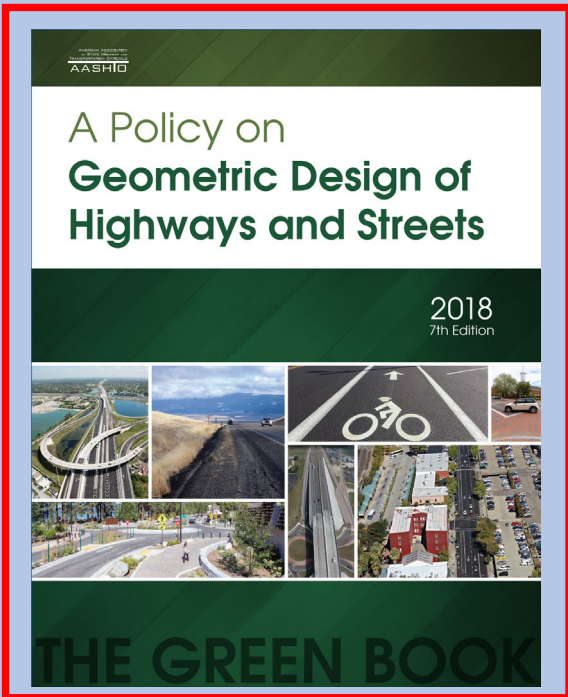


National Iowa

Promoting uniformity of urban design and construction across Iowa.

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IOWADOT DESIGN Bureau

DESIGN HOME

DESIGN MANUAL

ROAD DESIGN DETAILS

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QUICK LINKS


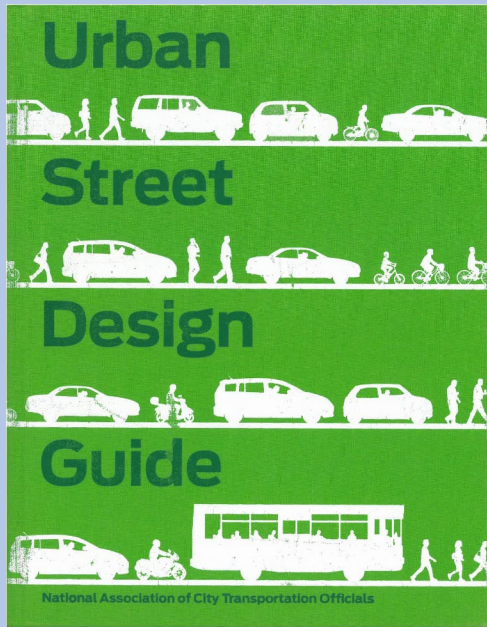
DESIGN MANUAL

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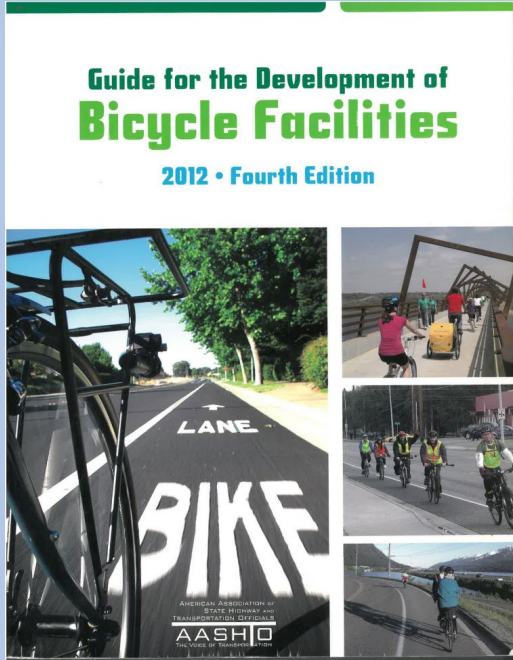
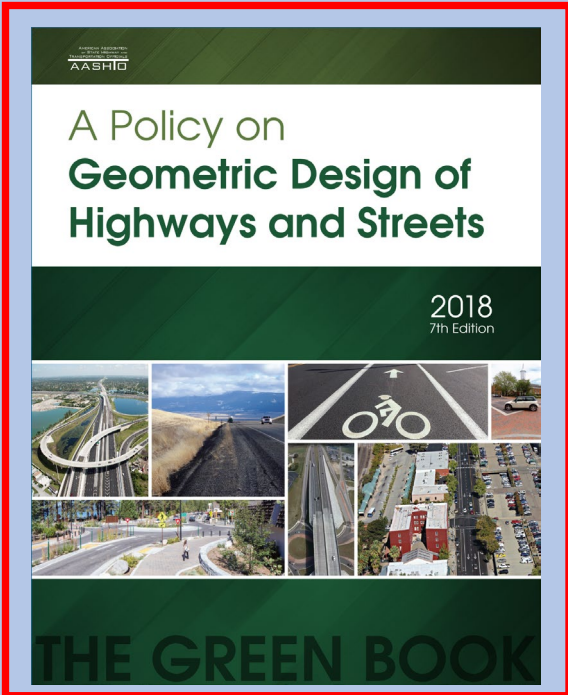
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Iowa
National



IOWADOT

DESIGN

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DESIGN HOME

DESIGN MANUAL

ROAD DESIGN DETAILS

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STORM WATER PERMITS

QUICK LINKS

DESIGN MANUAL

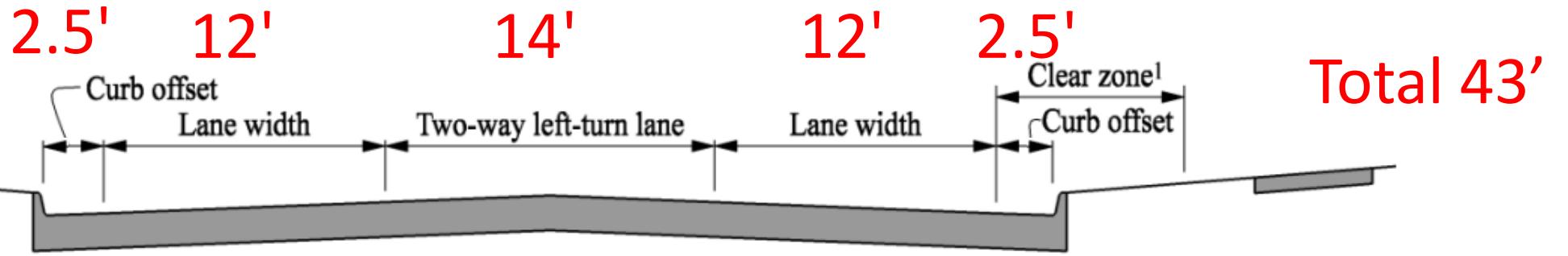
STANDARD ROAD PLANS

ROAD DESIGN DETAILS

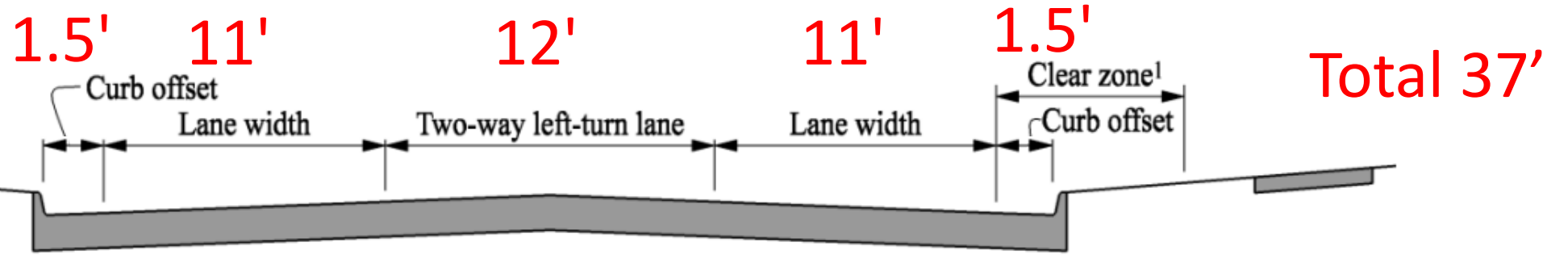
PROJECT DESIGN TABULATIONS

DESIGN GUIDANCE

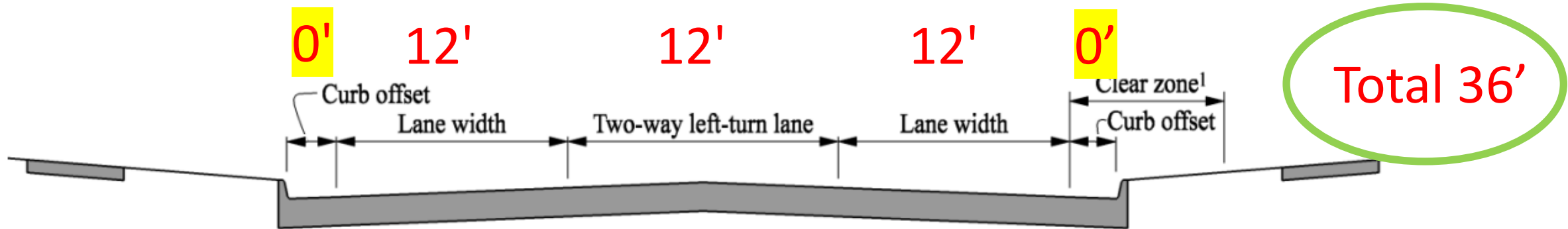
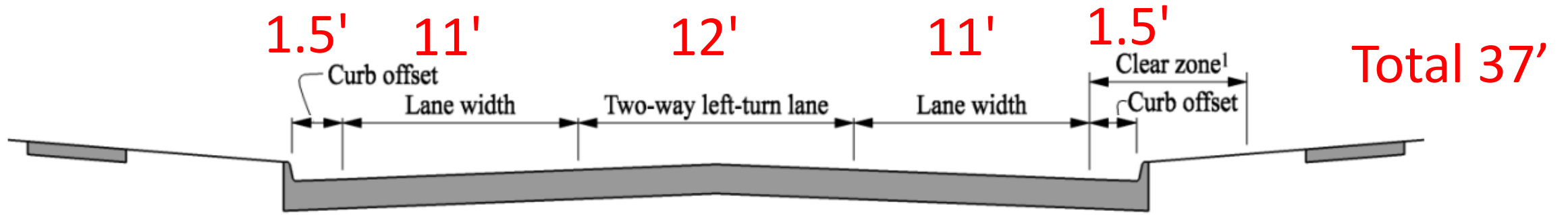
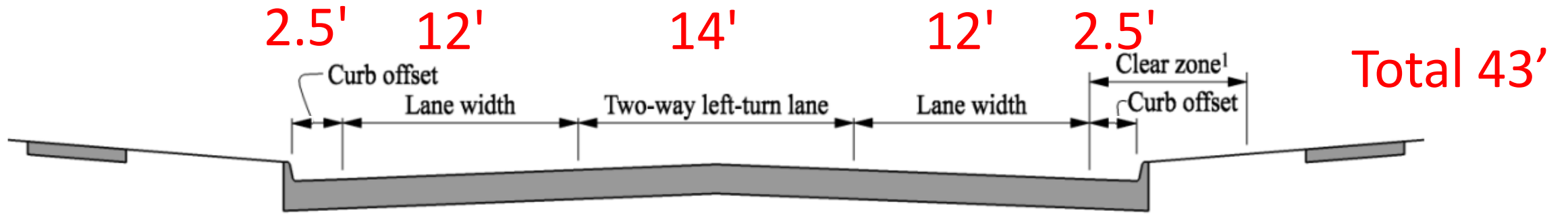
Preferred



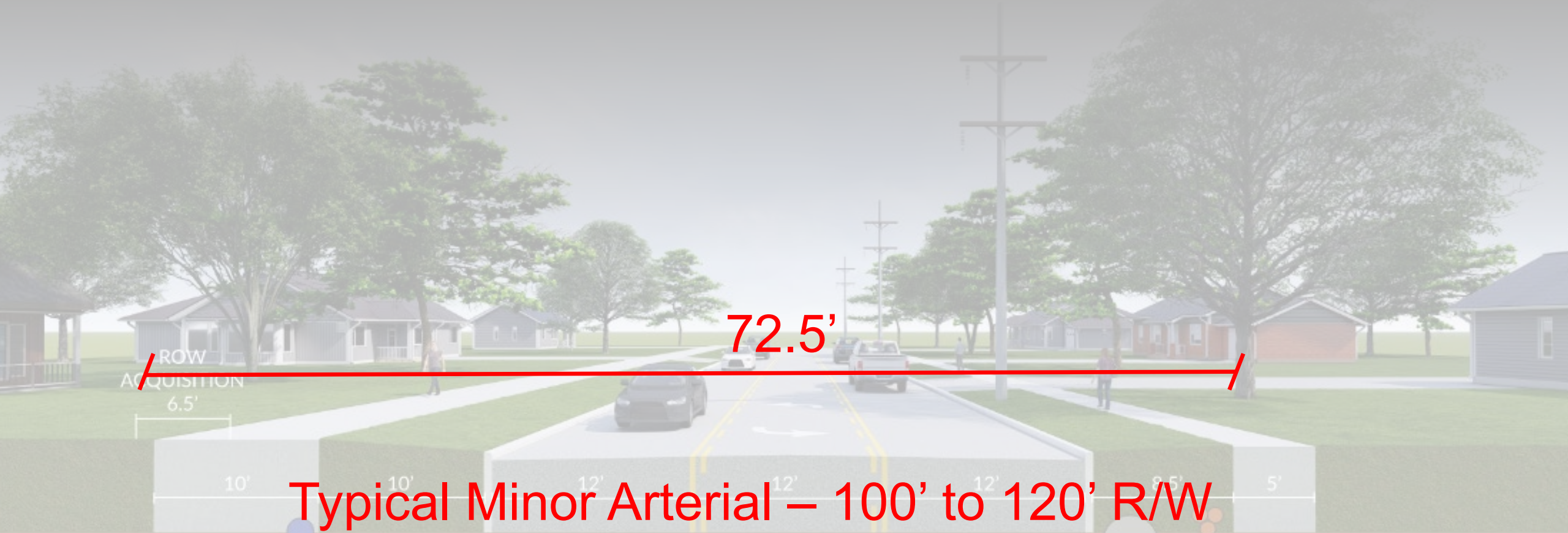
Acceptable



Preferred
Acceptable
Ashworth



RECOMMENDED CONFIGURATION



72.5'

Typical Minor Arterial – 100' to 120' R/W

WATERMAIN
TELECOMMUNICATIONS

SANITARY SEWER

GAS MAIN

STORM SEWER

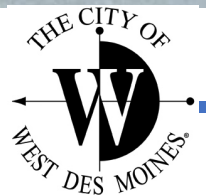
OPEN ACCESS
CONDUIT NETWORK
GAS MAIN

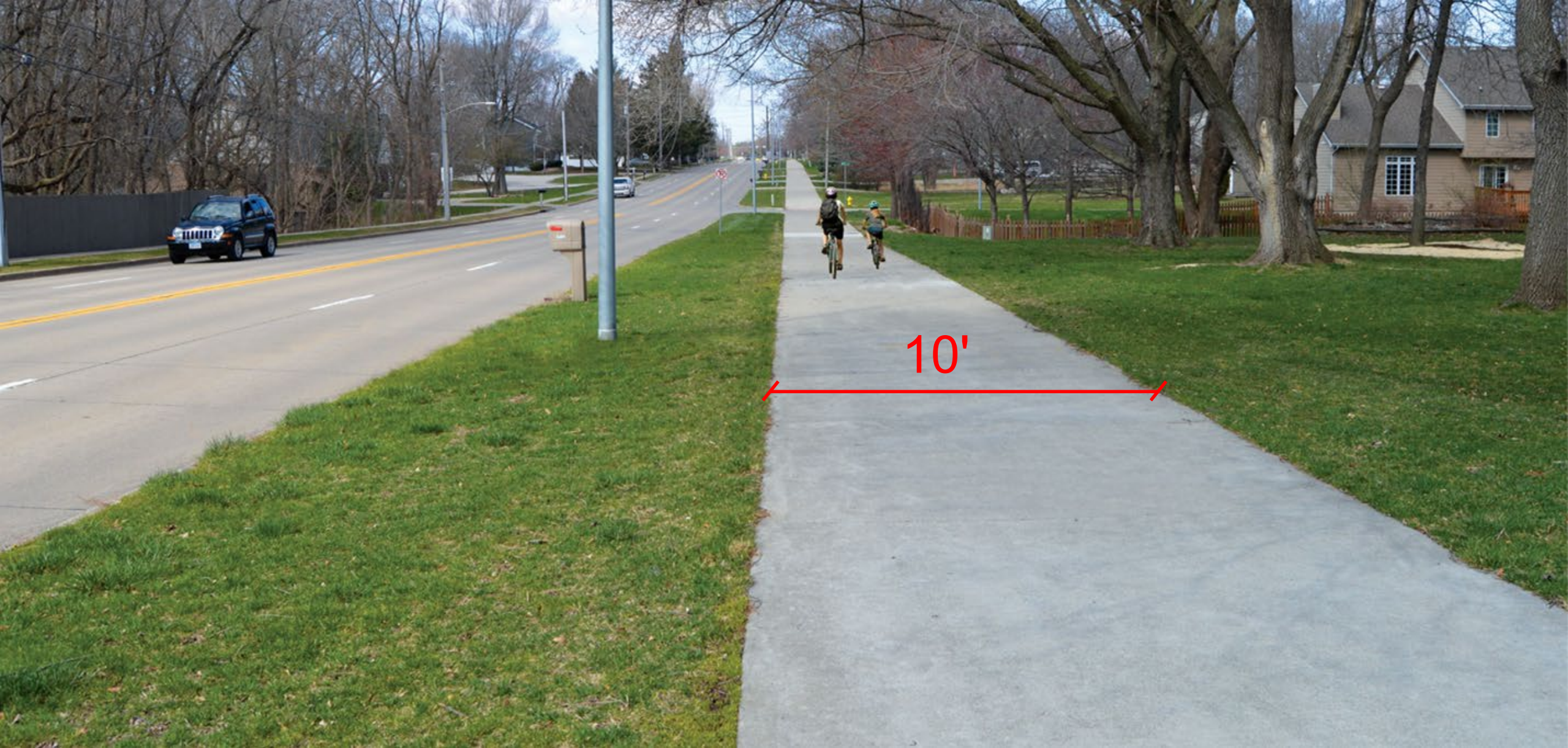
Shared Use Paths are maintained by the City – including snow removal by the City



ASHWORTH ROAD – PRAIRIE VIEW DRIVE TO 60TH STREET

SHIVEHATTERY
ARCHITECTURE+ENGINEERING





10'



8' - Snowplow



8' - Snowplow
/-----/

10' Path Avoids edge loading causing damage

C. Shared Use Path Design Elements

10'

The following considerations should be used as a guide when designing shared use paths.

- Width:** A bicyclist requires a minimum of 4 feet and a preferred 5 feet of essential operating space based upon their profile. The typical path width is 10 feet to accommodate two-way traffic. Consider wider paths (11 to 14 feet) when at minimum one of the following is anticipated:
 - User volume exceeding 300 users within the peak hour.
 - Curves where more operating space should be provided.
 - Large maintenance vehicles.
 - There is a need for a bicyclist to pass another path user while maintaining sufficient space for another user approaching from the opposing direction. 11 feet is the minimum width for three lanes of traffic.

Can use 8' if:

- Few Pedestrians
- Rare Maintenance Vehicles

Path width can be reduced to 8 feet where the following conditions prevail:

- Bicycle traffic is expected to be low.
- Pedestrian use is generally not expected.
- Horizontal and vertical alignments provide well-designed passing and resting opportunities.
- The path will not be regularly subjected to maintenance vehicle loading conditions.
- A physical constraint exists for a short duration such as a utility structure, fence, etc.

Path widths between 8 and 5 feet should be avoided; paths less than 5 feet do not meet ADA requirements.

- Many Pedestrians Anticipated
- Routine Snow Removal

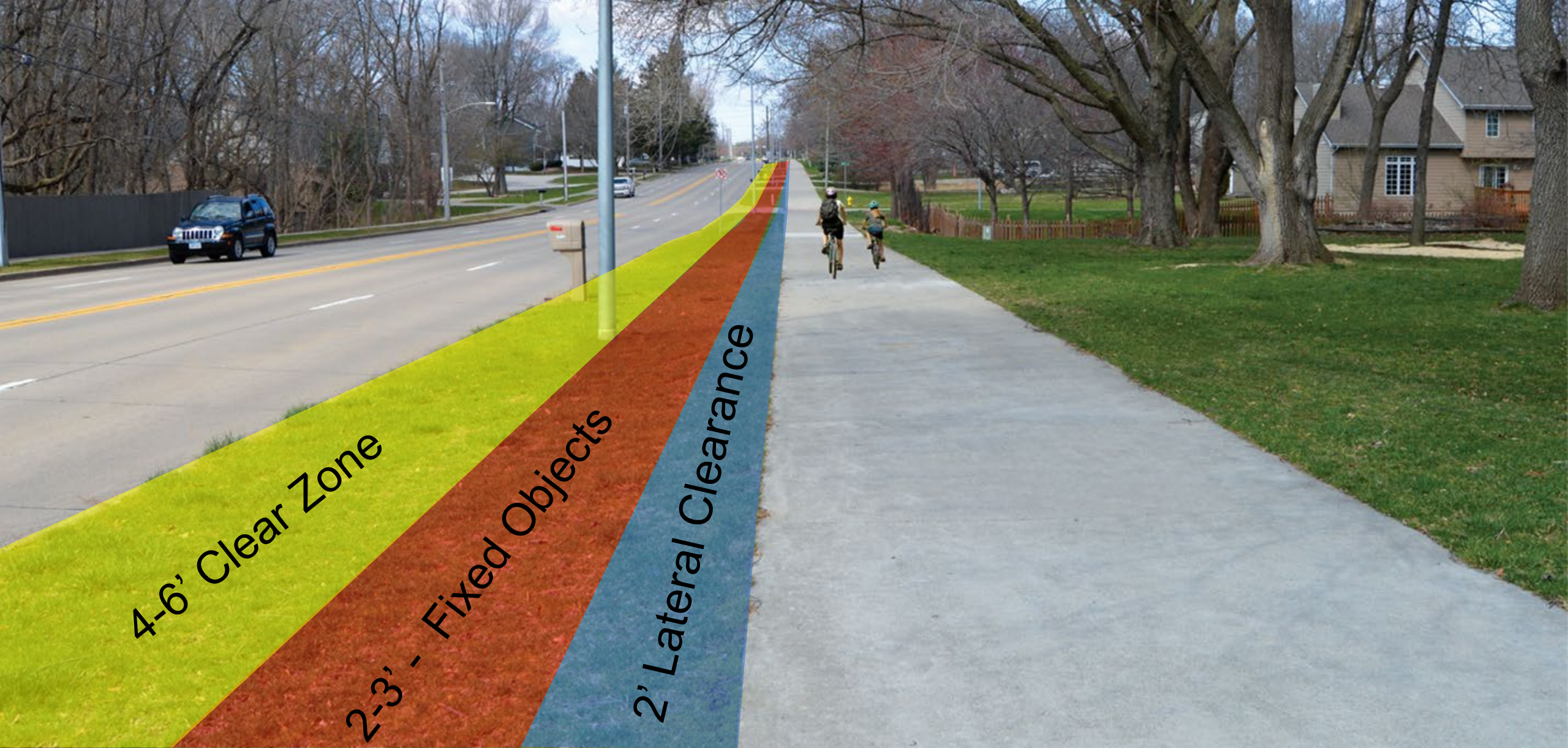




10'



Safety Buffer



4-6" Clear Zone

2-3' - Fixed Objects

2' Lateral Clearance



Secondary Snow Clearing

Snow Storage



7.5'



4'



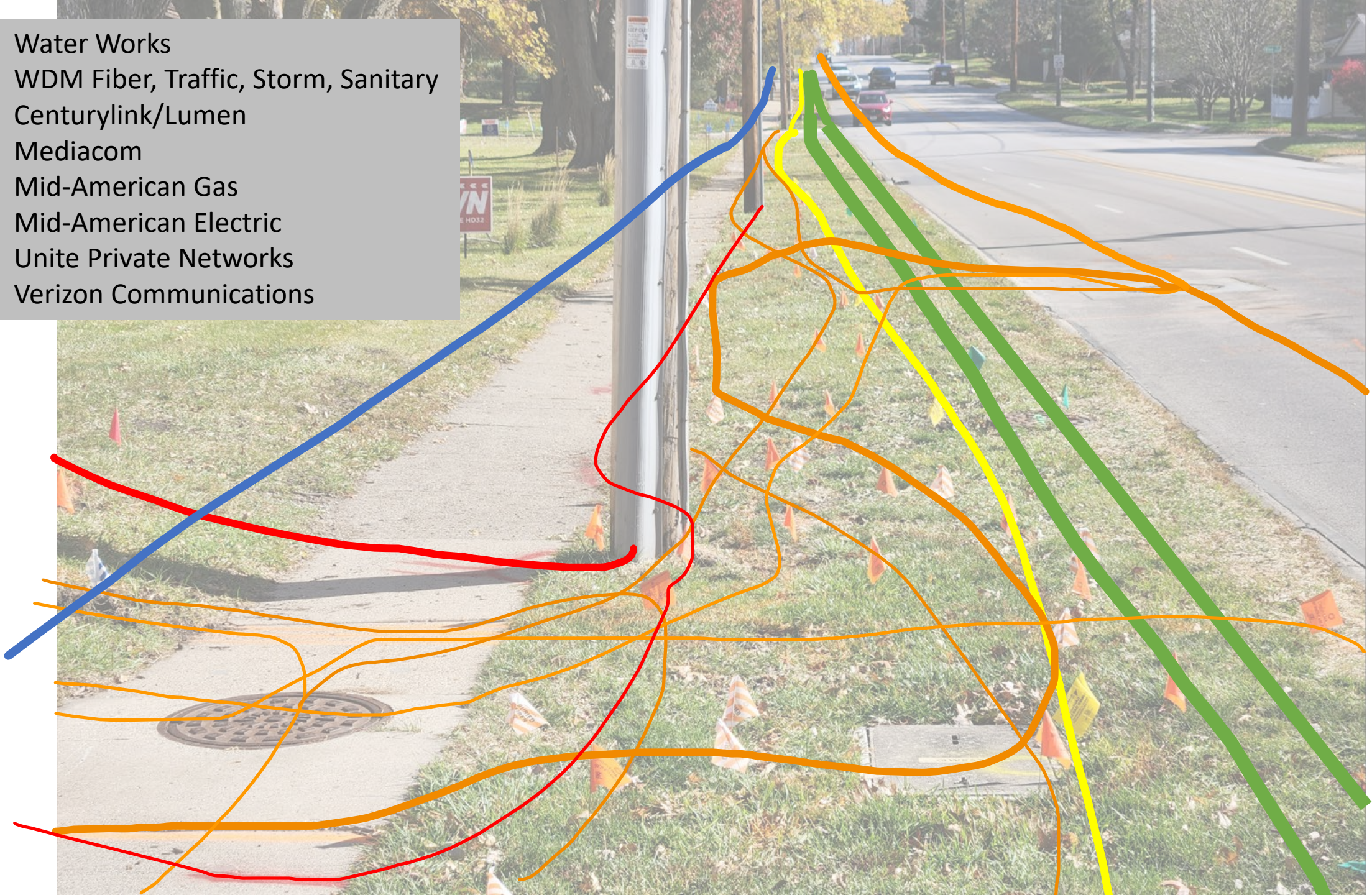
Underground Utilities



MARK
BROWN
IOWA HOUSE H032

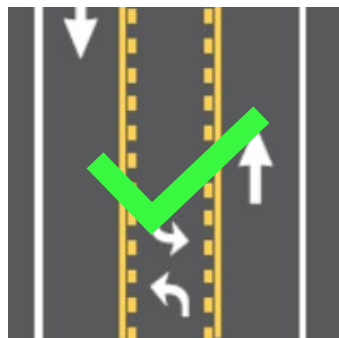


- Water Works
- WDM Fiber, Traffic, Storm, Sanitary
- Centurylink/Lumen
- Mediacom
- Mid-American Gas
- Mid-American Electric
- Unite Private Networks
- Verizon Communications



WHAT ELSE WAS CONSIDERED?

1. Do nothing
2. Two Lanes with On-Street Bike Lanes
3. Four Standard Width (12') Lanes
4. Five Lanes
5. Roundabouts at key intersections
6. Three Lanes



Alternative Summary

	Alternative	Geometrics and Capacity	Bike and Pedestrian	Right of Way Impacts
1	Two Lanes – On Street Bikes	Does not handle existing traffic volumes	Yes – on street	0 Acres of R/W 0 Major Setback Encroachments
2	Three Lanes – No Turn Lanes	Does not handle future traffic volumes	Yes – shared use path	4 Acres of R/W 5 Major Setback Encroachments
3	Four 12' Lanes - Widening	Yes – without continuous left turn lane	Yes – shared use path	7.5 Acres of R/W 10 Major Setback Encroachments
4A	Three Lanes – Five Lanes VW Drive to 19 th St – Widen to North	Yes – with continuous left turn lane but with geometric challenges at major intersections	Yes – shared use path	6.5 Acres of R/W 12 Major Setback Encroachments
4B	Four Lanes – Five Lanes 22 nd St o 19 th St	Yes – without continuous left turn lane	Yes – shared use path	9 Acres of R/W 14 Major Setback Encroachments
5	Three Lanes – Five Lanes VW Drive to 19 th St– Maintain Existing Centerline	Yes – with continuous left turn lane but with geometric challenges at major intersections	Yes – shared use path	6.5 Acres of R/W 8 Major Setback Encroachments

	Alternative	Geometrics and Capacity	Bike and Pedestrian	Right of Way Impacts
1	Two Lanes – On Street Bikes	Does not handle existing traffic volumes	Yes – on street	0 Acres of R/W 0 Major Setback Encroachments
2	Three Lanes – No Turn Lanes	Does not handle future traffic volumes	Yes – shared use path	4 Acres of R/W 5 Major Setback Encroachments
3	Four 12' Lanes - Widening	Yes – without continuous left turn lane	Yes – shared use path	7.5 Acres of R/W 10 Major Setback Encroachments
4A	Three Lanes – Five Lanes VW Drive to 19th St – Widen to North	Yes – with continuous left turn lane but with geometric challenges at major intersections	Yes – shared use path	6.5 Acres of R/W 12 Major Setback Encroachments
4B	Four Lanes – Five Lanes 22nd St to 19th St	Yes – without continuous left turn lane	Yes – shared use path	9 Acres of R/W 14 Major Setback Encroachments
5	Three Lanes – Five Lanes VW Drive to 19th St– Maintain Existing Centerline	Yes – with continuous left turn lane but with geometric challenges at major intersections	Yes – shared use path	6.5 Acres of R/W 8 Major Setback Encroachments
6	Three Lanes – Five Lanes 22nd St o 19th St– Maintain Existing Centerline	Yes – with continuous left turn lane but with geometric challenges at major intersections	Yes – shared use path	5 acres of RW 0 Major Set Encroachments

Current

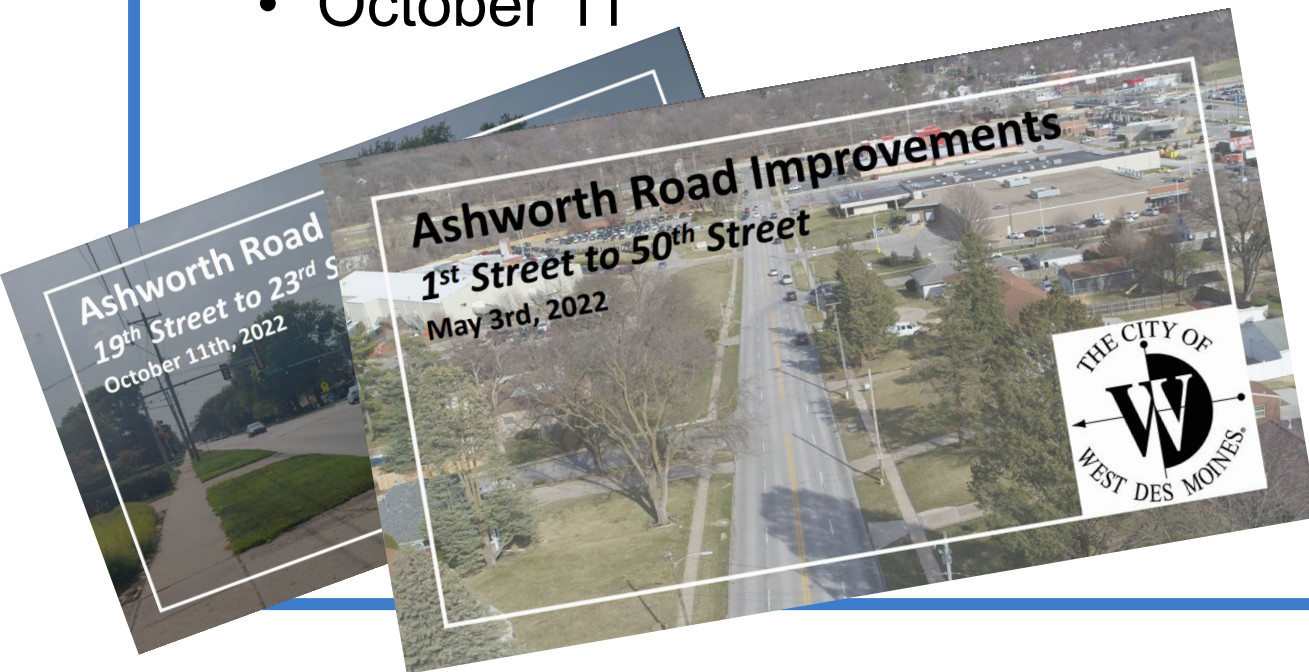
	Alternative	Geometrics and Capacity	Bike and Pedestrian	Right of Way Impacts
1	Two Lanes – On Street Bikes	Does not handle existing traffic volumes	Yes – on street	0 Acres of R/W 0 Major Setback Encroachments
2	Three Lanes – No Turn Lanes	Does not handle future traffic volumes	Yes – shared use path	4 Acres of R/W 5 Major Setback Encroachments
3	Four 12' Lanes - Widening	Yes – without continuous left turn lane	Yes – shared use path	7.5 Acres of R/W 10 Major Setback Encroachments
4A	Three Lanes – Five Lanes VW Drive to 19 th St – Widen to North	Yes – with continuous left turn lane but with geometric challenges at major intersections	Yes – shared use path	6.5 Acres of R/W 12 Major Setback Encroachments
4B	Four Lanes – Five Lanes 22 nd St to 19 th St	Yes – without continuous left turn lane	Yes – shared use path	9 Acres of R/W 14 Major Setback Encroachments
5	Three Lanes – Five Lanes VW Drive to 19 th St– Maintain Existing Centerline	Yes – with continuous left turn lane but with geometric challenges at major intersections	Yes – shared use path	6.5 Acres of R/W 8 Major Setback Encroachments
6	Three Lanes – Five Lanes 22 nd St o 19 th St– Maintain Existing Centerline	Yes – with continuous left turn lane but with geometric challenges at major intersections	Yes – shared use path	5 acres of RW 0 Major Set Encroachments
	Three Lanes – Right turn Lanes 19th St and 22nd St	Yes – with continuous left turn lane but with geometric challenges at major intersections	Yes – shared use path – 10' buffer	2.7 Acres of R/W 0 Major Set Encroachments

PUBLIC MEETINGS

- 1st to 50th Street
 - April 28th
 - May 3rd
- 19th to 23rd Streets
 - October 11

- Public Services Committee Dates
 - 3/23/2020 – Initial Study
 - 4/25/22 – Public Meeting Awareness
 - 5/23/22 – Public Meeting follow up

- Communication to Property owners
 - 1st to 50th
 - 4/14/22 – Notice for Public Meetings
 - 10/24/22 – Notice for Workshop
 - 19th to 23rd
 - 10/19/21 – Notice of Topographic Survey
 - 3/25/22 – Notice of Upcoming Meetings
 - 9/28/22 – Notice for Neighborhood Meeting



Ashworth Road Improvements

Workshop

