

**ARIZONA SECTION ITE
TECHNICAL COMMITTEE
SPECIAL PROJECT**

**RIGHT-TURN LANES
WITH AND WITHOUT
RIGHT-TURN ARROWS**

**11 INTERSECTIONS
17 STUDY MOVEMENTS**

**CITY OF SCOTTSDALE
CITY OF GLENDALE
CITY OF GOODYEAR**

TRAFFIC RESEARCH AND ANALYSIS

UNITED CIVIL GROUP

VOLUNTEERS

6 – CITY OF SCOTTSDALE

3 – ASU ITE CHAPTER

3 – MORRISON-MAIERLE

1 – P B S & J

1 – AMEC

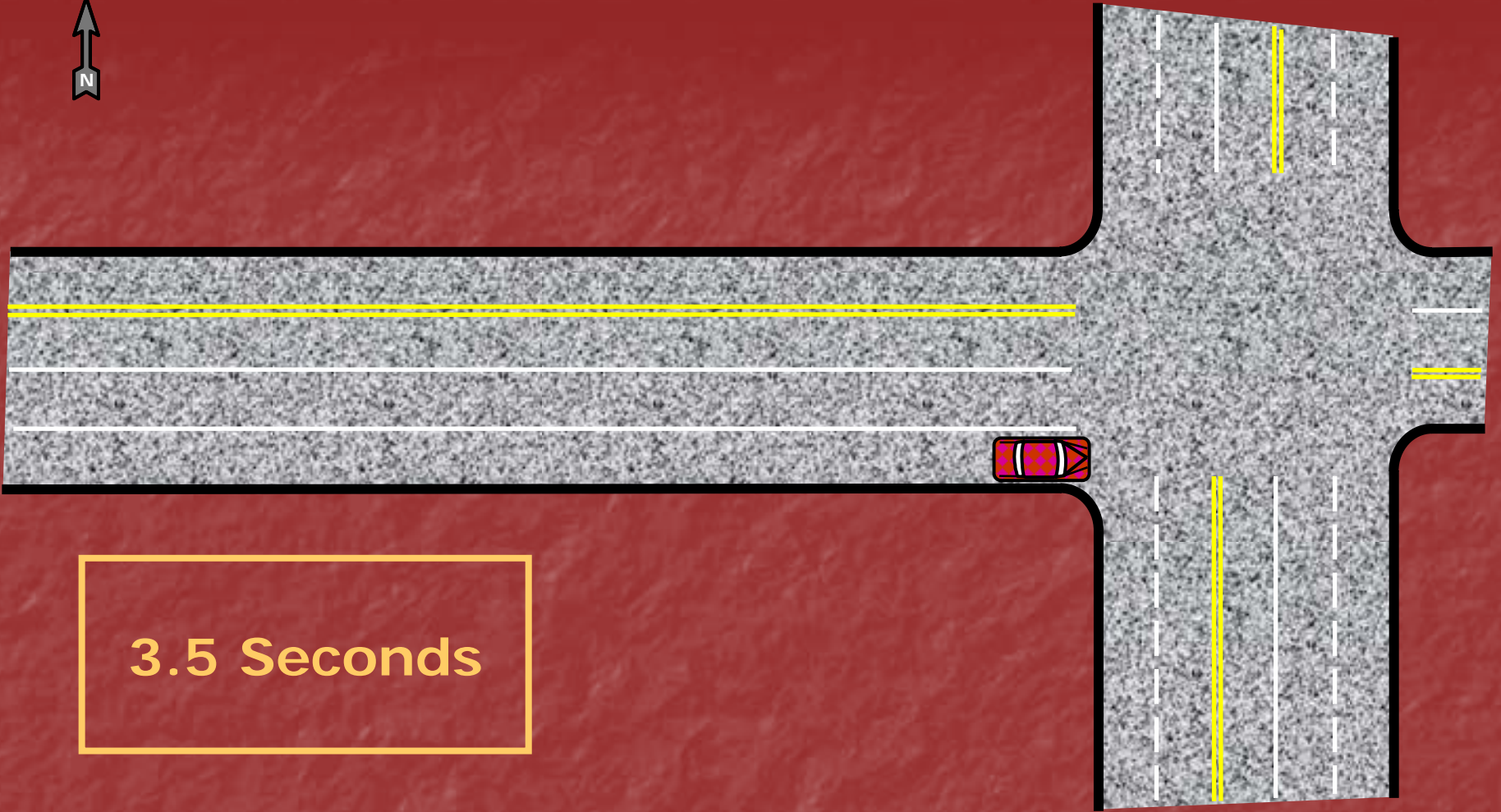
1 – AYRES

MEASURED DELAY

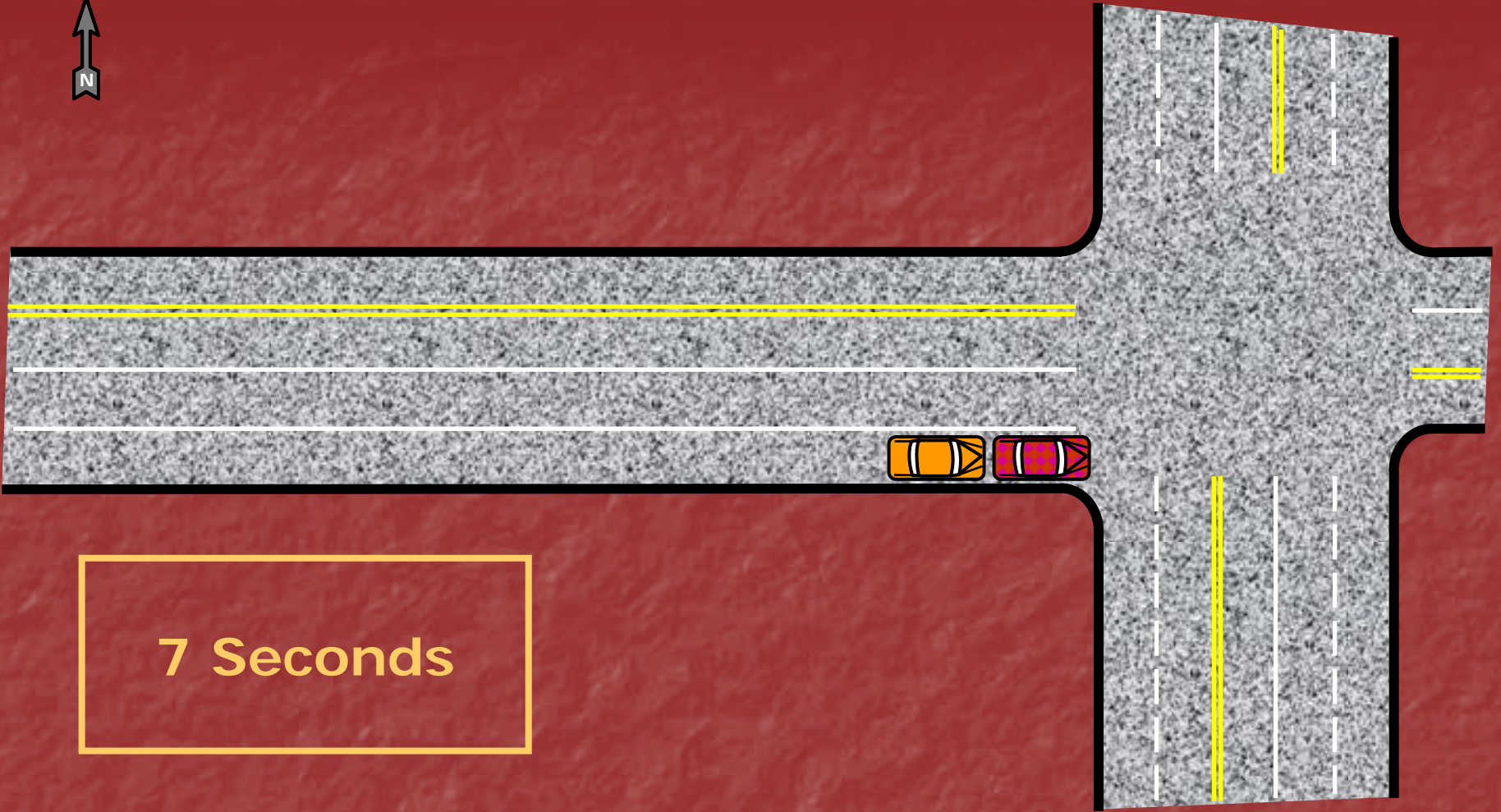
QUEUE AT

3.5 SECOND INTERVALS

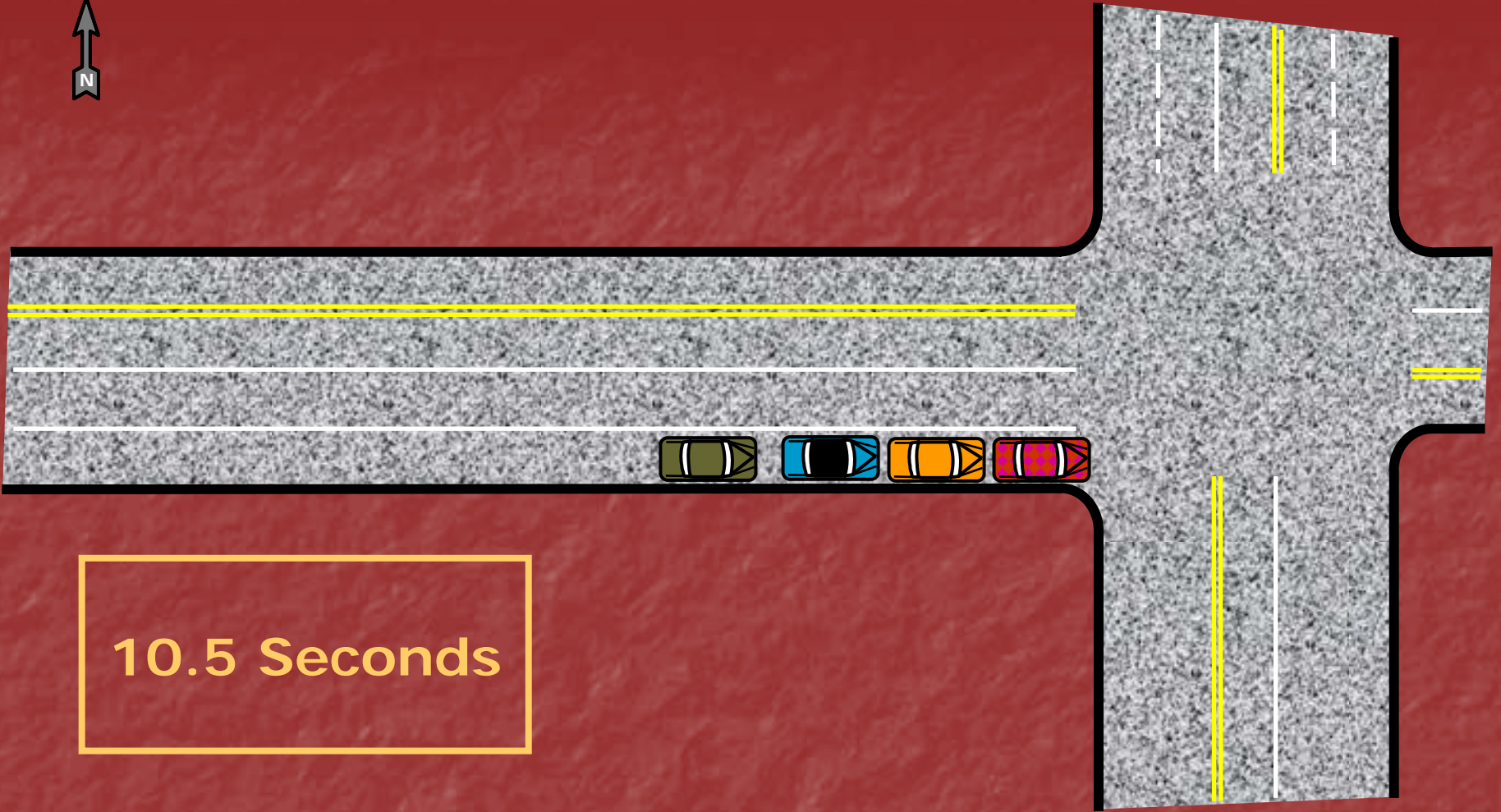
6 PEAK HOURS



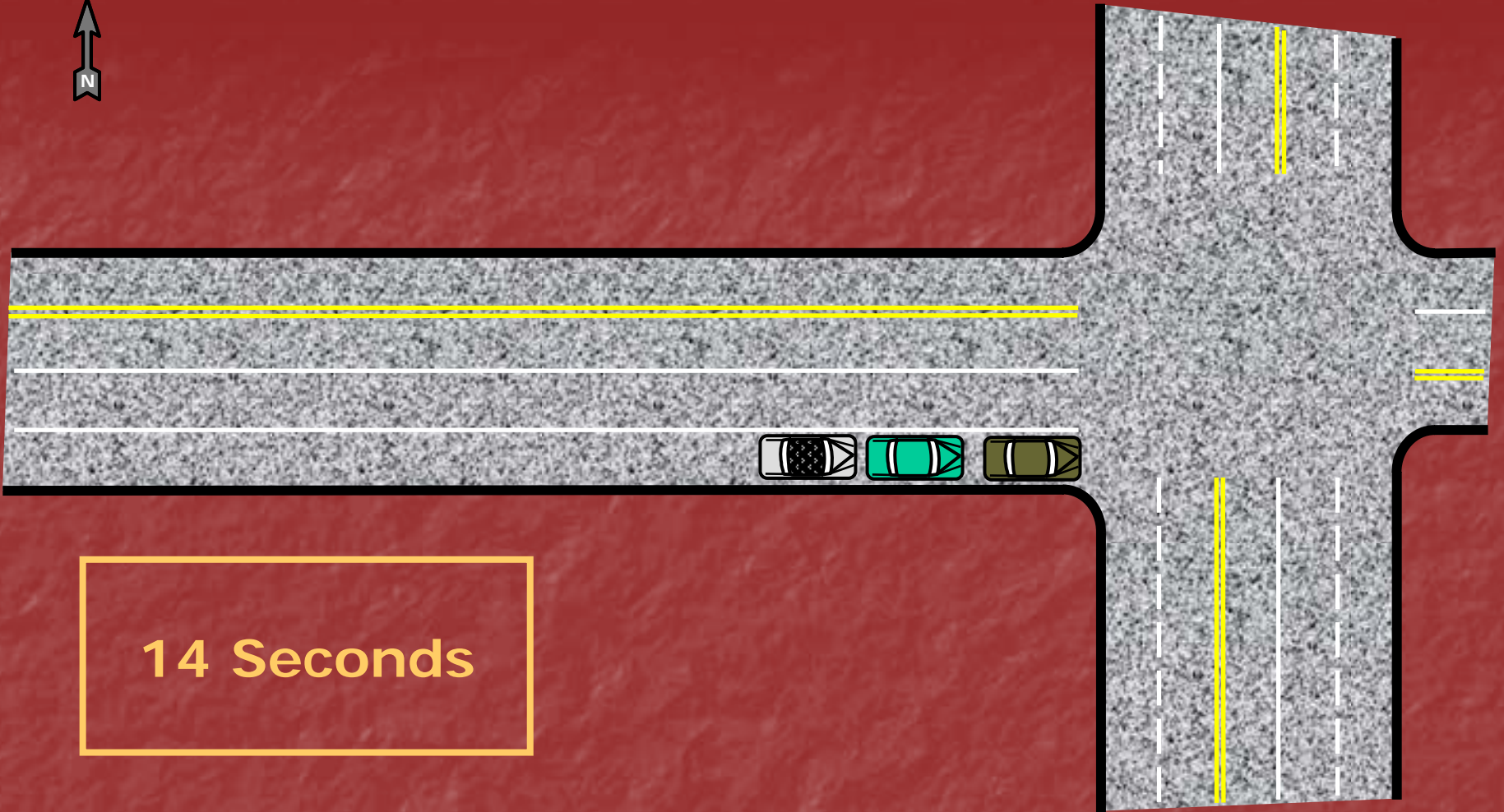
3.5 Seconds



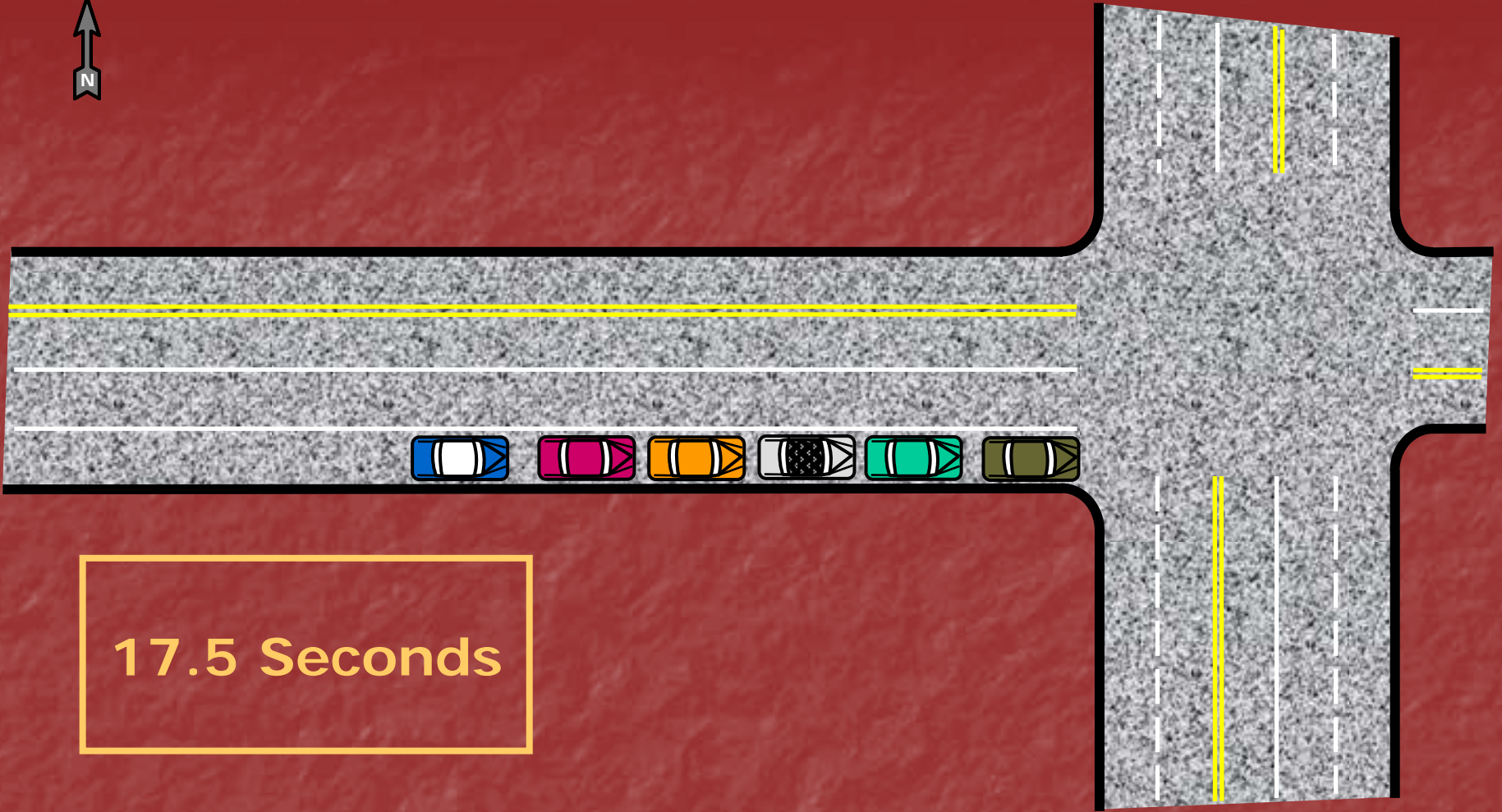
7 Seconds



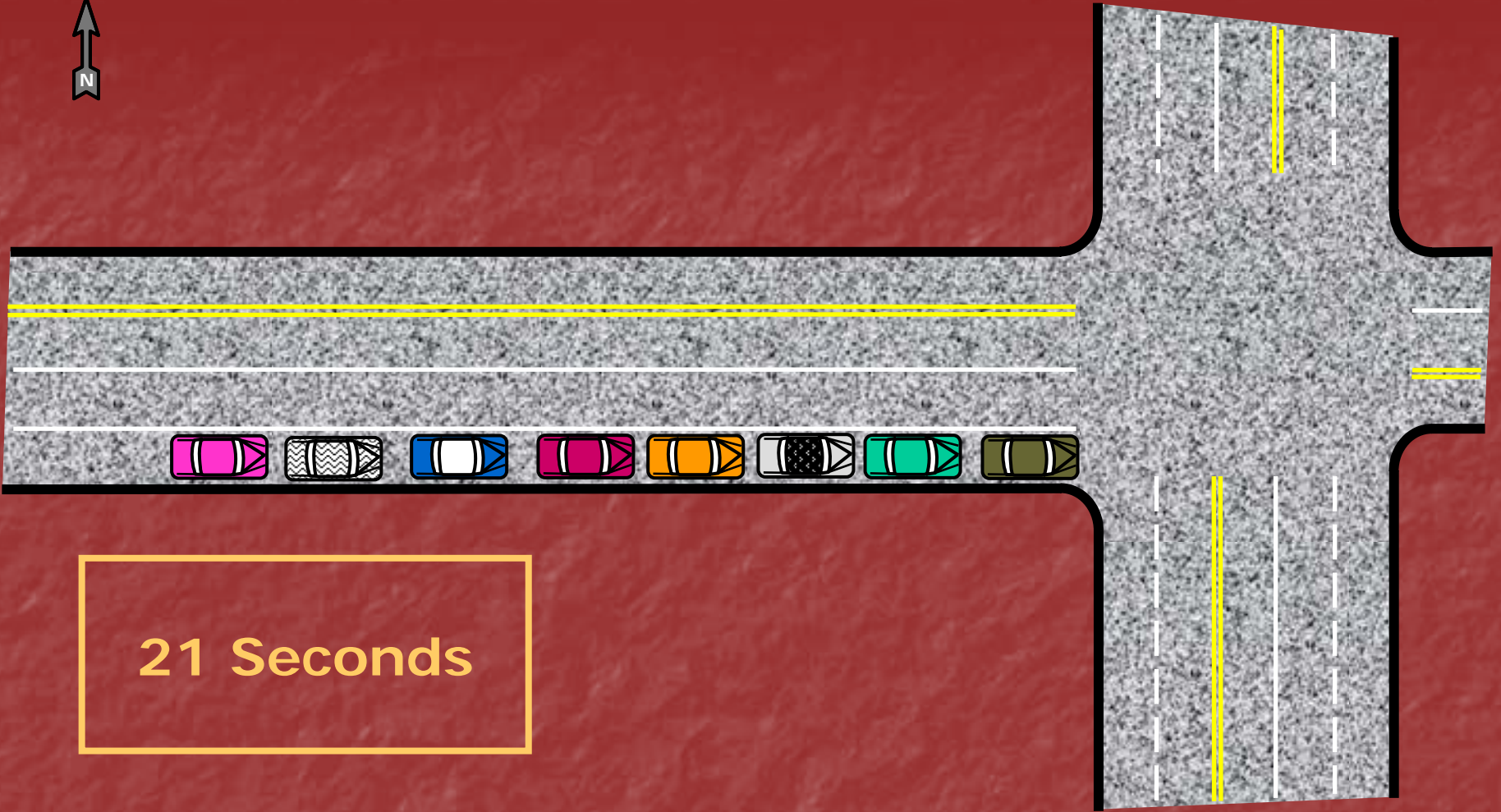
10.5 Seconds



14 Seconds

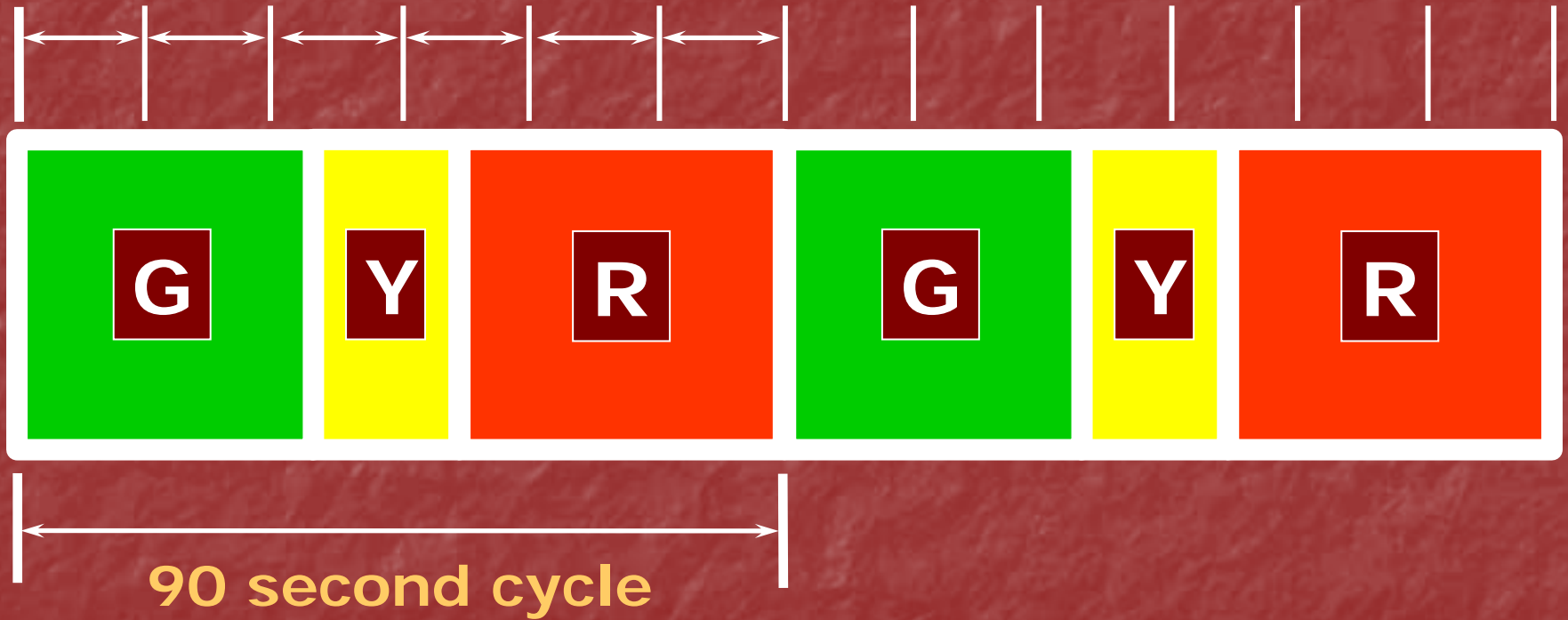


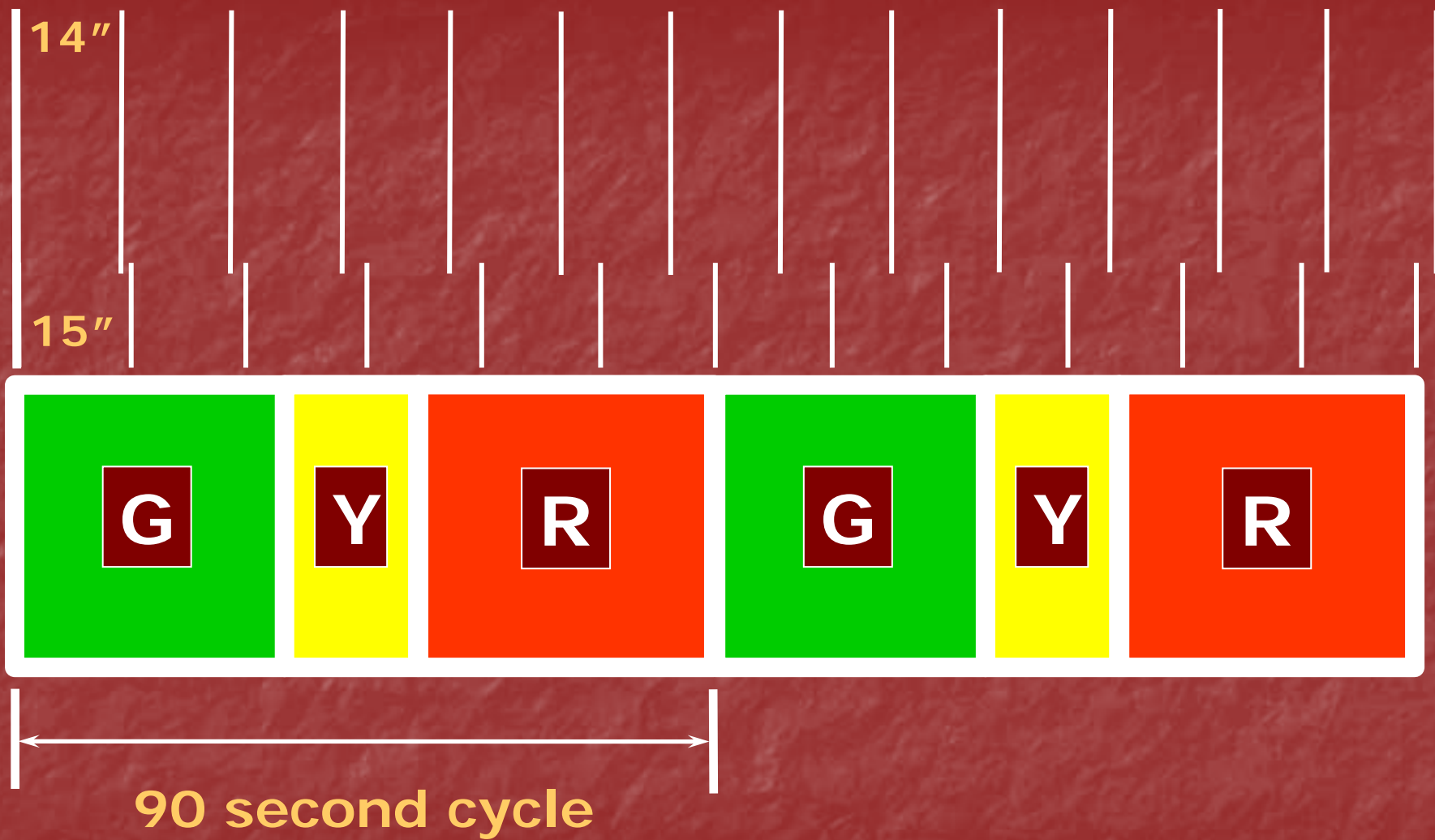
17.5 Seconds



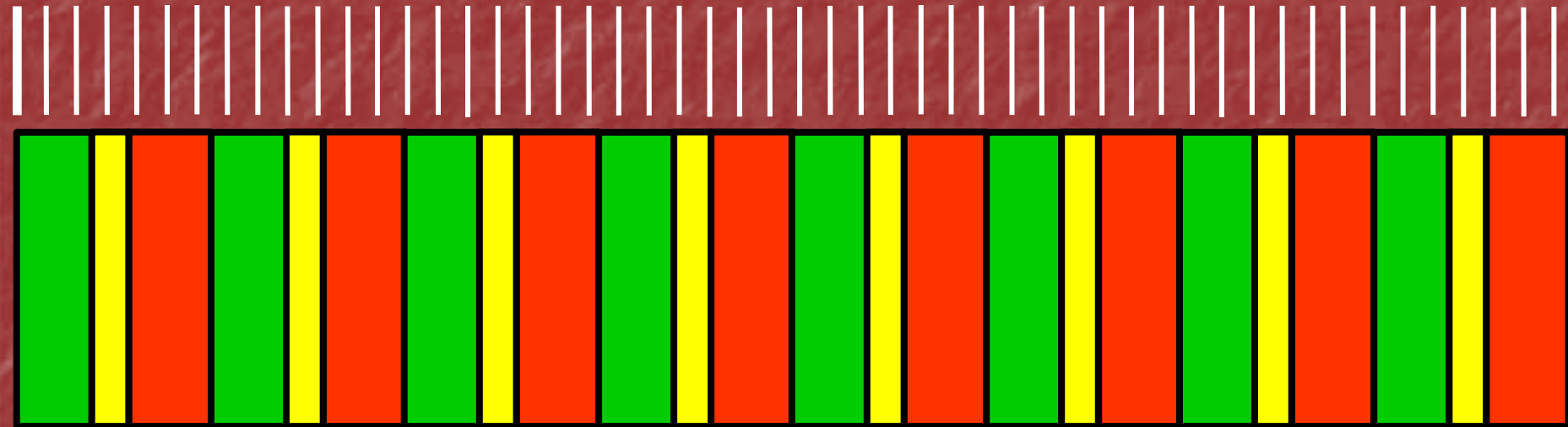
21 Seconds

15 second count increment





14 second count increment



210 seconds

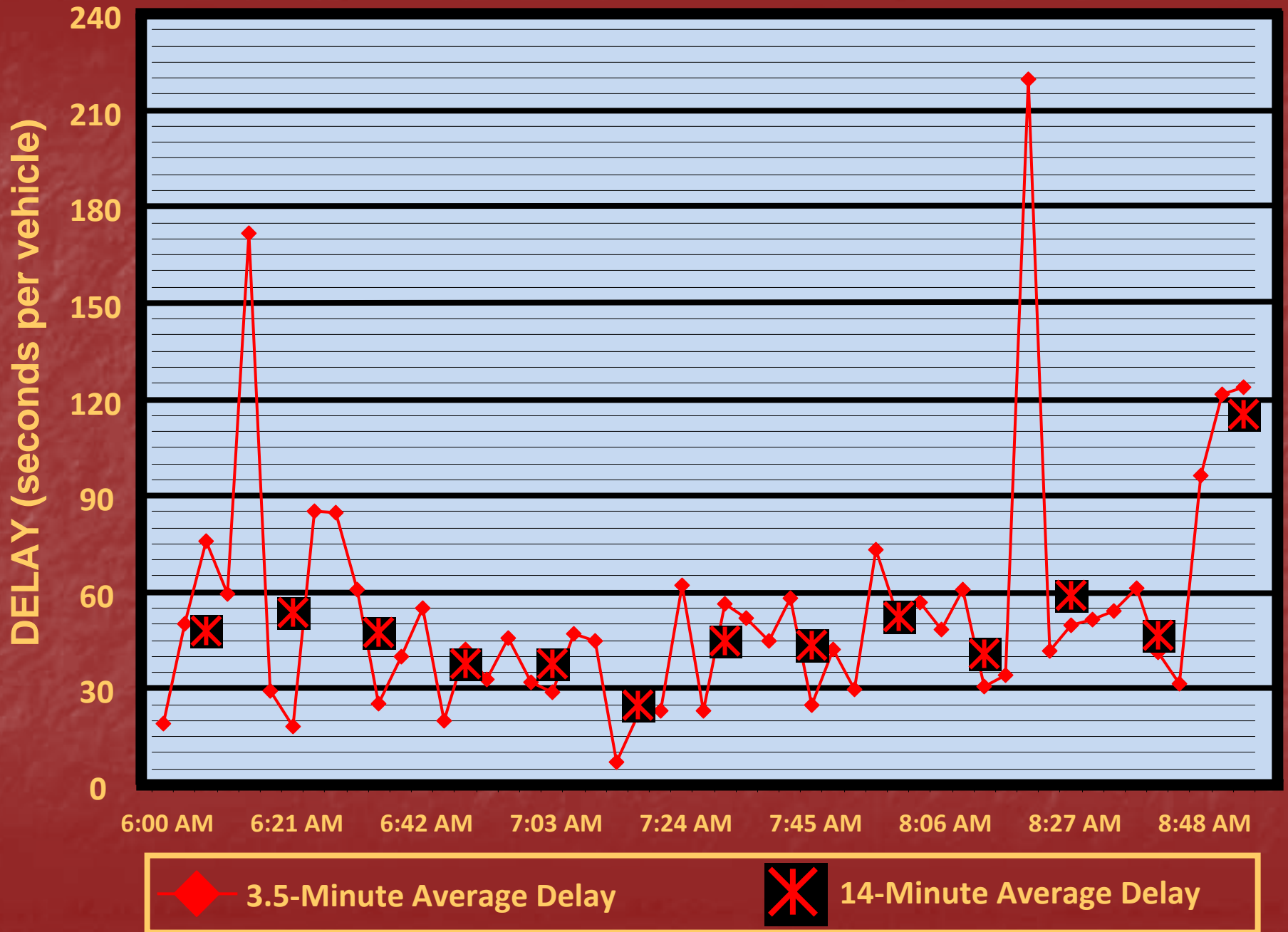
630 seconds

CALCULATION OF MEAN DELAY

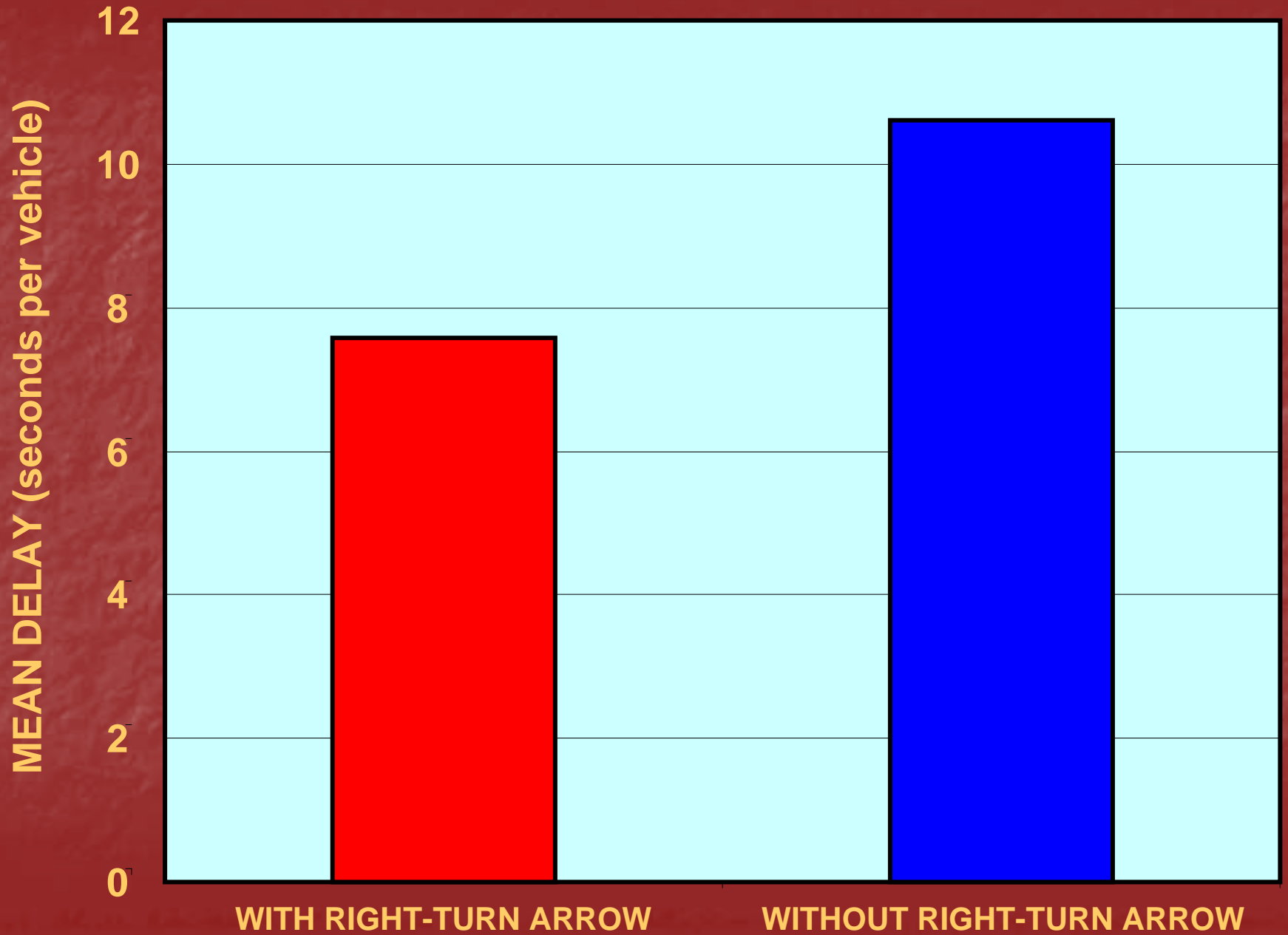
(Waiting Vehicles) * (Count Interval)

(Arriving Vehicles)

CITY OF SCOTTSDALE - HAYDEN ROAD AND INDIAN SCHOOL NORTHBOUND LEFT-TURN



ALL STUDY LOCATIONS AND MOVEMENTS



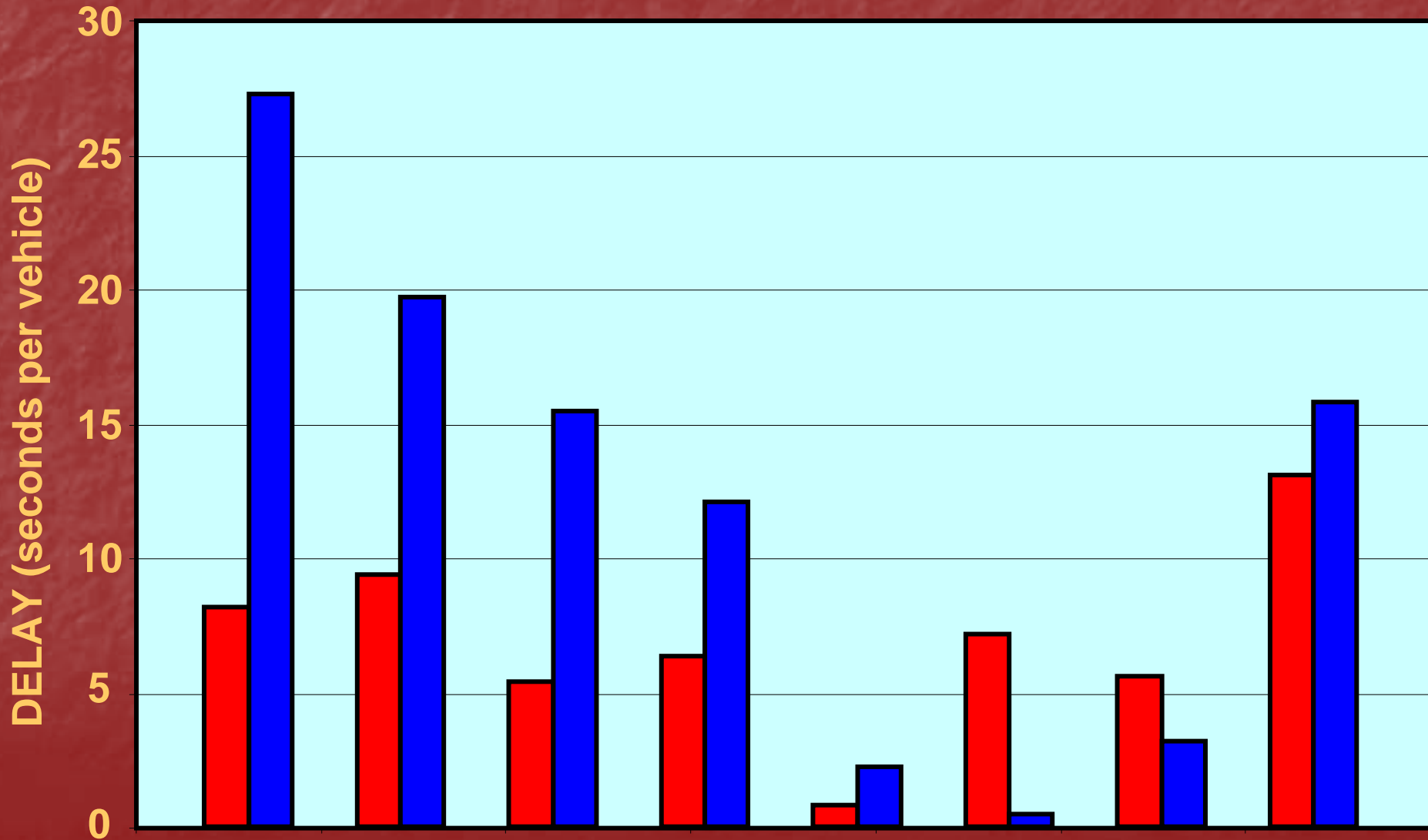
INTERSECTION PAIRS

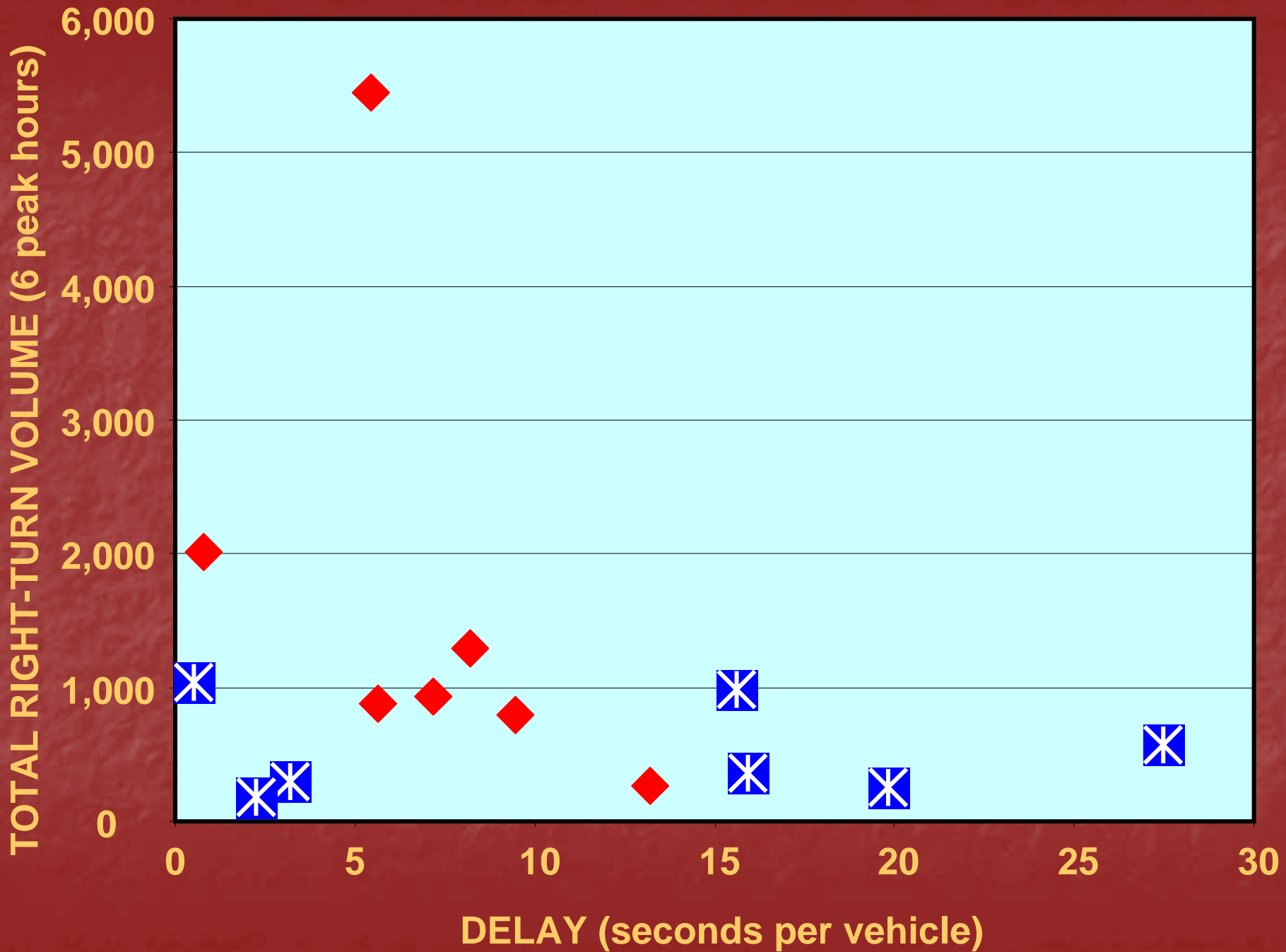


WITH ARROW



WITHOUT ARROW





**NO
STATISTICALLY SIGNIFICANT
DIFFERENCE**

1 MOVEMENT PAIR

**STATISTICALLY SIGNIFICANT
DIFFERENCE**

**WITH ARROW
MORE DELAY THAN
WITHOUT ARROW**

2 MOVEMENT PAIRS

STATISTICALLY SIGNIFICANT DIFFERENCE

**WITH ARROW
LESS DELAY THAN
WITHOUT ARROW**

ALL MOVEMENTS

5 MOVEMENT PAIRS