

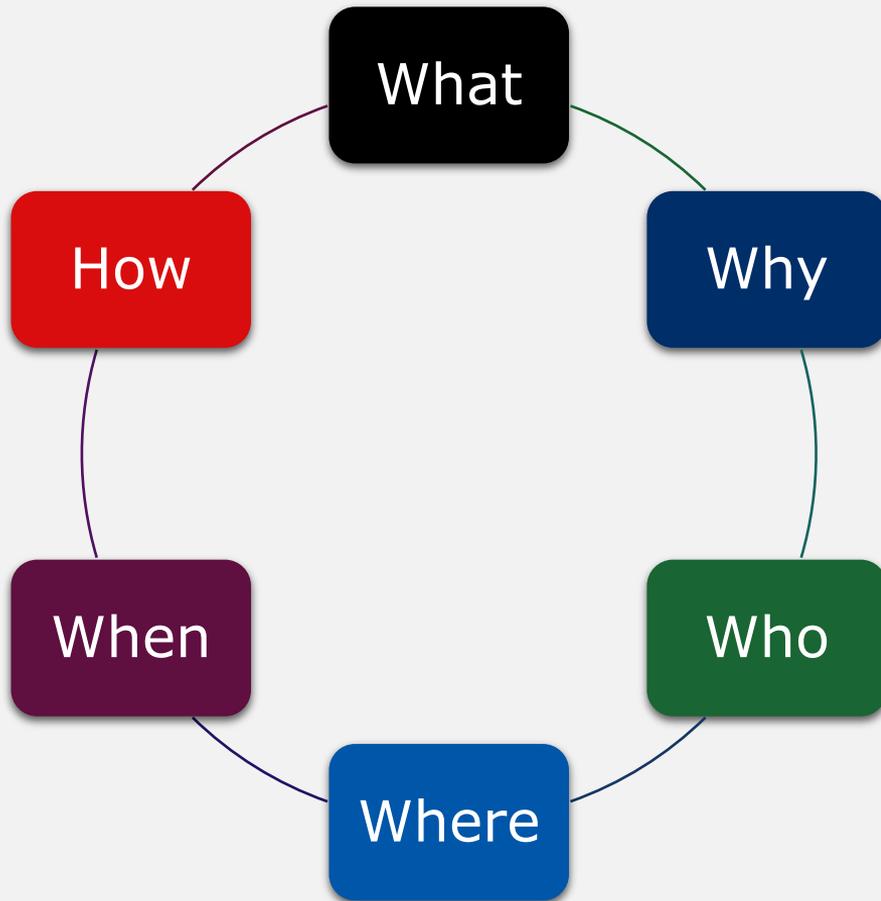


# Breaking the I.C.E.

Best Practices for Intersection Control Evaluation

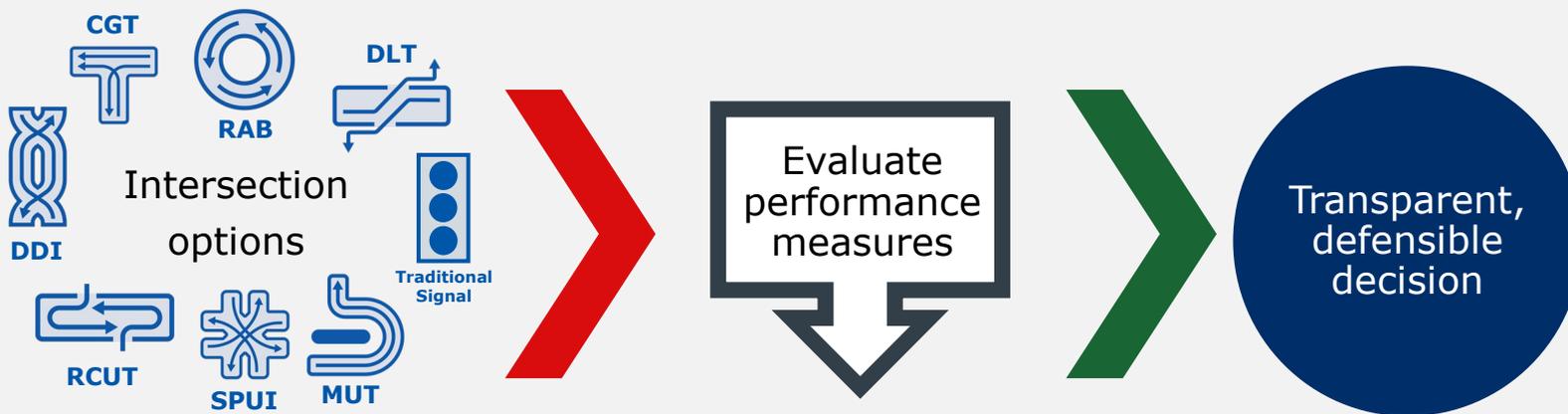


September 25, 2025



+ Pro Tips & FAQs

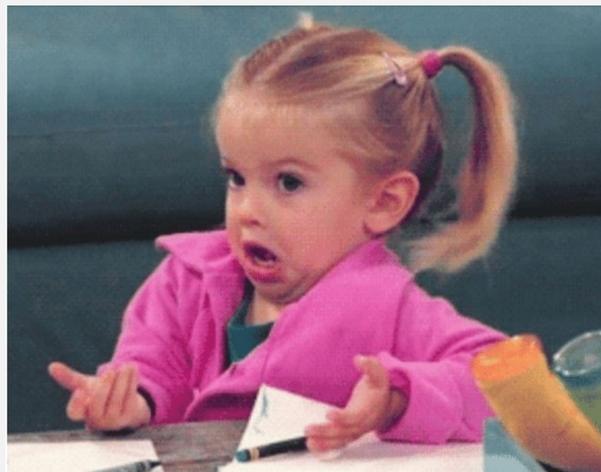
## What is ICE?



**"INTERSECTION CONTROL EVALUATION" (ICE)**

What

## What is ICE?



Evaluate  
performance  
measures

- Safety
- Operations
- Cost
- Impacts

What

## What is ICE?



Evaluate  
performance  
measures

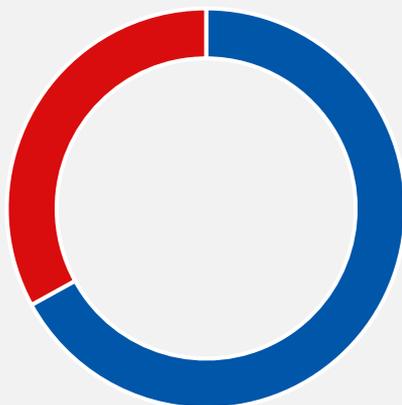
- Safety
- Operations
- Cost
- Impacts

The ICE process often produces a selection of intersection types with tradeoffs between performance measures such as operations, safety, cost, and impacts. Among the viable intersection types, the chosen control should be one with the highest expected safety performance that reduces fatal and serious injury crashes.

What

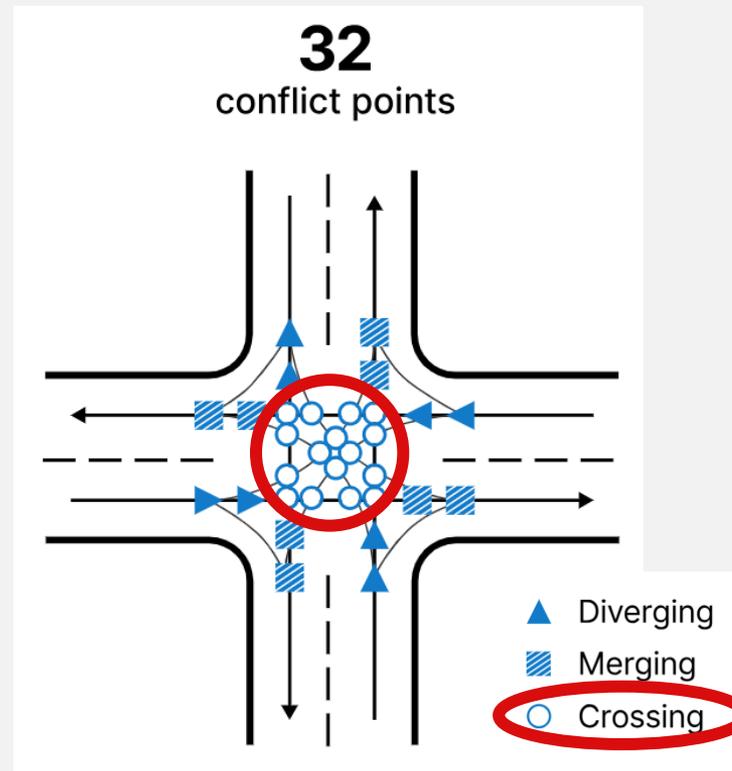
## Why ICE matters

Fatal and Serious Injury Crashes

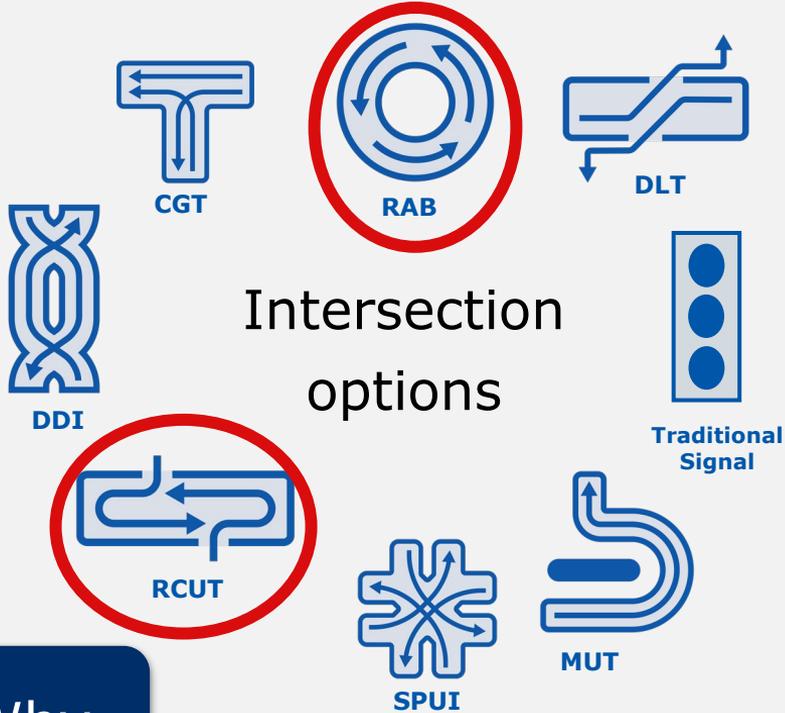


■ Intersections

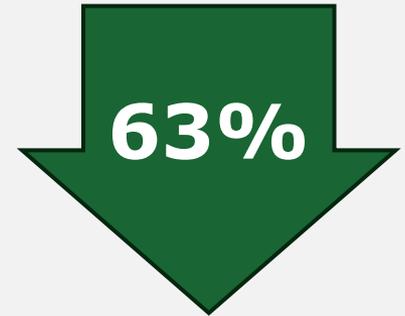
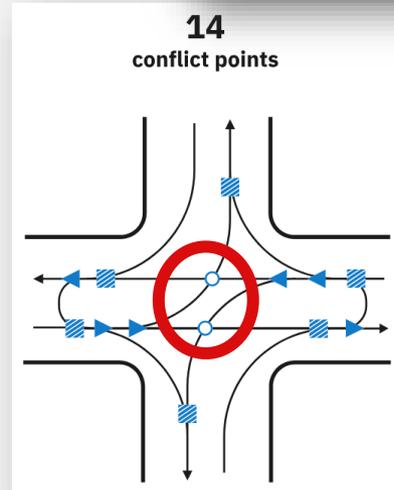
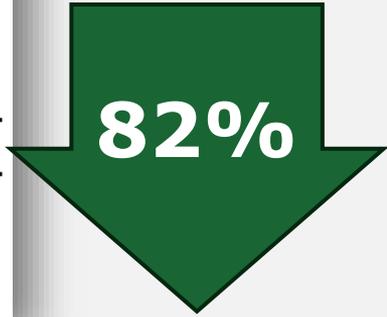
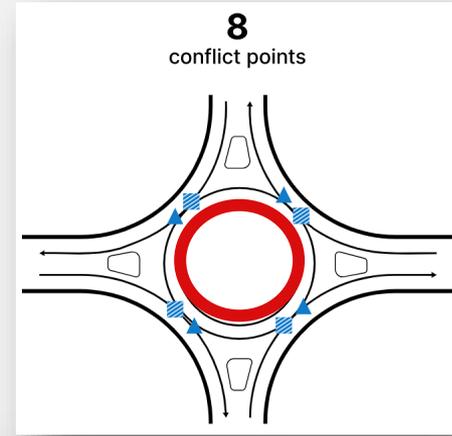
Why



# Why ICE matters



Intersection options



Why

## Who needs to do ICE?

- All TxDOT intersections – full or partial
- Recommended for local agencies



Transparent,  
defensible  
decision

Who

## Where do I need to do ICE (which projects)?

### Yes

- ✓ New Construction
- ✓ Reconstruction
- ✓ Opportunity to change

### No

- x Routine maintenance
- x Pavement projects

### Recommended

- Partial improvements
- Partial reconstruction

## When do I do ICE?



When

## How do I do ICE?

How

# TxDOT Coordination

1



Hello! Is this the TxDOT Area Office?

How

## Two Stages

2

### Stage 1

- Context assessment
- Operations (viability)
- Safety (ranking)



### Stage 2

- Detailed Ops
- Detailed Safety
- Cost
- Impacts

How

## Tools

3

How



U.S. Department of Transportation  
Federal Highway Administration



Capacity Analysis for  
Planning of Junctions



U.S. Department of Transportation  
Federal Highway Administration



Safety Performance for Intersection Control Evaluation

# Tools

3



How

## Data Needed

4

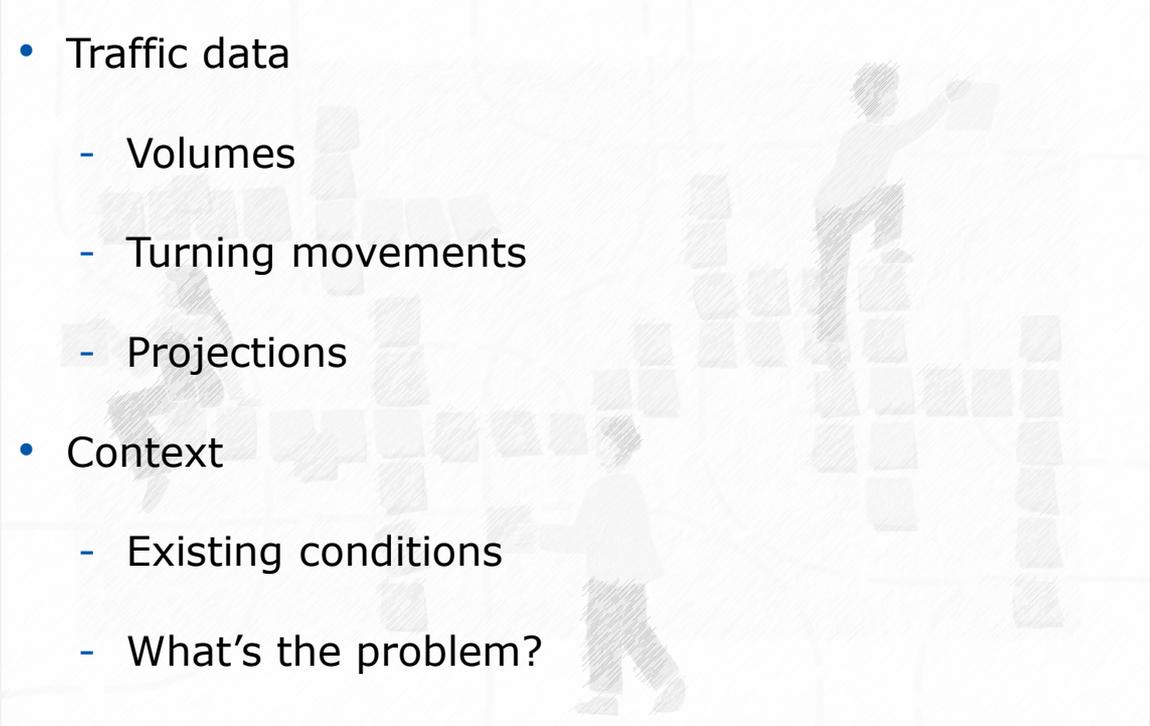


How

## Data Needed



4

- 
- Traffic data
    - Volumes
    - Turning movements
    - Projections
  - Context
    - Existing conditions
    - What's the problem?



How

# Get Help

5

[txdot.gov/about/programs/innovative-transportation/innovative-intersections.html](https://txdot.gov/about/programs/innovative-transportation/innovative-intersections.html)

## Innovative Intersections

### Innovative Transportation

Innovative Transportation in Texas



### What are innovative intersections?

Innovative intersections use non-traditional methods to improve traffic flow at crossroads, leading to enhanced safety, operational performance, and resiliency. As a result, they are becoming more common in Texas and on TxDOT facilities.

The most common types of innovative intersections are:

How



[txdot.gov/innov-int](https://txdot.gov/innov-int)



[innovative.intersections@txdot.gov](mailto:innovative.intersections@txdot.gov)



## Pro Tips & FAQs



## Tools are... just tools

1

- Planning level
- Not all layouts included
- Careful of inputs
- Beware of assumptions



## Interim vs. Ultimate



- How long is the interim stage?
- Can the interim be expanded to ultimate?
- Avoid costly reconstruction where possible
- Plan for the future, but prepare for now

## Narrative, Background, Assumptions

3

- Describe interim and ultimate
- Give good context
- Define the problem
- List assumptions
- Backup your recommendations



## Corridors



- Do ICE for *each* intersection
- Don't need ICE for right-in/right-out
- Consider corridor as a whole
- One report for one corridor
- Consider strategic combinations (RCUTs + Roundabouts)

## Example Reports



- TSAP Appendix K
- TxDOT → Join the Community of Practice (CoP)
- Contact [innovative.intersections@txdot.gov](mailto:innovative.intersections@txdot.gov) for:
  - Additional report examples
  - Mailing list for CoP Quarterly Webinars

## Key Takeaways

- **What:** ICE looks at alternative intersections that can improve ***safety & operations***
- **Why:** ICE is about producing a ***transparent, defensible*** decision
- **Who:** Do ICE on all TxDOT intersections, and wherever else you can
- **When:** Do ICE **early** in project development
- **Where:** New construction, reconstruction, opportunity to change
- **How:** 2 stages, CAP-X & SPICE, use TSAP, get help

## Thank you! Any questions?



 [txdot.gov/innov-int](https://www.txdot.gov/innov-int)

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