

Regional Left-Turn Crash Mitigation

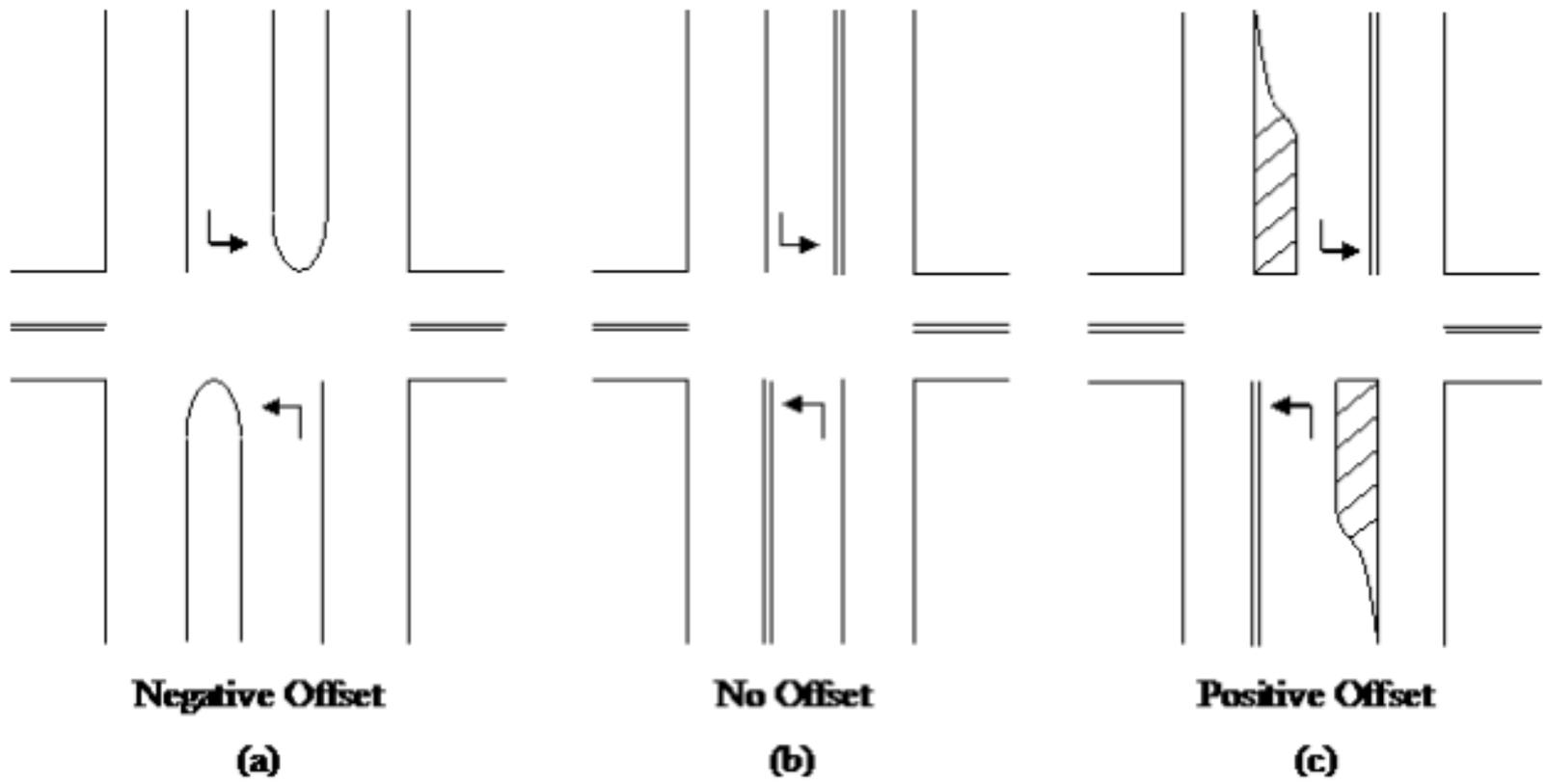
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Opposing Left-Turn Lane Offset Conditions



FY2017 MAG Project: Systemic Strategy to Mitigate Intersection Left-Turn Crashes

- Intersection RSAs have identified possible cause – Zero or Negative Offsets
- Study will examine potential of implementing Positive Offsets
- Study Outcome:
 - Ranked list of candidate intersections for installing positive offsets as a systemic road safety project
 - Template/Guideline for implementing positive offsets at all intersections with unprotected left-turns
- Funded by MAG at \$80,000 – An on-call project

Location Identification Methodology

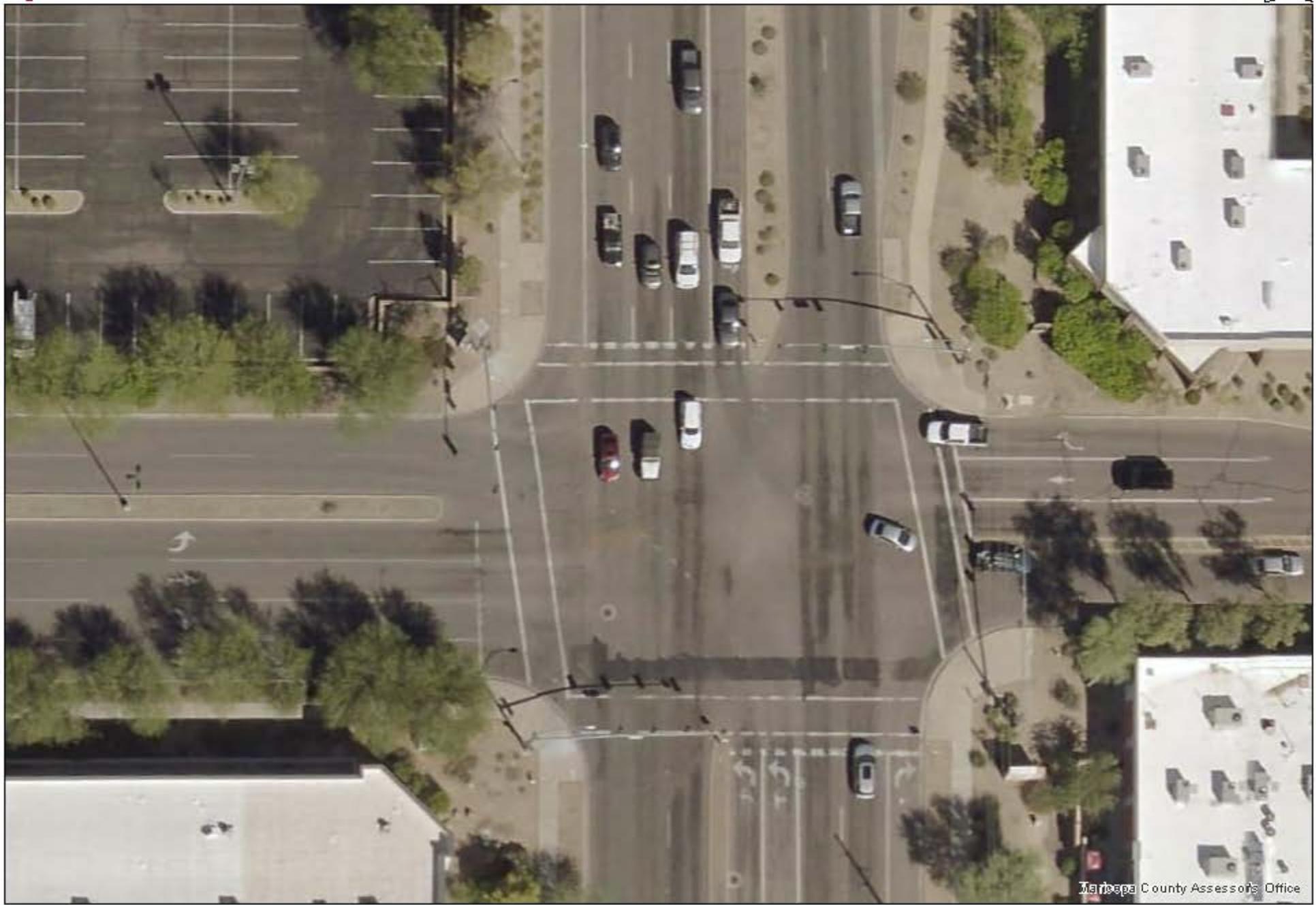
- Over 22k intersections with reported crashes region wide
- Over 3,000 signalized intersections with > 5 LT Crashes 2011-2015
- Combined like “ONROAD” listings → 244 Corridors
- Simple descending rank of LT crashes/year/mile
 - 51 corridors at or above the average range of 7.6 to 0.98 LTcr/yr/mi
 - Analyzed each intersection with > 5 LT Crashes for each corridor
 - 934 intersections: LT crashes vs. total crashes per Int → %LT crashes
- Other criteria provided by local agencies
 - Existing LT offset condition
 - Existing LT signal phasing



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Study Outcome Goal #1

- Ranked list of candidate intersections for installing positive offsets as a systemic road safety project
 - Existence of single opposing left turn lanes
 - Minimum Fatal and Incapacitation crashes
 - Zero or negative offset as a current condition
 - Permissive or Protected-Permissive signal phasing
 - Modifiable median or striped lane width

Study Outcome Goal #2

- **Template/Guidelines for implementing positive offsets at all intersections with unprotected left-turns**
 - Sampling of those not meeting criteria for Goal #1
 - Number of opposing through lanes
 - Other sight visibility factors
 - LT crashes involving bicyclist and pedestrians
- **Based on analysis of criteria, published documents, crash analysis, etc.**
- **Used by local agencies to review existing AND new intersection design**

Next Steps

- Anticipated NTP for Study – April 2017
- Study completed by June 2017 – Template & Guidelines Document
- 2nd phase will be funded by MAG planning funds budgeted on an annual basis for RSA and PA projects
 - 15 percent design, cost estimation, cost/benefit ratio
 - Based on a recent examples for striping and median modifications approximate cost of \$170k per intersection
 - HSIP application for 30+/- locations
 - January 2018 HISP call for projects

Questions