

Maricopa Association of Governments Road Safety Assessment Program

Presented to TexITE District
Ft. Worth
August 30, 2012

Road Safety Assessment



What is a RSA?

- ▶ Road Safety Audit/Assessment
- ▶ Structured review of intersection or road segment
- ▶ Multi-disciplinary team
 - Team Leader
 - Team Coordinator
 - Traffic Engineer from another agency
 - Local Police Officer
 - Human Factors expert
 - MAG traffic engineer

Arizona RSA History

- ▶ ADOT – RSAs since 2006
- ▶ MAG – RSA Program began last year
- ▶ Pima Association of Governments (PAG) beginning this year

MAG'S RSA Program

- ▶ MAG provides Top 100 crash locations to member agencies
- ▶ Agencies nominate intersections
- ▶ MAG's Transportation Safety Committee programs based on rank order of crash risk
- ▶ Assign RSA consultant to lead/coordinate
- ▶ MAG representative participates on RSA team
- ▶ MAG monitors crash experience at RSA locations

Kick-off Meeting Information

- ▶ **Reason for RSA** – Crashes, citizen complaints, etc.
- ▶ **History** – Recent changes
- ▶ **Background Information** – Number of lanes, volumes, speed limits, signalization, etc.
- ▶ **Crash History Overview** – Number & Severity by year
- ▶ **Roadway Owner Comments** – What prompted RSA request; what has been tried?

Agenda – Day One

- ▶ 9:00 AM: Kick-Off Meeting (close to site)
- ▶ 10:30 AM: Daytime Off-Peak Site Visit
- ▶ 12:30 PM: Mid-day Field Review
- ▶ 3:00 PM: PM Peak Period Field Review
- ▶ 7:00 PM: Nighttime Field Observations

Agenda – Day Two and Three

- ▶ 7:00 AM: Morning Peak Period Field Review
- ▶ 9:00 AM: RSA Team Meeting / Findings & recommendations
- ▶ Day 2 PM and Day 3 AM: Team Coordinator and Team Leader Prepare presentation summarizing team findings and recommendations
- ▶ 1 PM Day 3: RSA Team reviews and modifies preliminary findings
- ▶ 2 PM Day 3: Presentation to Owner/Discussion

Field Reviews

- ▶ Entire team in van
 - Drive all turning movements from all approaches
 - Walk and cross all approaches
 - Do both day and night
- ▶ Note things done well
- ▶ Note issues
- ▶ Consider improvement options

RSA Team Discussions

- ▶ Things done well
- ▶ Issues/problems observed
- ▶ Improvements suggested and discussed
- ▶ Recommendations are from TEAM – not an individual

Reporting

- ▶ Team Coordinator and Team Leader draft report within 2 weeks
- ▶ Review/Modification by RSA team
- ▶ Submit to MAG Safety Engineer for review/submission to Owner
- ▶ Owner reviews and prepares response.



Road Safety Assessments
MAKING ARIZONA'S ROADS SAFER



RSA Team



Pedestrians

- ▶ Crossing at all times of day and early evening
- ▶ Vehicles turn in front of or behind pedestrians
- ▶ Not always watching for cars
- ▶ Crossing against signal because:
 - Traffic not that heavy
 - Delay seemed excessive



Recommendations to Improve Pedestrian Experience

- ▶ Operate pedestrian recall for minor street from 6AM–9PM
 - Currently operates well in the AM
 - May reduce driver frustration
- ▶ “LOOK” pavement stencils
- ▶ Turning Vehicles Yield to Pedestrians



Pedestrians

- ▶ Low visibility of crosswalks at night



Recommendations to Improve Pedestrian Experience

- ▶ High visibility crosswalks across arterial street
- ▶ Improve illumination
 - Brighter luminaries, or
 - Additional lights on NWC and SEC

Pedestrians

- ▶ Uneven sidewalk surface
- ▶ Pitted and bulging asphalt at pedestrian ramps



Recommendations to Improve Pedestrian Experience

- Sidewalk repair
- Add down-guy shields and trim anchor tail near SWC
- Replace peeling push button decals
- Replace push button decal on SWC with a sign
- Raise pedestrian signal on SEC to 7' min



Bicyclists

- ▶ Bicyclists can't reach push buttons
- ▶ Bike lanes not carried to intersection in all directions
- ▶ Width of bike lanes



Recommendations for Bicyclists

- ▶ Extend bike lanes to intersection on all approaches
- ▶ Provide video bicycle detection on minor street, or
- ▶ Provide bicycle push button near curb on minor street

Signal Timing & Progression

- ▶ Different cycle lengths
- ▶ SBL vehicles impatient and several close calls observed with:
 - NB through vehicles
 - N-S Pedestrians
 - Vehicles exiting Circle K

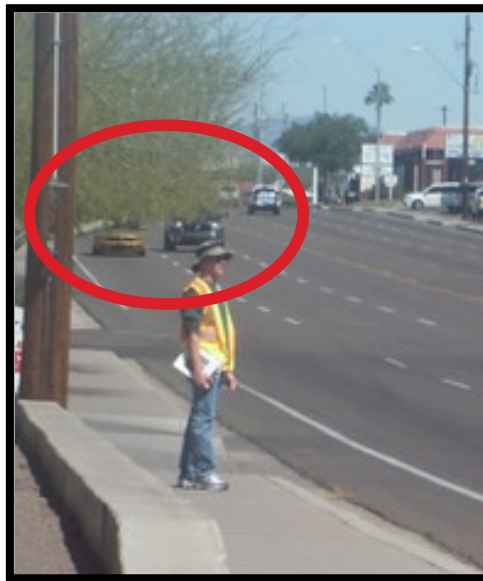


Recommendations for Signal Timing & Configuration

- ▶ Pedestrian Recall across arterial from 6AM – 9PM
- ▶ Review timing at three adjacent intersections
- ▶ Consider flashing yellow arrow for SBL

Sight Distance

- ▶ Eastbound right turn vehicles have sight distance blocked by signal cabinet and vegetation



- ▶ ***Recommendation:***
Trim/remove tree north of the intersection on the west side

Circle K Driveway



- ▶ SBL vehicles were often making the quick turn to use this driveway
- ▶ Exiting vehicles want to get in WBL queue
 - Driving off of curb instead of using driveway



Recommendations for Circle K Driveway

- ▶ Explore moving Circle K driveway further east
 - Relocate air compressor
 - Relocate/remove pay phones



Other Issues

- ▶ Trim vegetation blocking speed limit sign



- ▶ Paint solid lines for through traffic on arterial near intersection to discourage lane-changing
- ▶ Refresh centerline striping on all legs

Ultimate Improvement

- ▶ Major Street Road Diet (Restriping)
 - Remove one lane NB and SB
 - Wider left-turn lanes with positive offset
 - Bike lanes with stencils and hatched buffer
 - Keep current configuration ½ mile south
 - Extend road diet to the north 2–3 miles
 - Time it with next resurfacing



Questions?