



Real People. Real Solutions.

Hwy 144 (1st Ave) 3-lane Conversion

Council Workshop

April 8, 2019



Agenda

- Project Description
- Project History
- Why this Project?
- Potential Benefits of 3-Lane Roads
- Potential Disadvantages of 3-Lane Roads
- Conclusions
- Next Steps

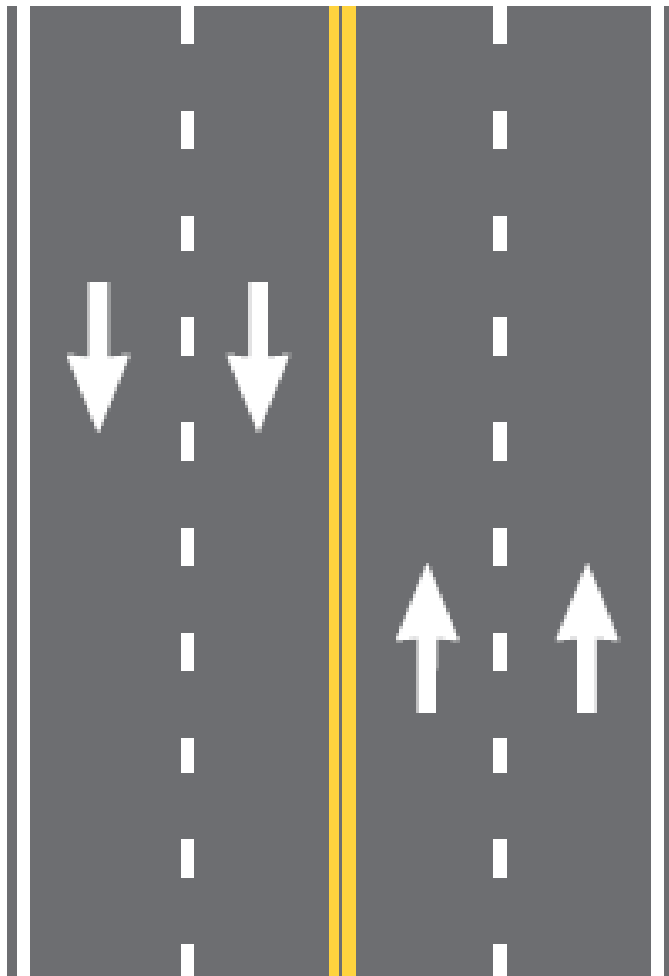


Project Description

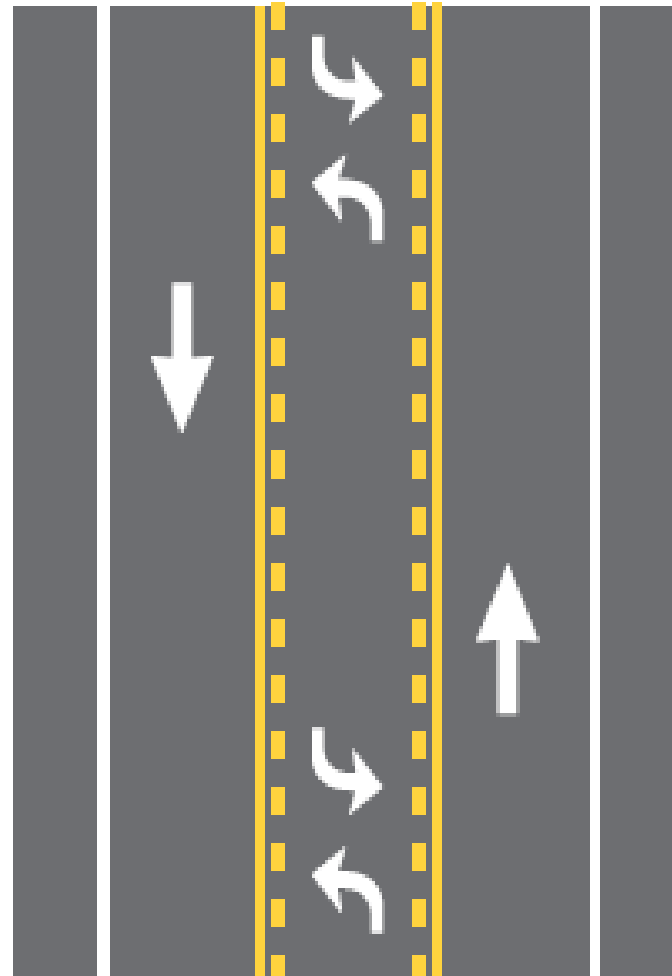
- Hwy 144 North and South of Willis is currently a 4-lane undivided roadway
- Proposed to be changed to a 3-lane section to match section around Willis
 - One lane in each direction with a center turn lane
- 2016 Volume
 - Hwy 141 to Willis Ave = 8,900 Vehicles/day
 - Willis Ave to Rawson St = 6,400 vehicles/day
 - Rawson St to Park St = 4,900 vehicles/day



BEFORE



AFTER



Project History

- Iowa DOT completed “Statewide Screening for Potential Lane Reconfiguration” report in 2017
 - Several roads throughout the state identified as potential for 3-Lane
 - Based on vehicle volume and crash history
 - 3-lanes recommended for consideration by IDOT when volumes are less than 16,000 vehicles/day and crash rate greater than state avg.
- Hwy 144 Pavement Condition is poor in areas
- Grant Funding secured to repave & restripe Hwy 144
 - Council voted in 2018 to support the grant application



Why this Project?

- FHWA list a 4 to 3-lane conversion as a Proven Safety Countermeasure
- 3-lanes have shown to reduce crashes by 19-47%
- From 2017 IDOT report, Hwy 144 has a crash rate of 474 HMVMT
- Statewide average is 155 HMVMT
- Crash rate is 3 X state average



Road Diets (Roadway Reconfiguration)

A "Road Diet," or roadway reconfiguration, can improve safety, calm traffic, provide better mobility and access for all road users, and enhance overall quality of life.

SAFETY BENEFIT:

4-Lane → 3-Lane

Road Diet Conversions

19-47%

Reduction in total crashes

Source: *Evaluation of Lane Reduction "Road Diet" Measures on Crashes*, FHWA-HRT-10-053.



Why this Project?

- Concerns from Residents
 - Speeding
 - Safety/Crash Concerns
 - N. of Rawson St
 - 23 crashes in since 2012
 - 98% of crashes: rear-end, broadside, angle
 - 20% are injury related
 - Limited Sight Distance when pulling out from side streets



Why this Project?

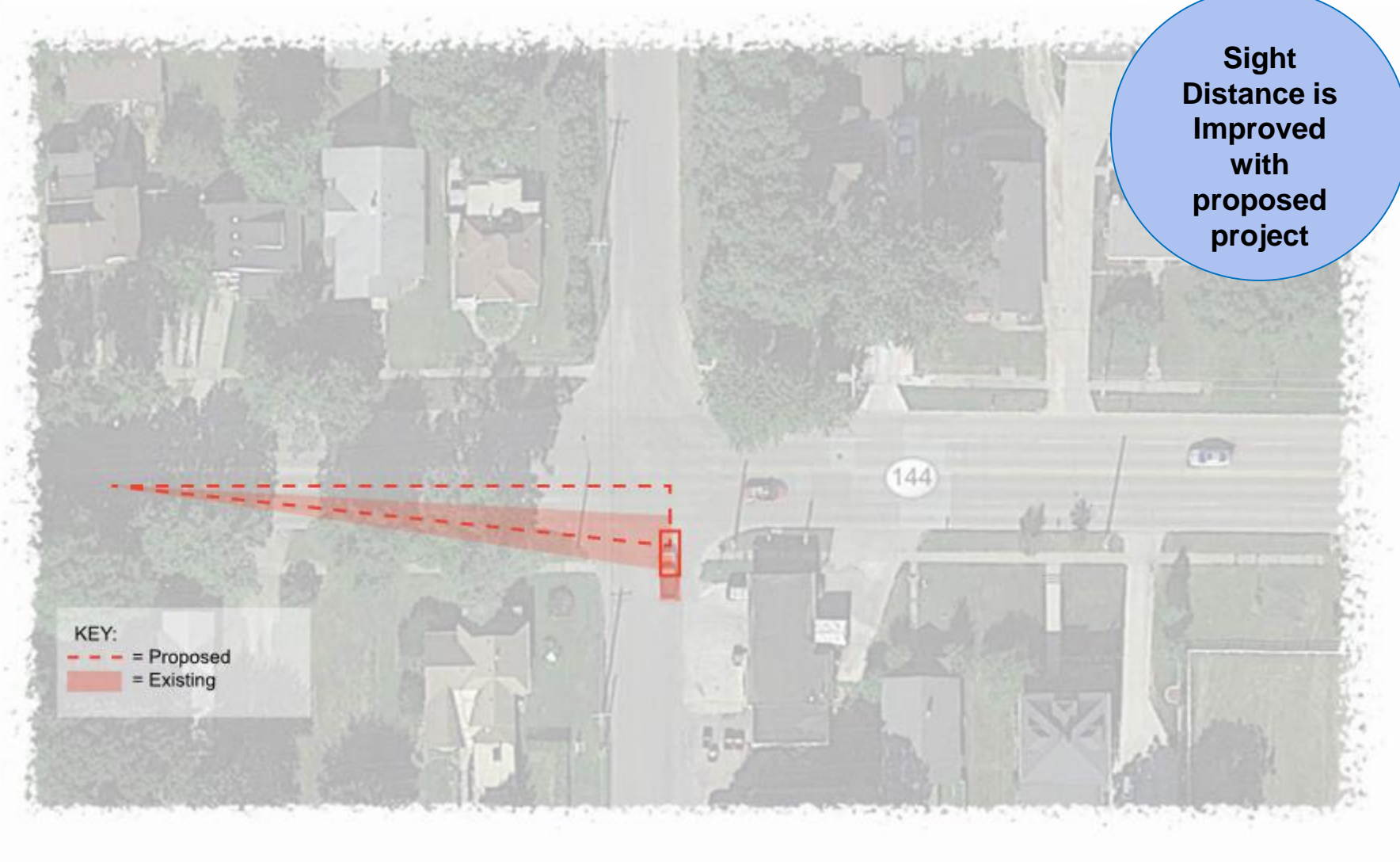
- Example: Existing Sight Distance from Park St



**Sight
Distance is
Improved
with
proposed
project**

KEY:

- - - = Proposed
- █ = Existing

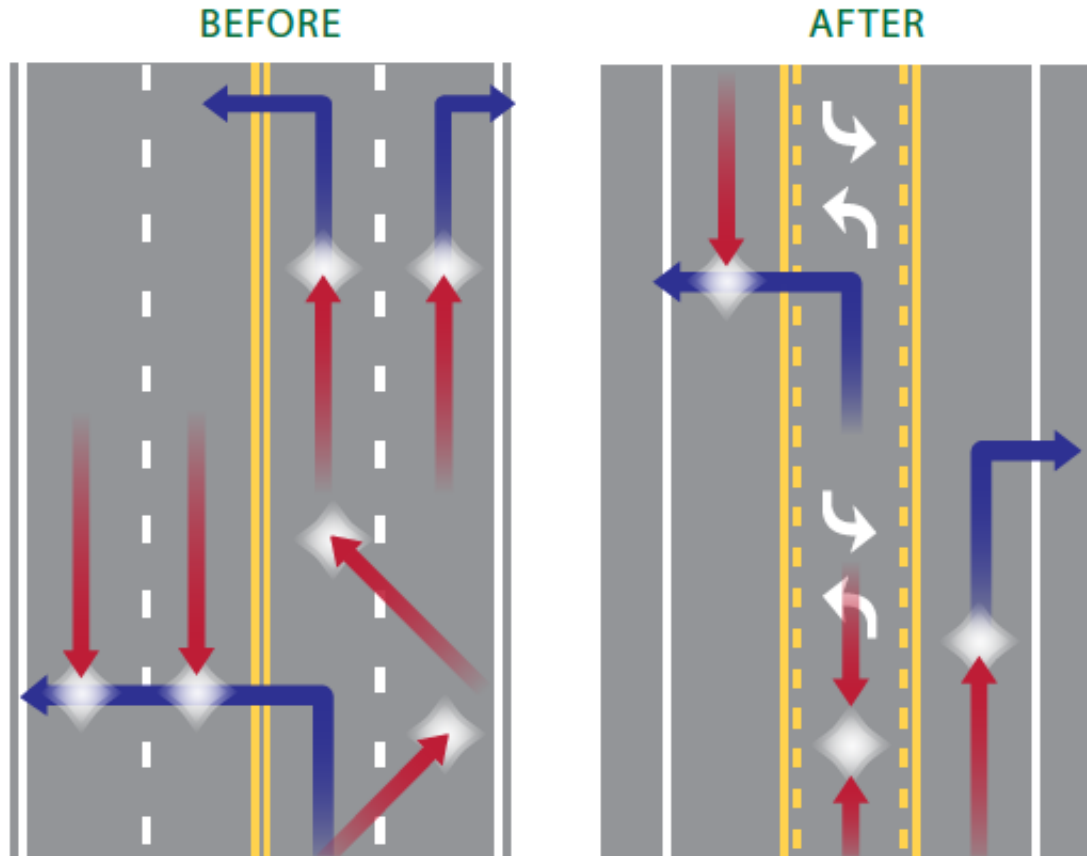


3-Lane Potential Benefits

- Improved Vehicle Safety
- Improved Pedestrian Safety
- Traffic Calming
- Improved Emergency Response Time

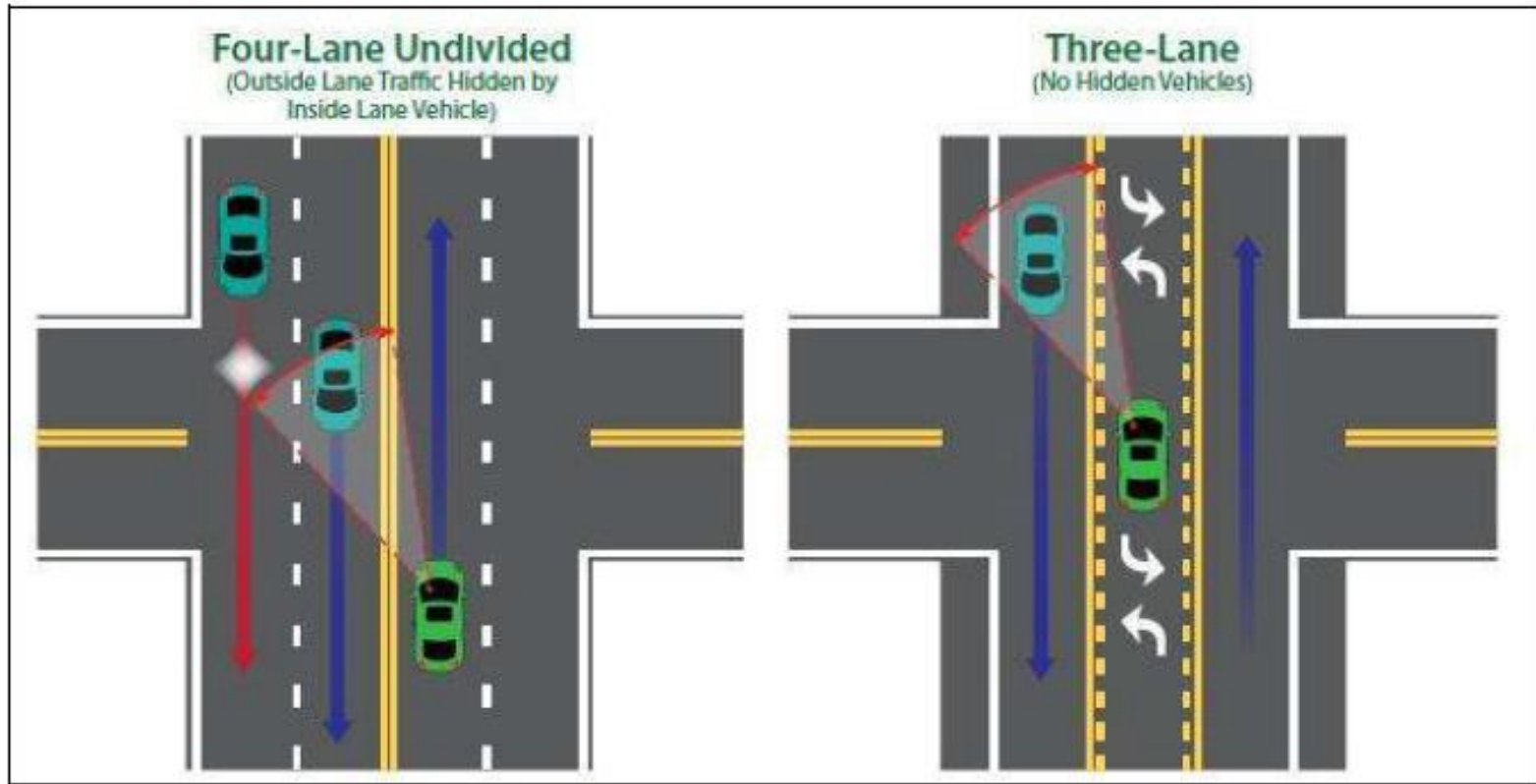


Reduced Conflict Points



6 conflict chances vs. 3 conflict chances

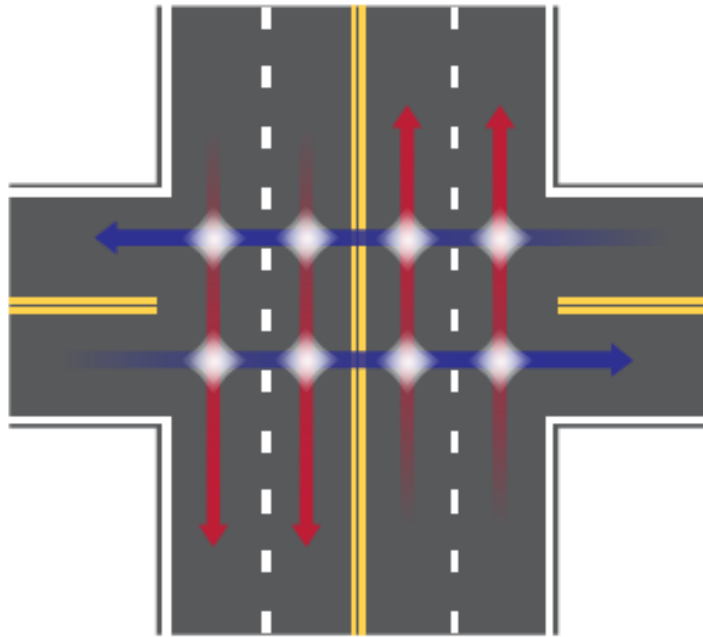
Better Sight Distance



Reproduced from the FHWA Road Diet Information Guide

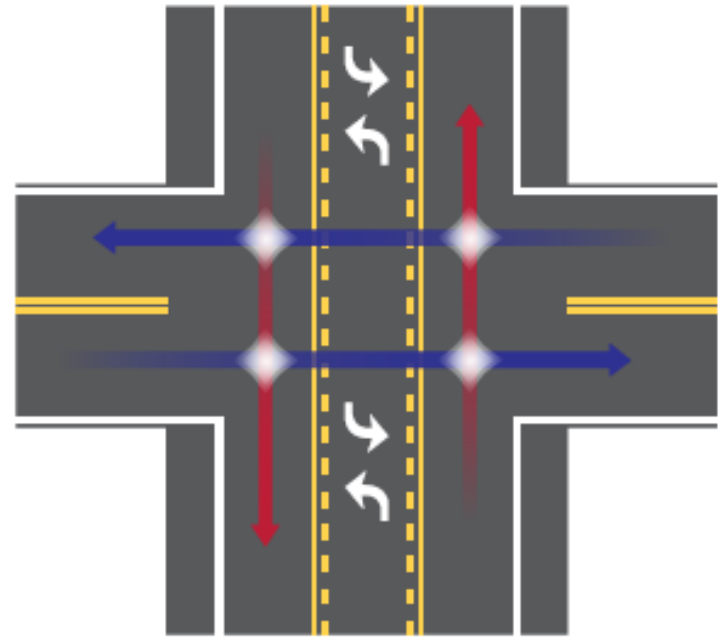
Safer Street Crossings

Four-Lane Undivided



8

Three-Lane



4

Pedestrian Crossing a 4-Lane Undivided Roadway



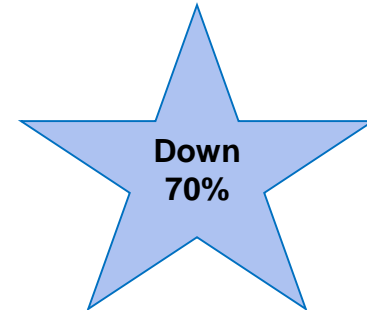
Pedestrian Crossing a 3-Lane Roadway

**Crossing only
one lane of traffic
at a time reduces
the risk of
crashes and
serious injuries
- AARP**



It works!

- Success with other 3-lane restriping projects in Perry
 - Hwy 144 from Willis to Bateman Restriped in 2016
 - Before project this section had 20 crashes in 3-years
 - With 7 injury crashes, including one fatal
 - After project this section had 6 crashes in 3-years
 - With no injury crashes



Potential Disadvantages

- Increased delay at unsignalized access points
- Loss of passing opportunities
 - Aggressive Drivers
 - Slow Moving Vehicles
- Increased Travel Delay



Conclusion

- Traffic safety & Pedestrian safety is a community issue
- Community to determine which is the priority?
 - Improving traffic and pedestrian safety while maintaining an acceptable traffic flow
- OR
- moving traffic with a minimum amount of delay and accepting the higher safety risks
- This project will increase safety and improve the city's infrastructure
 - 3-Lane roadways are proven to reduce the types of crashes experienced on Hwy 144
 - It works here: 3-Lane by Willis Ave reduced crashes 70%

Next Steps

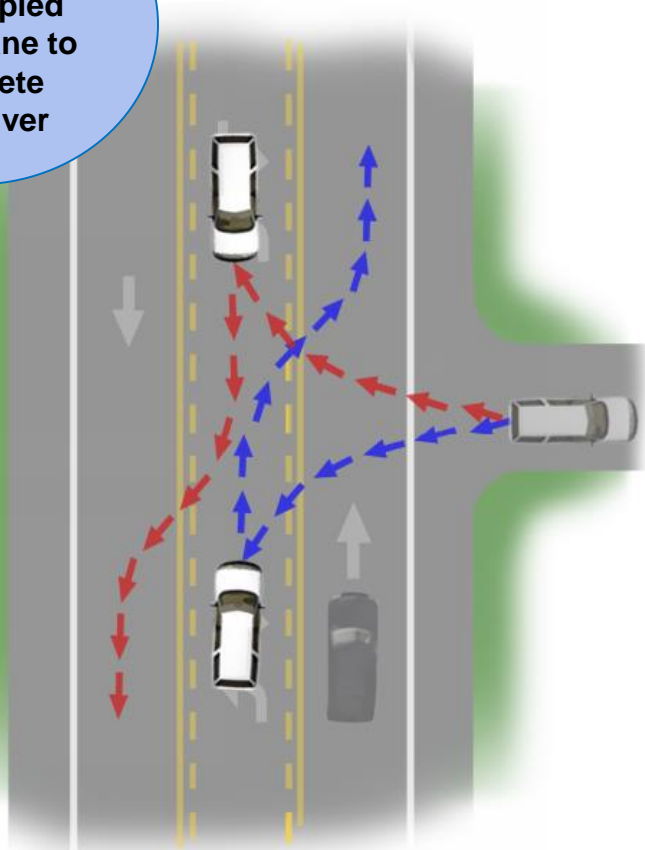
- A public meeting will be planned for late spring/early summer 2019 to present the concept plan
- Modifications to the plan will be made in Summer/Fall 2019
- Repaving/Restriping work will be completed in Spring/Summer 2020



Questions?

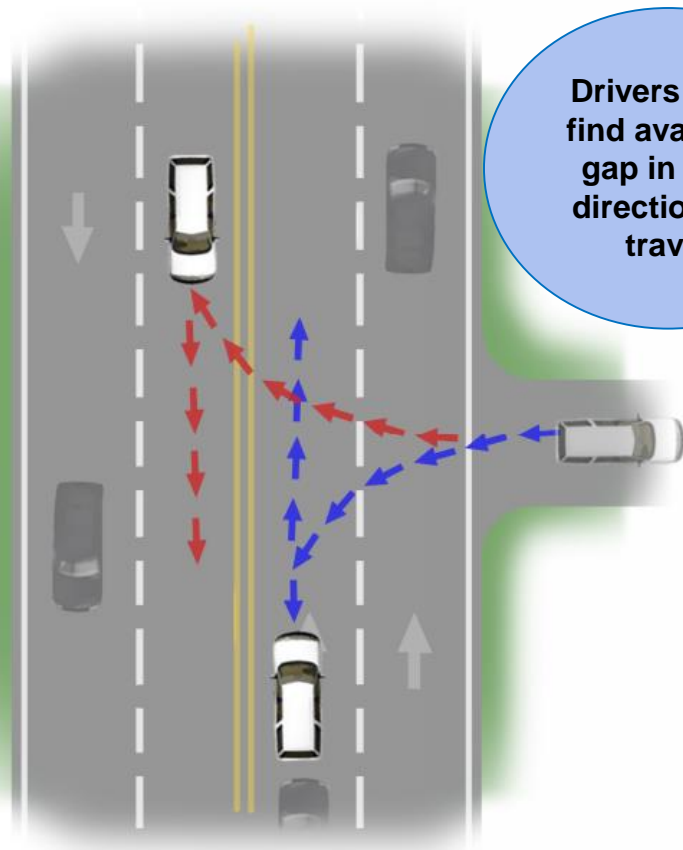
Backing out of Driveway

Drivers can use unoccupied center lane to complete maneuver



AFTER

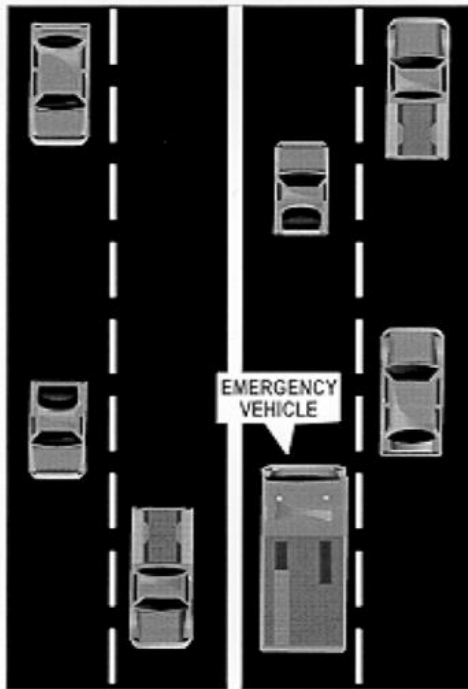
Drivers must find available gap in both directions of travel



BEFORE

Improved Emergency Vehicle Access

Four - Lane Emergency Vehicle Access



Three - Lane Emergency Vehicle Access

