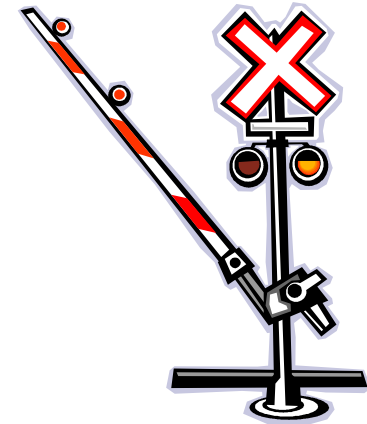
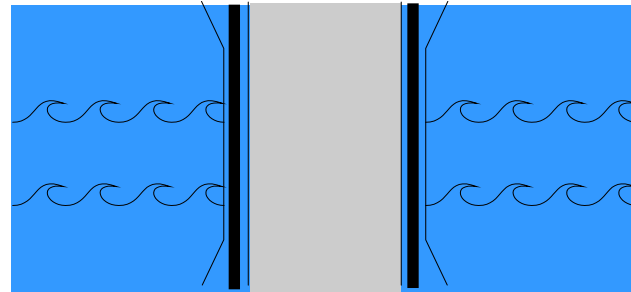
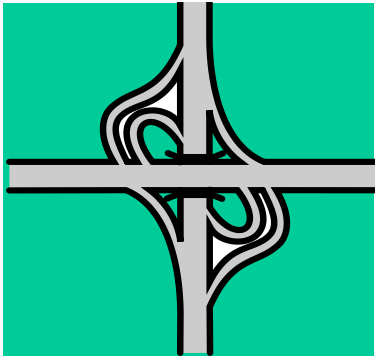


Chapter 13

Special Studies



Special Studies

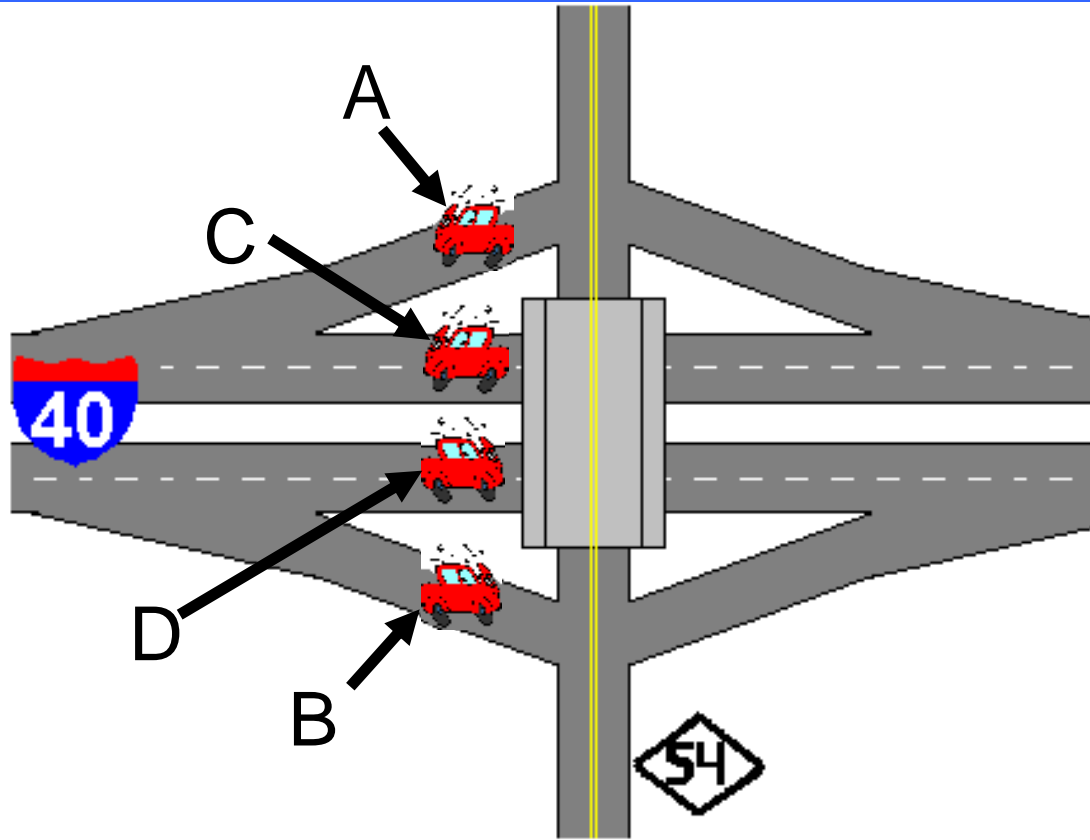
Several types of studies deviate from standard practices such as the following...

- Interchanges
- Bridges
- At-grade railroad crossings
- Non-motorists (pedestrians and bicyclists)

Interchange Studies

- Should be performed as strip studies
- Consider length of ramps along mainline route when identifying beginning and ending mileposts
- Crash reports should always be reviewed to determine where they actually occurred (mainline or ramps)
- Crashes where the “On” road is the same as the “From” road usually indicate that the crash occurred on a ramp (i.e. “on US 1 from US 1”) – the officer’s narrative and sketch will need to be reviewed to differentiate between specific ramps
- Note that it may NOT be possible to definitively determine the location of a given crash, even with the crash report information (engineering judgment is sometimes required to choose the most probable location of the crash)

Interchange Example

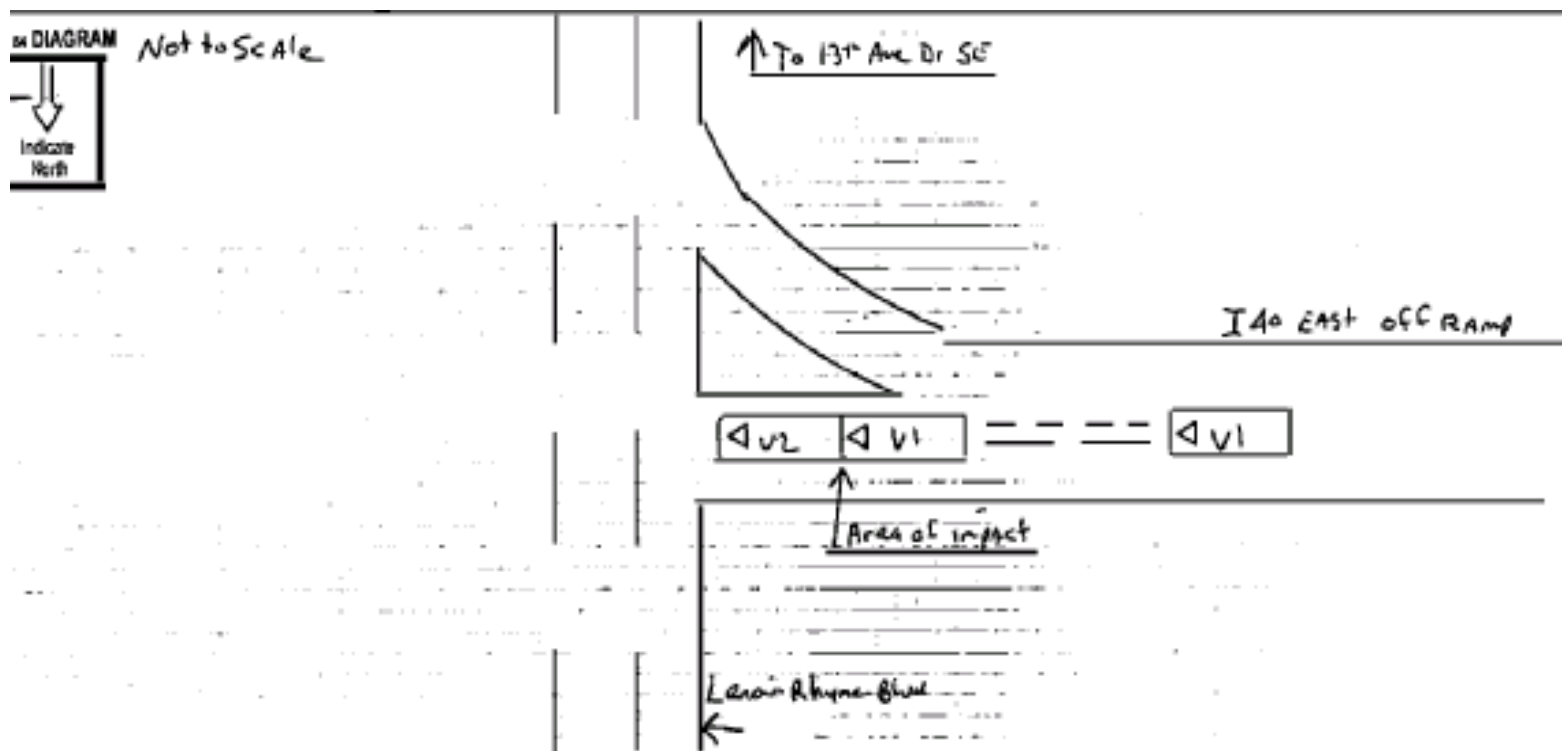


If a crash was reported as occurring on I 40, 100 feet from NC 54 AND the crash was noted as occurring on a ramp, the crash could have actually occurred at A or B.

If a crash was reported as occurring on I 40, 100 feet from NC 54 AND it was not noted whether or not the crash occurred on a ramp, the crash could have actually occurred at A, B, C or D.

Ramp Example

Below is portion of a crash report for a crash that occurred on a ramp. This information can be reviewed to determine the relative location of the crash.



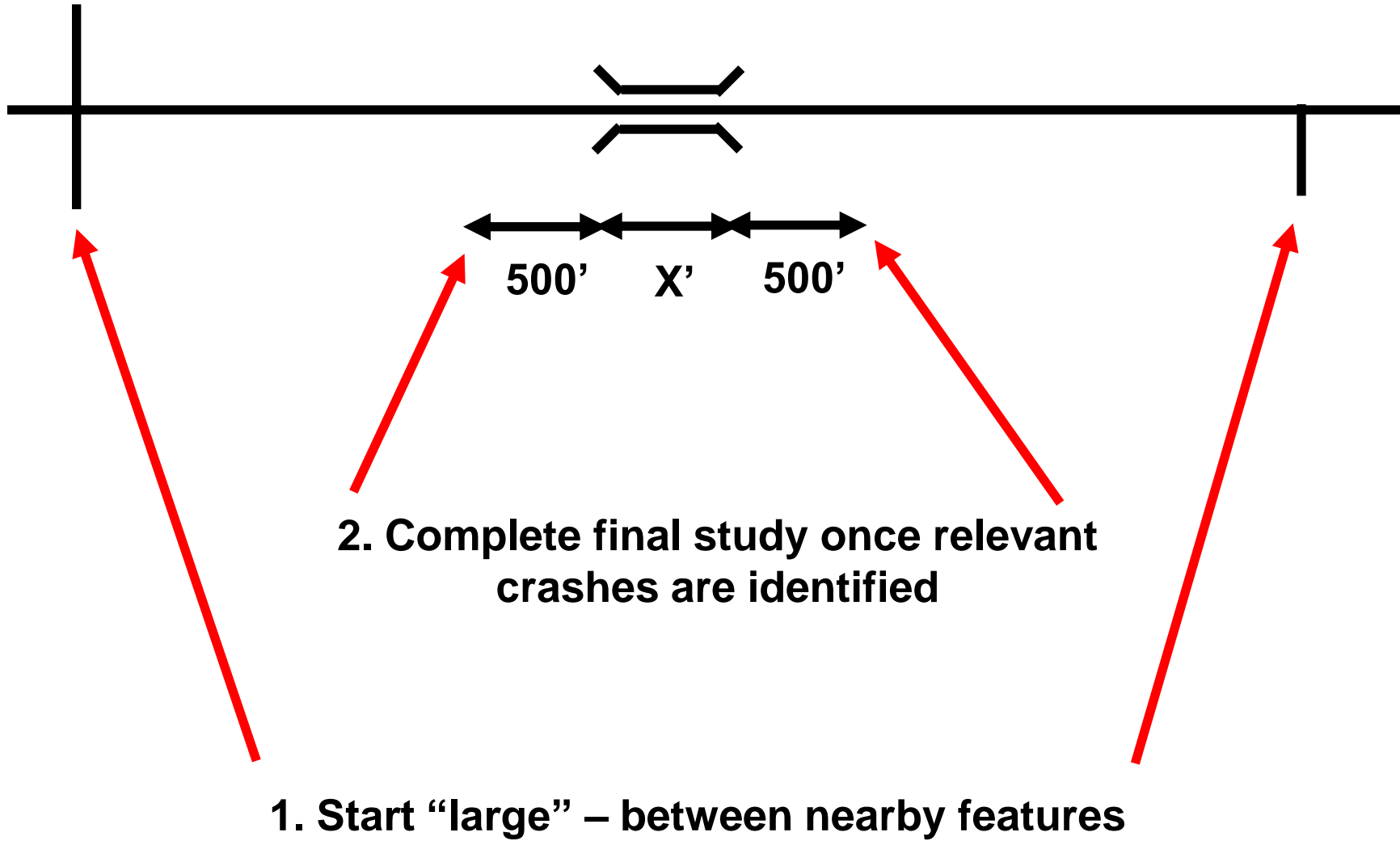
Unit 1 was: Traveling Parked Facing N S E W on off ramp I40 EAST Unit 2 was: Traveling Parked Facing N S E W on off ramp I40 East

AS NARRATIVE (Includes pertinent and unusual aspects, which are not listed elsewhere on the form) Vehicle #2 exits off of I-40 East to the off ramp and stopped at the red light at Lesain Rhyme Blvd. V#1 drove up behind V#2 attempting to stop behind him. Due to bare tires and chard showing on V#1 front tires, V#1 started sliding on the wet roads. V#1 driver tried to turn right with brakes depressed and the vehicle continued straight hitting V#2 rear end. No injuries were reported. V#1 was driven by driver to Rockula cafe to be asked for future tow. V#1 is not safe for roadway travel.

Bridge Studies

- **Specifically performed to identify crashes occurring on or adjacent to bridges**
- **Generally used for rural locations as these areas may be miles from nearby intersecting routes**
- **Rural bridge related crashes generally occur in the approach areas and not on the structure itself**
- **The length of a bridge study is generally the length of the structure plus 500 feet on either end (this length can be adjusted depending on the approach conditions, skew, nearby intersections, etc.)**
- **For rural bridge locations, start “large” (i.e. run an initial study and fiche between features on either side of the bridge) to identify crashes on or near the bridge, then do the actual study (length \pm 500 feet) and add any crashes identified in the “large” study but not in the final study**

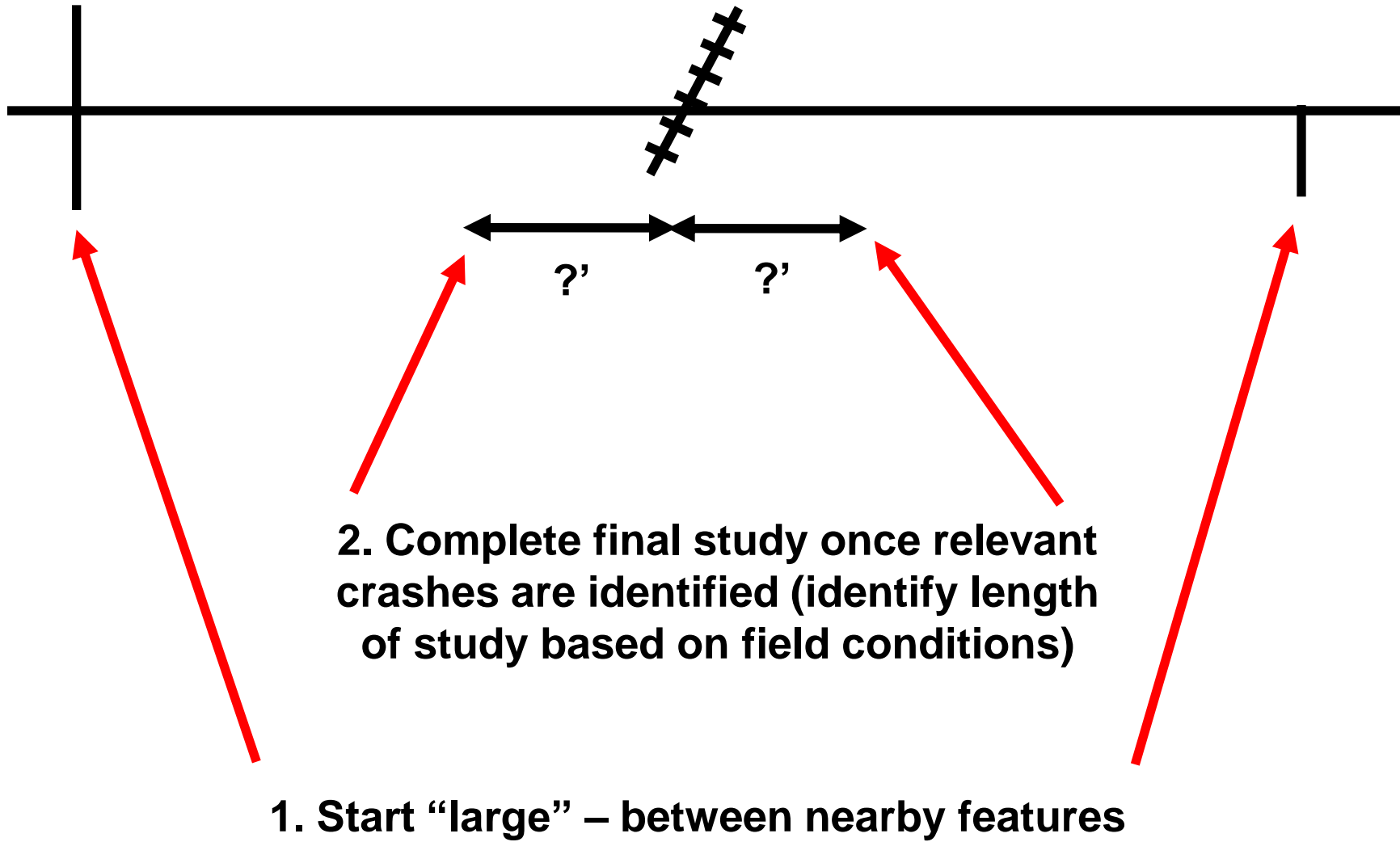
Bridge Example



At-Grade Railroad Crossing Studies

- Specifically performed to identify crashes occurring on or adjacent to at-grade railroad crossings
- Generally used for rural locations as these areas may be miles from nearby intersecting routes
- There is no standard length for a study as it generally depends on the influence area of the crossing (such as approach conditions, skew, nearby intersections, etc.)
- For rural locations, start “large” (i.e. run an initial study and fiche between features on either side of the crossing) to identify crashes on or near the crossing, then do the actual study and add any crashes identified in the “large” study but not in the final study

At-Grade Railroad Crossing Example



Non-Motorist Studies

- **Specifically performed to identify pedestrian and/or bicycle crashes**
- **These types of crashes only account for approximately 2% of all crashes and, therefore, may be difficult to identify in high frequency crash locations**
- **The “crash type” field is not always coded correctly for these types of crashes, which makes it difficult to use the fiche, intersection, or strip reports to identify these crashes**
- **Best to contact the Traffic Safety Unit (TSU) and request the crash ids – they can query the database directly and identify these crashes through the use of additional fields not available to TEAAS users (the crash ids can then be placed in studies using dummy routes in order to produce the frequency tables, statistics, etc.)**
- **Submit a crash information request form to the TSU from the following URL...**

<https://connect.ncdot.gov/resources/safety/Pages/default.aspx>