



# Oelwein

## Collaborative Discussion on Improved Safety and Operations



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May 11, 2026



## Agenda

**IA 150 Intersections**

**Roundabouts**

**Traffic Signals**

**4- to 3-Lane Conversion**

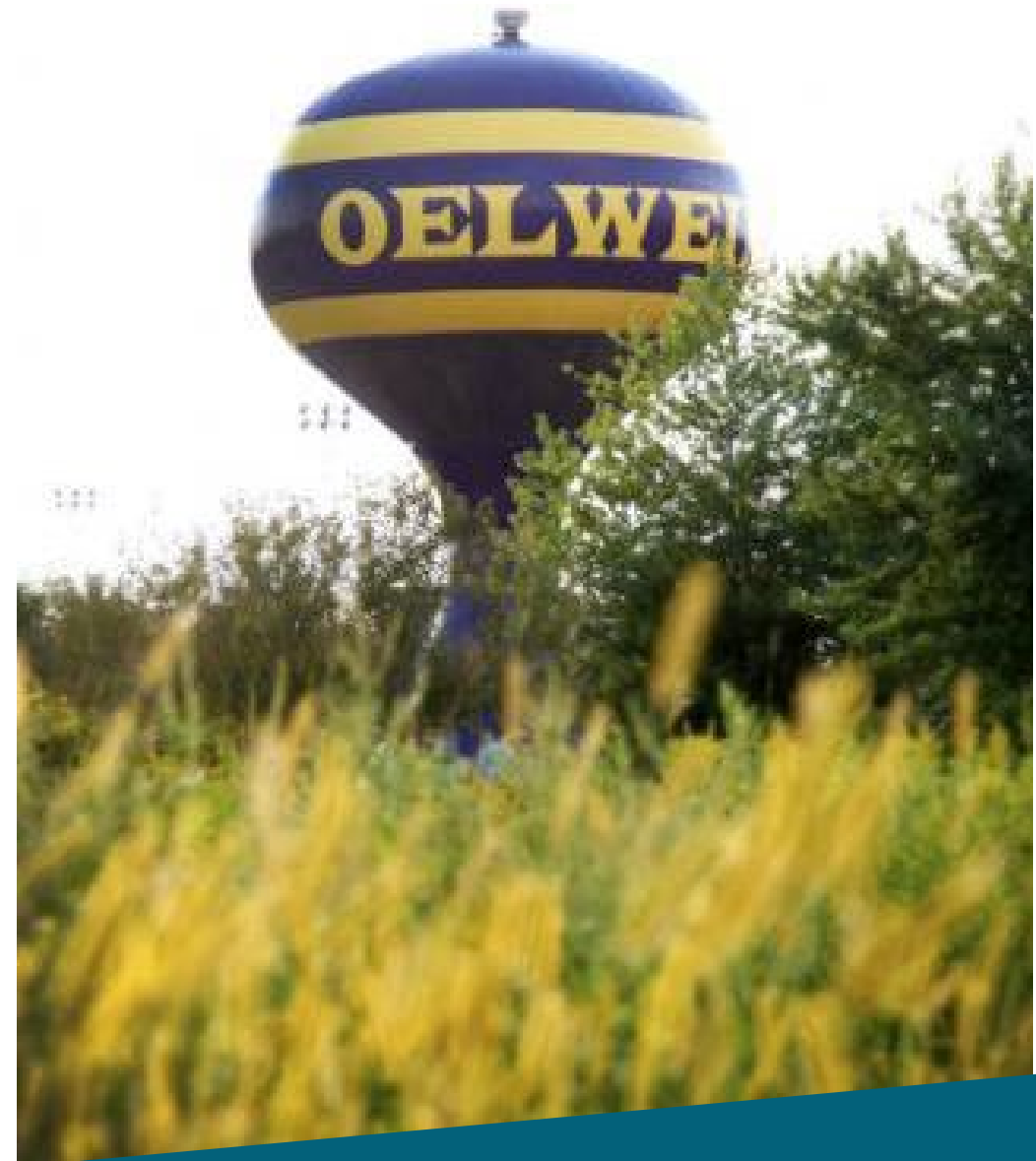
**Speed Limits**

**Walkability**

**Funding**

**Additional Information**

**Questions**



# IA 150 Intersections

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14<sup>th</sup> Street SE



# IA 150 & 14<sup>th</sup> Street SE Crash Data (2021-2025)

## Crash Severity

- 17 crashes
  - 3 minor injury
  - 4 possible injury
  - 10 property damage only

## Major Cause

- Identified patterns:
  - FTYROW: Making left turn = 4
  - Other = 5

## Potential for Crash Reduction (PCR)

- All Crashes = Negligible
- Severe Crashes = Negligible

Manner of Crash Collision	17
Non-collision (single vehicle)	0
Head-on (front to front)	3
Rear-end (front to rear)	5
Angle (oncoming left turn)	0
Broadside (front to side)	5
Sideswipe (same direction)	3
Sideswipe (opposite direction)	0
Rear to rear	0
Rear to side	0
Not reported	1
Other	0
Unknown	0

# IA 150 Intersections

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20<sup>th</sup> Street SE



# IA 150 & 20<sup>th</sup> Street SE Crash Data (2021-2025)

## Crash Severity

- 9 crashes
  - 2 minor injury
  - 4 possible injury
  - 3 property damage only

## Major Cause

- Identified patterns:
  - FTYROW: From stop sign = 3
  - FTYROW: Making left turn = 4

## Potential for Crash Reduction (PCR)

- All Crashes = Medium
- Severe Crashes = Negligible

Manner of Crash Collision	9
Non-collision (single vehicle)	0
Head-on (front to front)	0
Rear-end (front to rear)	1
Angle (oncoming left turn)	3
Broadside (front to side)	4
Sideswipe (same direction)	0
Sideswipe (opposite direction)	1
Rear to rear	0
Rear to side	0
Not reported	0
Other	0
Unknown	0

# IA 150 Intersections

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IA 281



# IA 150 & IA 281 Crash Data (2021-2025)

## Crash Severity

- 6 crashes
  - 2 possible injury
  - 4 property damage only

## Major Cause

- Identified patterns:
  - FTYROW: From stop sign = 4

## Potential for Crash Reduction (PCR)

- All Crashes = Medium
- Severe Crashes = Negligible

Manner of Crash Collision	6
Non-collision (single vehicle)	1
Head-on (front to front)	0
Rear-end (front to rear)	1
Angle (oncoming left turn)	0
Broadside (front to side)	4
Sideswipe (same direction)	0
Sideswipe (opposite direction)	0
Rear to rear	0
Rear to side	0
Not reported	0
Other	0
Unknown	0

# Potential for Crash Reduction – All Intersections

Road 1	Road 2	Traffic Control	KAB			KABCO			Statewide			
			Category Rank	Category Total	Statewide KAB Rank	Statewide Total	KAB PCR Level	Category Rank	Category Total	KABCO Rank	Statewide Total	KABCO PCR Level
IA 3	4TH STREET NORTHWEST /4'	Partial Stop	47,426	50,690	107,207	115,274	Negligible	3,390	50,690	6,042	115,274	Negligible
IA 3	7TH STREET NORTHWEST	Partial Stop	27,523	50,690	74,462	115,274	Negligible	12,177	50,690	22,486	115,274	Negligible
IA 150	20TH STREET SOUTHEAST	Partial Stop	25,814	26,073	112,998	115,274	Negligible	51	26,073	1,322	115,274	Medium
IA 3 E	1ST AVENUE NORTHEAST	Partial Stop	40,557	50,690	94,657	115,274	Negligible	35,731	50,690	91,066	115,274	Negligible
IA 150	CHARLES STREET EAST /IA 3	Traffic Signal	298	1,655	1,117	115,274	Medium	392	1,655	2,208	115,274	Medium
IA 150	12TH STREET SOUTHEAST	Partial Stop	41,288	50,690	95,765	115,274	Negligible	46,833	50,690	107,982	115,274	Negligible
IA 3	9TH STREET NORTHEAST	Partial Stop	26,300	50,690	72,441	115,274	Negligible	12,016	50,690	21,939	115,274	Negligible
IA 3	6TH STREET NORTHEAST /6T	Partial Stop	15,269	50,690	53,908	115,274	Negligible	33,252	50,690	87,010	115,274	Negligible
IA 150	14TH STREET SOUTHEAST	Partial Stop	25,933	26,073	113,741	115,274	Negligible	25,985	26,073	112,843	115,274	Negligible
IA 3 E	8TH STREET NORTHEAST	Partial Stop	27,523	50,690	74,462	115,274	Negligible	40,488	50,690	98,649	115,274	Negligible
IA 3	5TH STREET NORTHEAST	Partial Stop	46,070	50,690	104,611	115,274	Negligible	35,911	50,690	91,382	115,274	Negligible
IA 3 E	5TH STREET NORTHWEST	Partial Stop	23,627	50,690	68,454	115,274	Negligible	38,512	50,690	95,705	115,274	Negligible
IA 3 E	5TH STREET NORTHEAST	Partial Stop	23,414	50,690	68,142	115,274	Negligible	11,752	50,690	20,963	115,274	Negligible
IA 3 E	3RD STREET NORTHWEST /3	Partial Stop	47,928	50,690	108,125	115,274	Negligible	46,160	50,690	107,053	115,274	Negligible
IA 3 E	1ST STREET NORTHEAST	Partial Stop	49,261	50,690	110,645	115,274	Negligible	49,072	50,690	111,212	115,274	Negligible
IA 3 E	7TH STREET NORTHEAST	Partial Stop	21,575	50,690	64,947	115,274	Negligible	37,243	50,690	93,506	115,274	Negligible
IA 3	45TH STREET	Partial Stop	18,236	26,073	82,755	115,274	Negligible	20,323	26,073	68,538	115,274	Negligible
IA 281/IA 150	100TH STREET	Partial Stop	556	26,073	2,991	115,274	Negligible	152	26,073	2,745	115,274	Medium
IA 150	10TH STREET SOUTHEAST /C	Partial Stop	699	50,690	2,227	115,274	Negligible	47,455	50,690	108,846	115,274	Negligible
IA 150	4TH STREET SOUTHEAST	Partial Stop	42,037	50,690	97,046	115,274	Negligible	47,266	50,690	108,569	115,274	Negligible
IA 150	3RD STREET SOUTHEAST	Partial Stop	49,493	50,690	111,094	115,274	Negligible	5,105	50,690	8,854	115,274	Negligible
IA 150	1ST AVENUE SOUTHEAST /3f	Partial Stop	40,835	50,690	95,085	115,274	Negligible	3,422	50,690	6,094	115,274	Negligible
IA 150	1ST STREET SOUTHEAST	Partial Stop	1,013	50,690	2,842	115,274	Negligible	2,141	50,690	4,140	115,274	Medium
IA 150	2ND STREET SOUTHEAST	Traffic Signal	597	1,655	6,141	115,274	Negligible	1,064	1,655	113,442	115,274	Negligible
IA 150	7TH STREET SOUTHEAST	Traffic Signal	1,143	1,655	113,745	115,274	Negligible	663	1,655	24,221	115,274	Negligible
2ND ST NW	FREDERICK AVENUE NORTH	Traffic Signal	1,233	1,655	114,062	115,274	Negligible	1,214	1,655	114,065	115,274	Negligible

# Roundabouts

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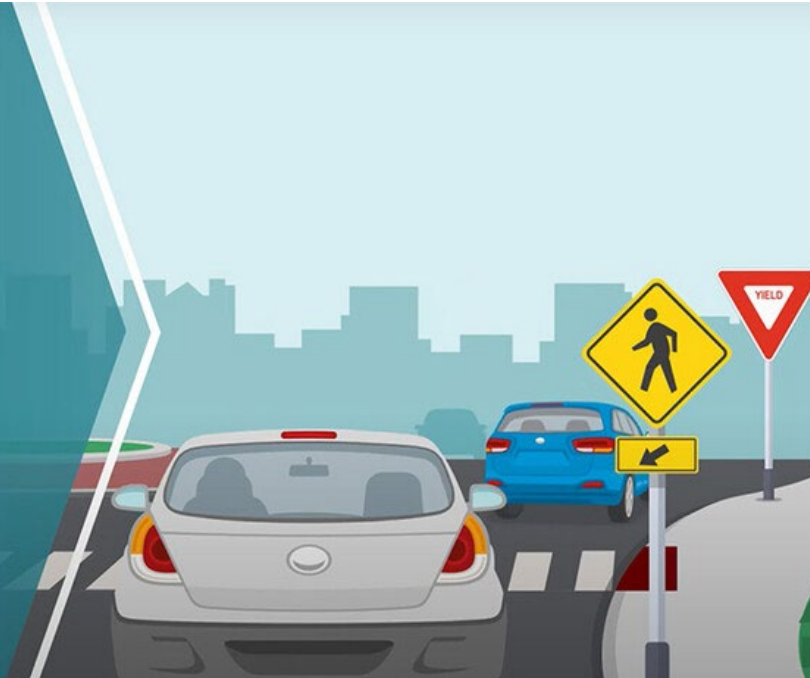
Improve Safety



# Roundabouts

## ROUNDABOUT DRIVING TIPS

1. Slow Down
2. Look for Pedestrians
3. Yield to Other Drivers



- [Iowa DOT Information](#)
- CRASH REDUCTION
  - 40% reduction in **all** crashes.
  - 80% reduction in **serious** crashes.
  - Reduce conflict points from 32 to 8.
- Programs
  - Complimentary Design Review
  - Traffic Engineering Assistance Program (TEAP)
  - Traffic Safety Improvement Program (TSIP)

# ROUNDAABOUTS REDUCE CRASHES



# Traffic Signals



Standard traffic signal



Arrow signal head

## Solid red

Come to a complete stop.

## Flashing red

Treat it the same as a stop sign.

## Solid yellow

Do not enter the intersection if you can stop safely. If you cannot stop safely, proceed through the intersection with caution.

## Flashing yellow

Proceed with caution. Yield to vehicles and pedestrians and proceed when it is safe.

## Solid green

Go, but only when the intersection is clear. Yield to vehicles and pedestrians in the intersection. When the light changes, traffic may be caught in the intersection, and you must give them time to clear.

## Steady red arrow

Drivers turning left or right must stop.

## Steady yellow arrow

The left or right turn signal is about to turn red. Do not enter the intersection if you can stop safely. Complete your left or right turn if you are already within the intersection.

## Flashing yellow arrow

Yield to oncoming traffic and pedestrians; then turn left proceeding with caution. Oncoming traffic has a green light.

## Steady green arrow

Drivers can proceed with the left or right turn. Oncoming traffic must stop. Do not go straight. Drive only in the direction of the arrow. Yield the right of way to other vehicles and pedestrians already in the intersection.

# Traffic Signals

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## Installation Justification

- Must be warranted by way of MUTCD (Section 4) analysis.
  - Evaluate existing intersection control
  - Review crash data (3 years)
  - Analyze traffic counts and turning movements
- Should improve overall safety and/or operations of intersection.
- Traffic Control Device application required.

## Marginally Warranted

- Increase delay.
- Increase crash rates.
- Disrupts traffic flow.

**NOT always the safer solution.**

# 4- to 3-Lane Conversions

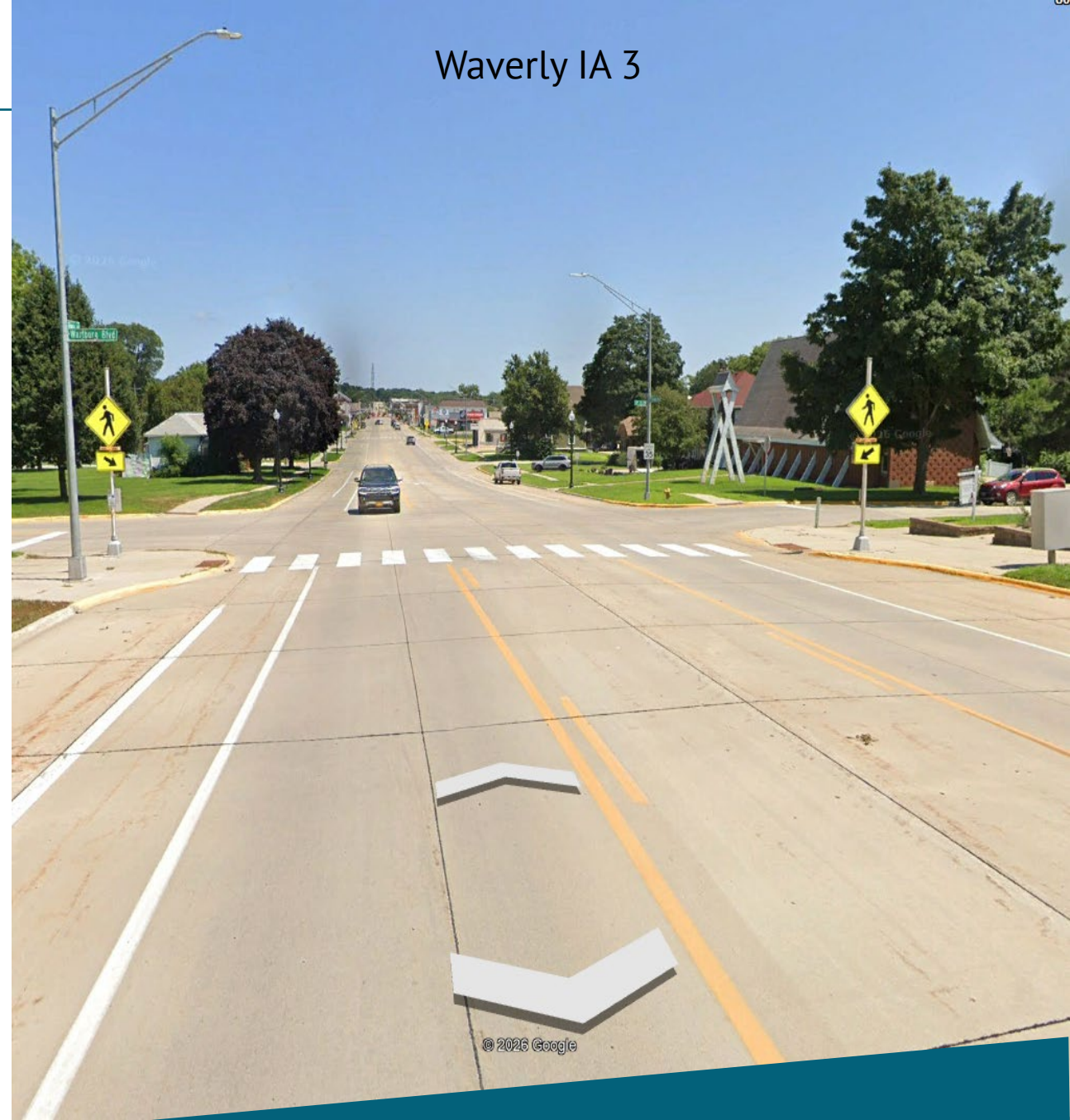
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Ex: US 65 Mason City

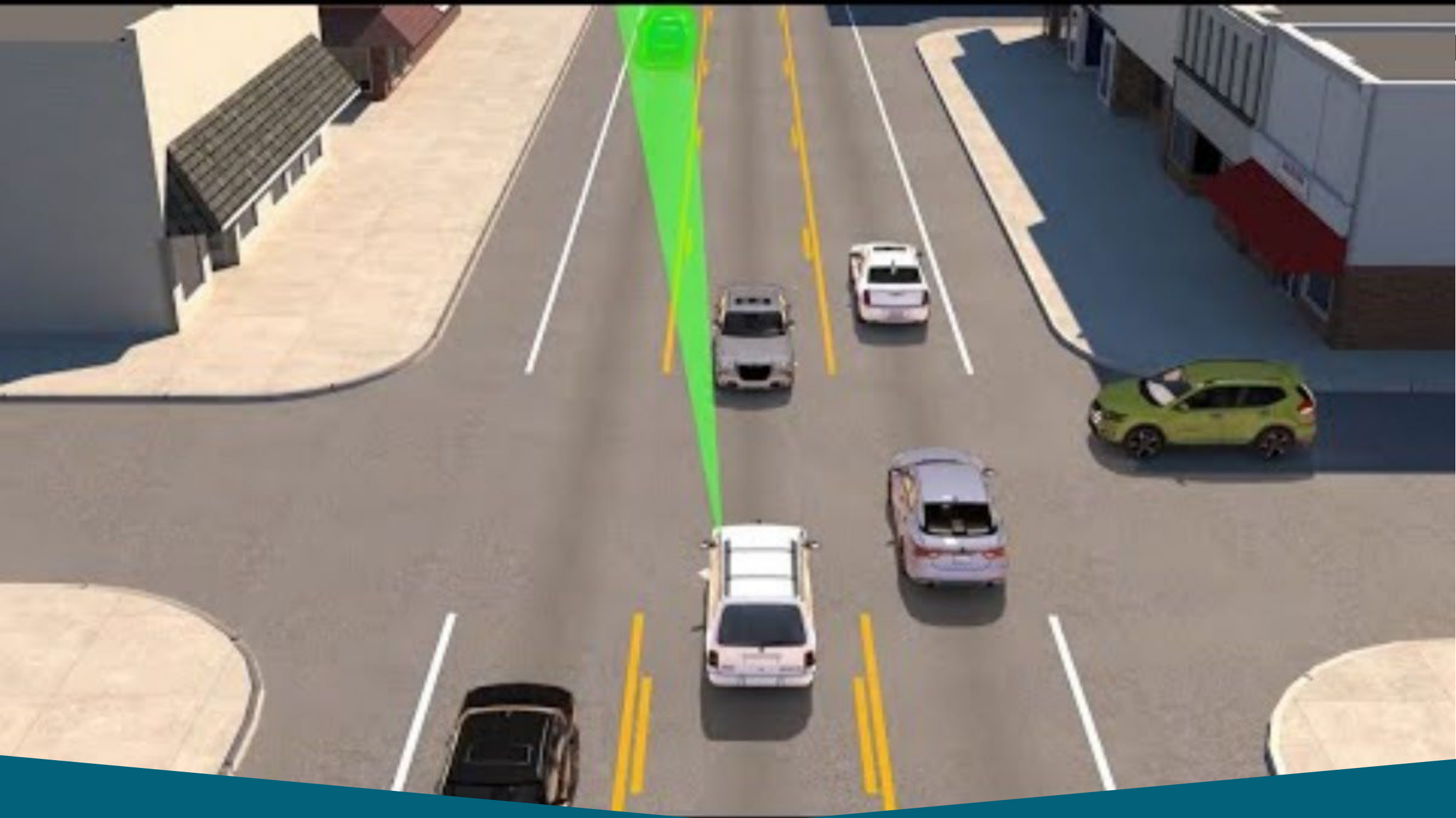
Mason City US 65



## 4- to 3-Lane Conversions

- [Iowa DOT Information](#)
- Reduces crashes by ~50%.
- Improves walkability
  - Fewer lanes to cross.
  - Lanes are further away from sidewalk/curb
- Regulates speeds and calms traffic
  - Reasonable driver sets the speed
- Installed by agreement with DOT & City





# Speed Limits

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## IOWA SPEED LIMITS

Getting you up to speed  
on speed limits in Iowa

**Remember to always use good judgment and drive at a safe and reasonable speed for the existing conditions.**

**This is every driver's responsibility.**



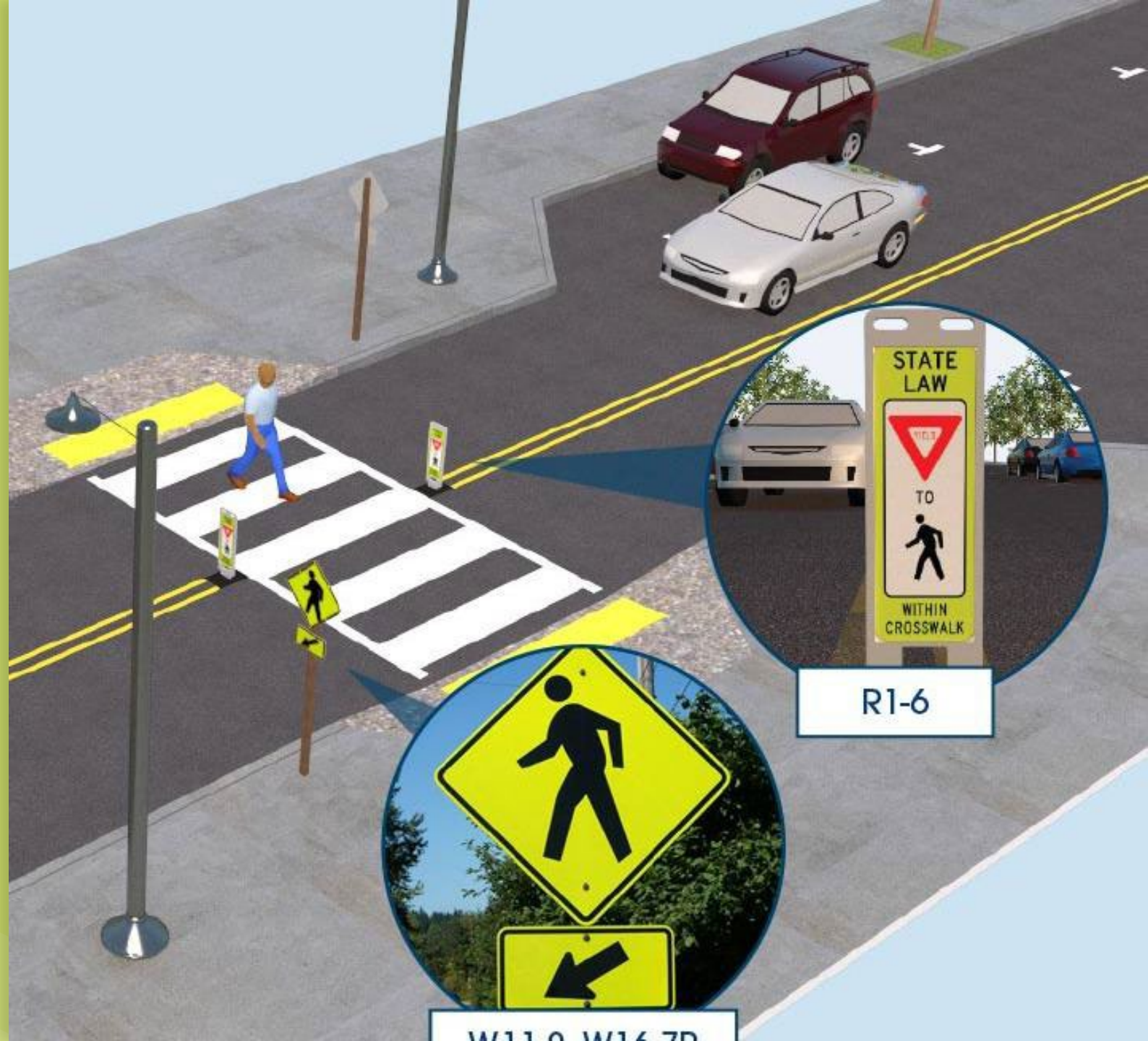
# Speed Limits

- Setting [Speed Limits](#)
  - Area Context
  - Road Environment
  - Road Characteristics
  - Crash History
  - Traffic Speeds
- Speed Study (IA 150 in 2018)
- [Speed Feedback Signs](#)
- [Automated Traffic Enforcement](#)



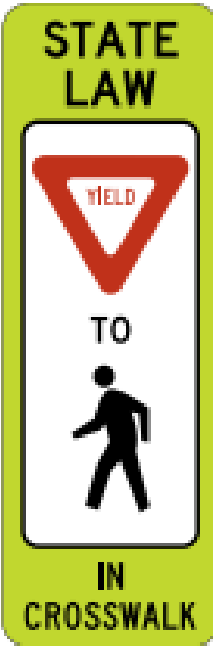
# Walkability

## Sidewalks & Crosswalks



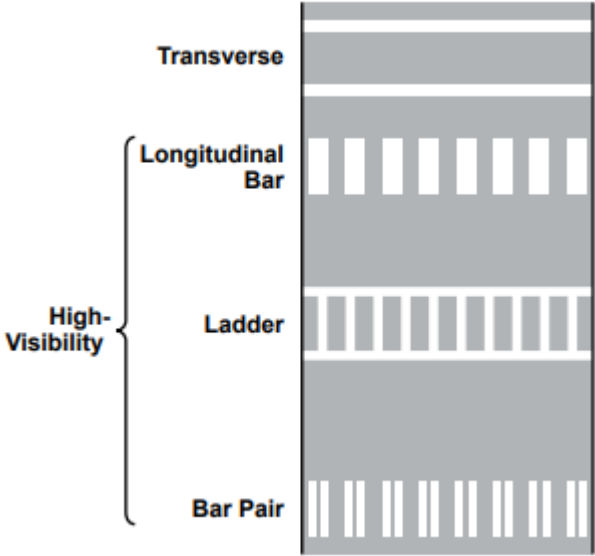
R1-6

W11 9 W16 7D



# Walkability

- [Complete Streets Policy](#)
- [Rectangular Rapid Flashing Beacons](#)
- [Pedestrian Hybrid Beacons](#)
- Improved Lighting
- Enhanced Signing & Pavement Markings
  - High-visibility markings
  - In-street signs



R1-5

## Funding ([link](#))

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- [Local Safety Funding Comparison Table](#)
- Traffic Safety Improvement Program (TSIP)
- Local Highway Safety Improvement Program (HSIP-Local)
- Urban-State Traffic Engineering Program (U-Step)
- Traffic Engineering Assistance Program (TEAP)
- Transportation Alternatives/TAP

## [Other Grant and Program List](#)

# Additional Information

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## Traffic Data

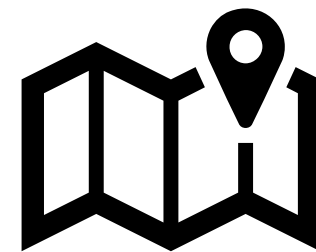
- <https://experience.arcgis.com/experience/291d4e2c64cf490a95a6660b1349a088/page/Traffic-Volume>
  - Includes both segment and intersection turning movements throughout the state.

## Preliminary 3-lane layout with Roundabouts

- Google Earth KMZ file shows preliminary layout.
- 3-lane can be completed without the roundabouts.
  - Suggested to convert and monitor before installing roundabout.
- Roundabouts can be added as needed or funding allows.

## Potential for Crash Reduction

- <https://arcg.is/1PuWXL3>



Click Map for Google Earth KMZ

# Questions?

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