

Capital Improvement Program

Ironwood Road Road Safety Audit



**BETTER
ROADS
AHEAD**

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3.20.19

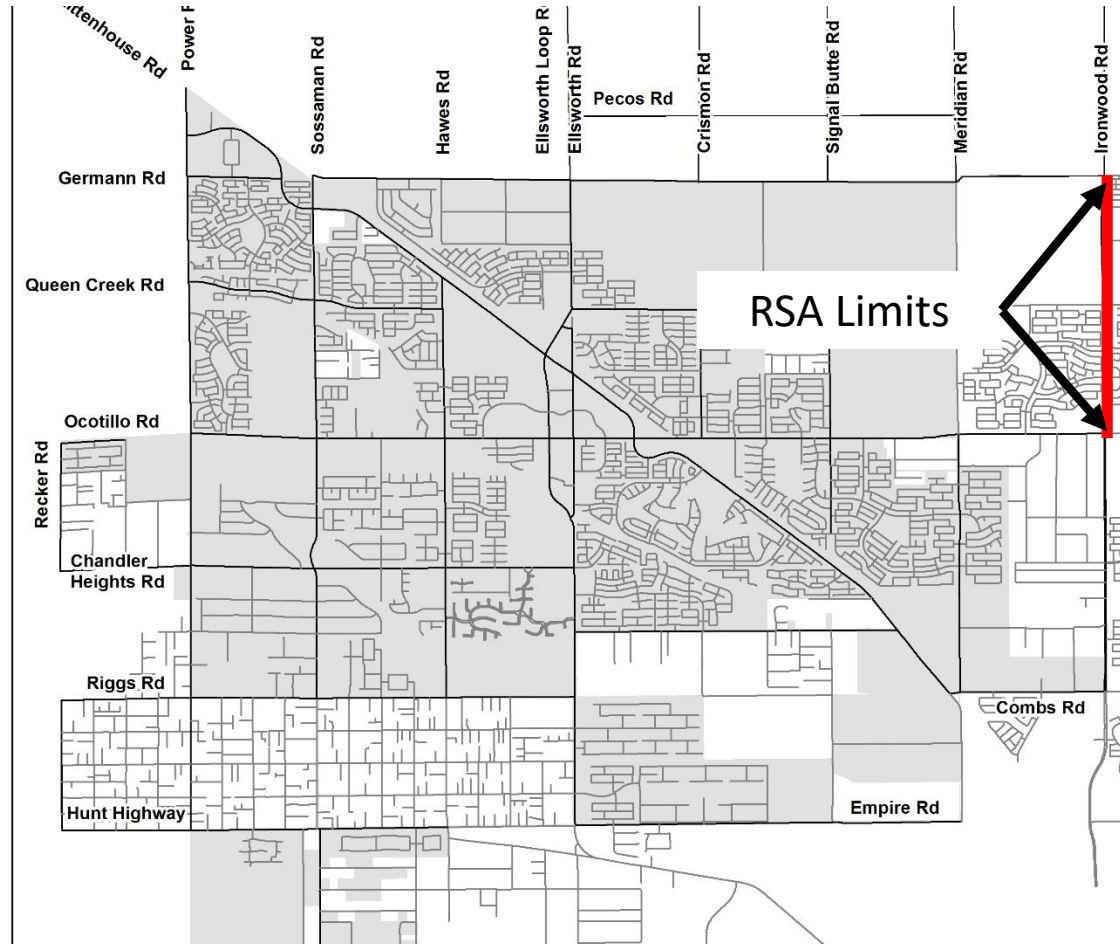
Ironwood Road – Roadway Safety Audit

Background

- April 2018 - Ironwood Crossing was officially annexed into the Town of Queen Creek.
 - Town was required to annex adjacent roadways
 - Town began to receive safety concern calls regarding Ironwood Road
- June 2018 - The Town's Transportation Engineer requests that ADOT conduct a Road Safety Audit for Ironwood Road.
- April – December 2018 The commercial center on the northwest corner continues to fill in.
 - Additional safety concerns reported by MCSO
- January 2019 – Roadway Safety Audit Commences
- March 2019 – Staff receives final Roadway Safety Audit report



PROJECT LIMITS FOR THE ROAD SAFETY AUDIT



Road Safety Audit

What is a Road Safety Audit (RSA)

- A formal safety performance examination of an existing or future road or intersection by an independent, **multidisciplinary team**. It qualitatively estimates and reports on potential road safety issues and identifies opportunities for improvements in safety for all road users.

The aim of an RSA is to answer the following questions:

- What elements of the road may present a safety concern: to what extent, to which road users, and under what circumstances?
- What opportunities exist to eliminate or mitigate identified safety concerns?





Ironwood Road RSA Findings

1. Needs Immediate Attention - Completed/In Progress
✓ \$35k
2. Needs to be Addressed – FY 2020
✓ \$700k
3. Can wait – Ultimate Improvement Solution
✓ \$2.3m \$3.3m

Findings - Users



Ironwood Road Safety Audit Findings



Needs Immediate Attention
Completed/In-Progress

Findings – Traffic Signal Timing

- EB Left-Turn lane not clearing in one cycle during AM Peak.
- Recommend Split signal phasing initially.



Completed

Findings – Broken Traffic Signal

Fix/replace damaged 5-section signal head on Germann west leg.



Completed



Findings – Shoulder Drop

Steep, unprotected shoulder just south of Germann Road on east side of Ironwood Drive.



Recommend grading, or maintenance



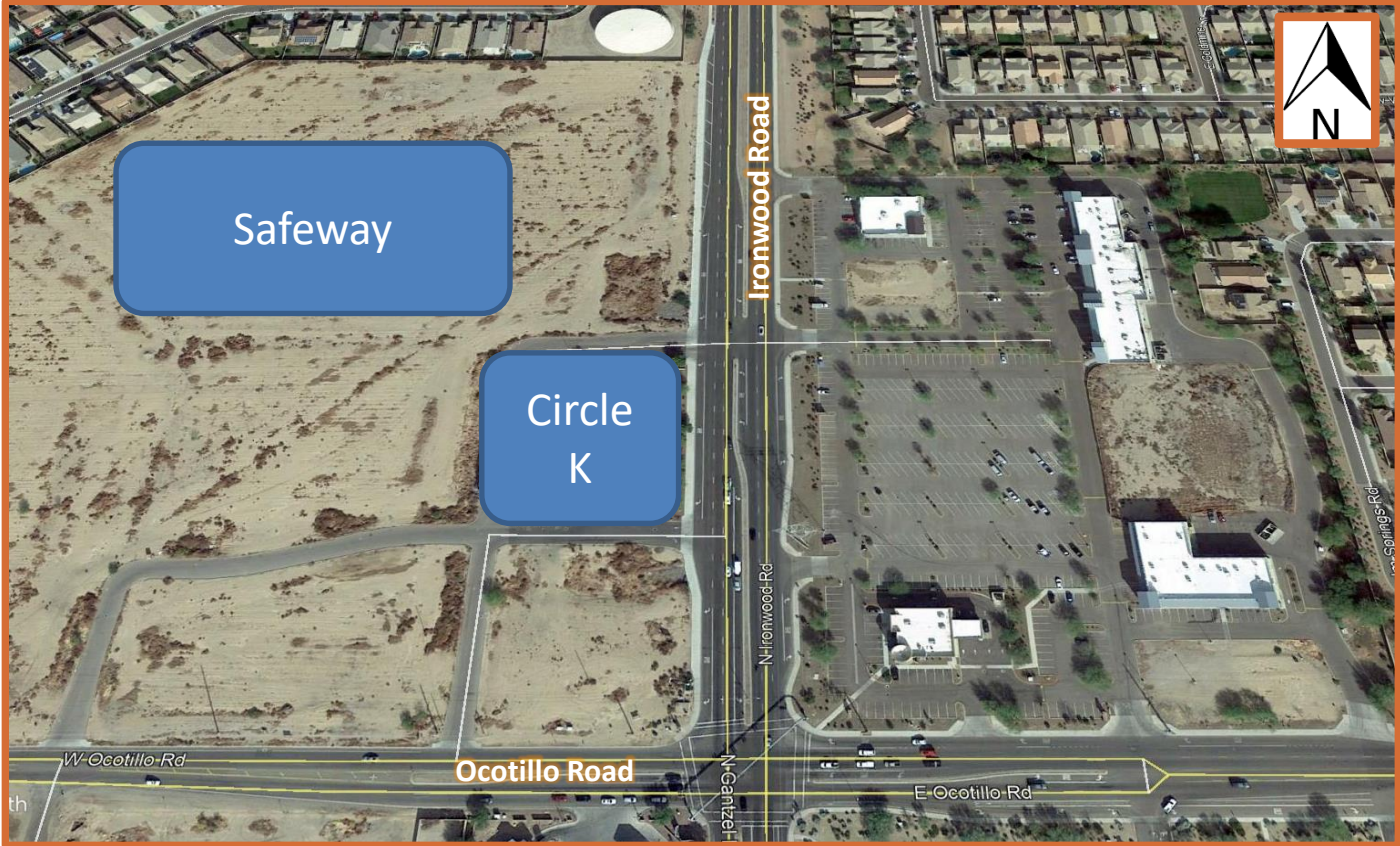
Findings – Missing Sidewalk Panel

Add sidewalk slab on east leg of Ocotillo & Ironwood.
Provide minimum 3' crossing width for ADA.

Referred
to Pinal
County



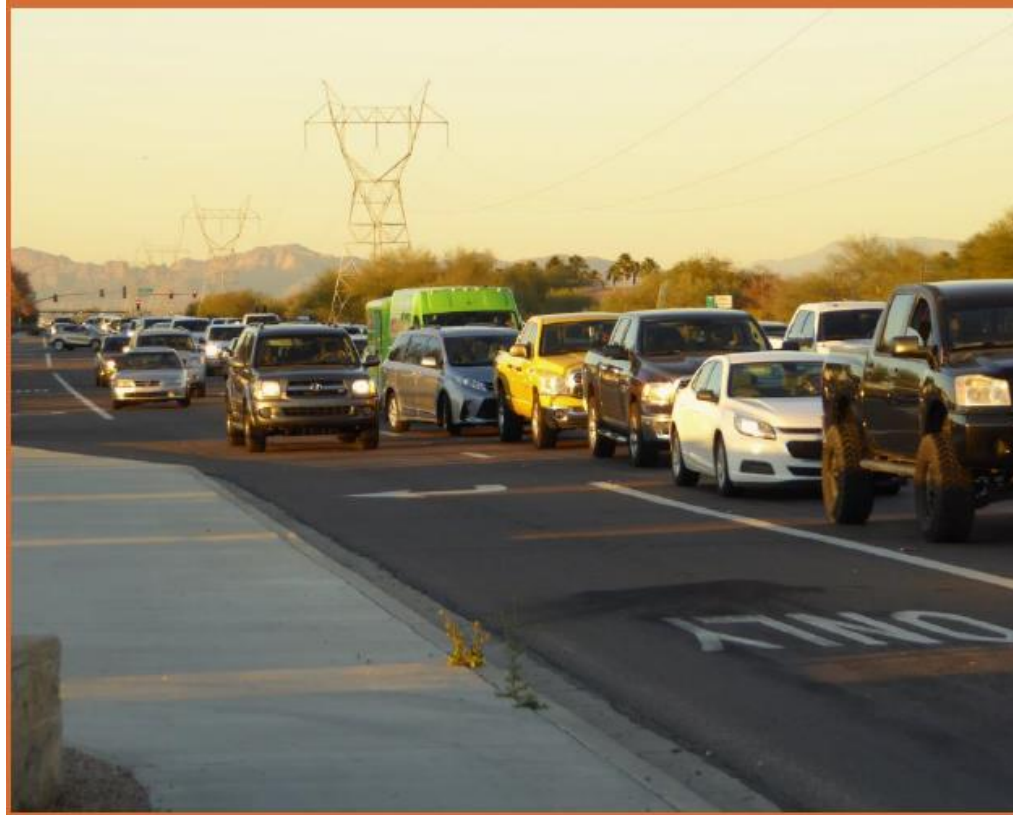
Findings – Ironwood Southbound Traffic



Findings – Ironwood Southbound Right-turn Lane North of Ocotillo Road



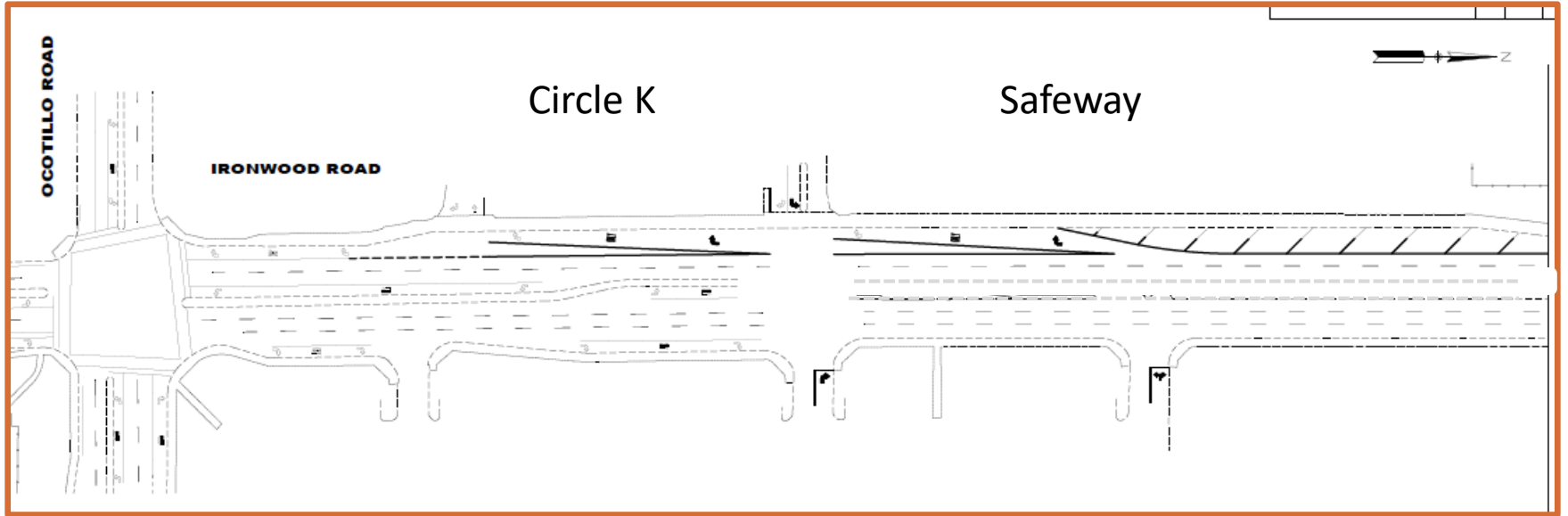
Ironwood Southbound Right-turn Lane North of Ocotillo Road



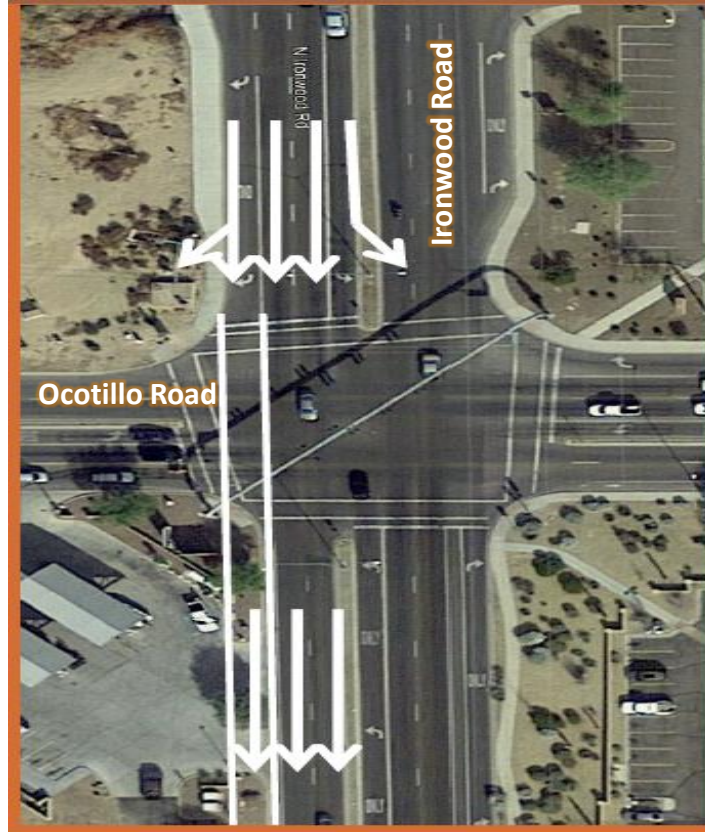


In Progress
\$25k

Ironwood – Restriping Project

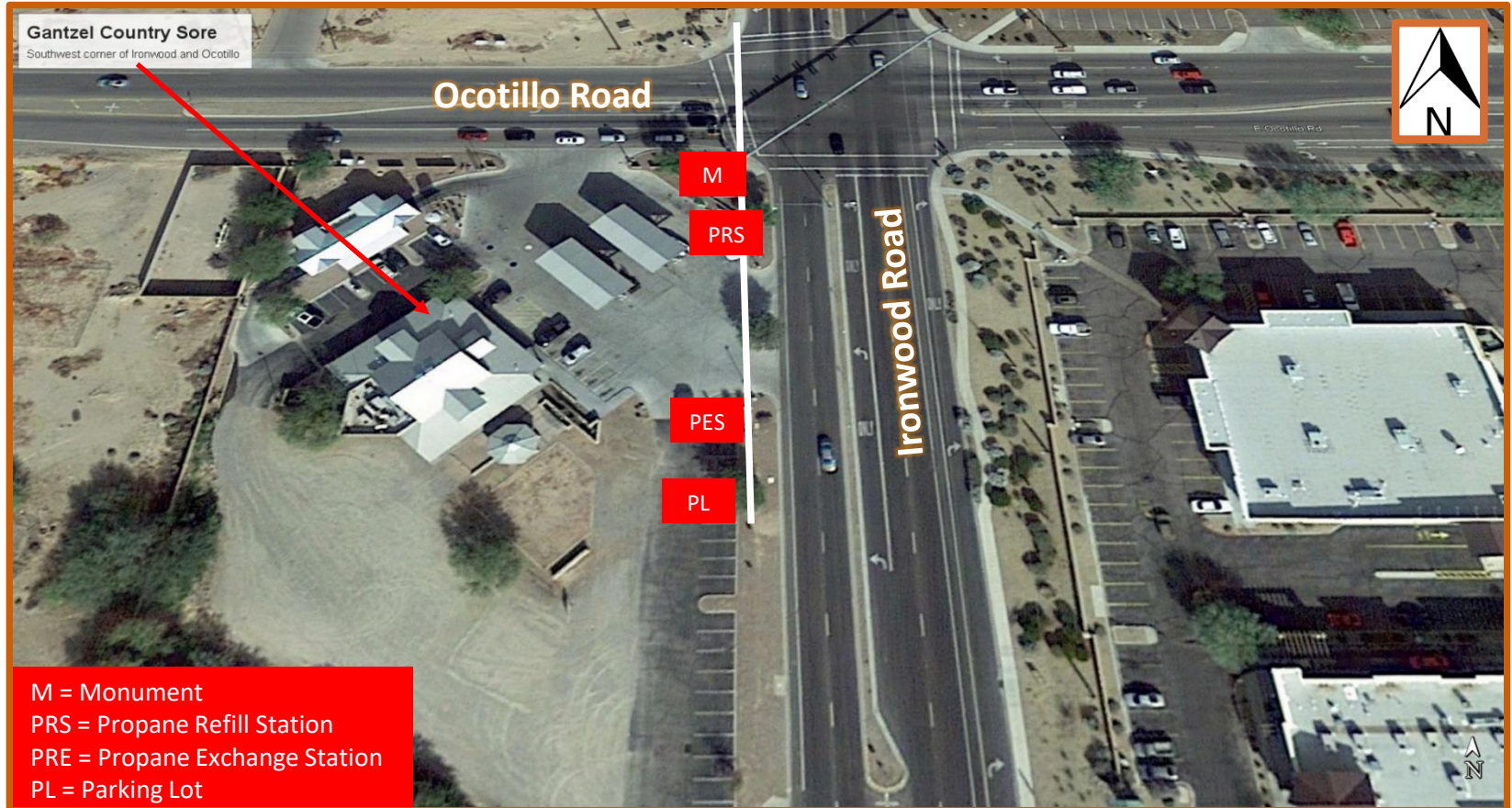


Ultimate Improvement Solution



Ultimate Improvement Solution
\$1.5m - \$2.5m

Southbound Ironwood Traffic Issue





Ironwood Road Safety Audit Findings

Needs to be Addressed
Recommending in 2020 Budget

Findings - Signage, Curbs, Paint

- Place object markers and keep right signs consistently on all intersection medians and median openings.
- Refresh Yellow Paint on median noses.
- Repair damaged median curbs.



- Install reflective traffic signal head tape.
- Install oversize speed reduction signs north of Germann for southbound Ironwood.
- Install flashing speed feedback sign south of Germann for southbound Ironwood.



FY 2020
\$35k

Findings – Signage, Curb, Paint (Continued)

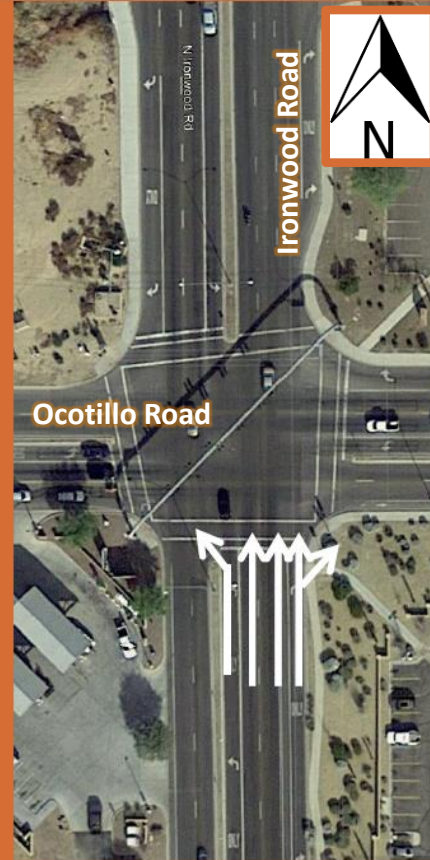
North leg of Ironwood/Ocotillo Median extends into crosswalk.

- Recommend cutting curb back to avoid conflict with crosswalk.



Findings – Right-Turn only lane should be Through-Lane

- Re-stripe northbound right-turn lane to be a thru/right-turn option.
- Right-turn lane would open up 900' before Ocotillo.
- Remove bike lane at McDonalds or move to inside
- Drivers already doing this.



FY 2020
\$3k

Findings – Pedestrian Countdown Signals

Show pedestrian countdown timer on pedestrian signals.



FY 2020
\$7k

Findings – Pedestrian Ramps

No sidewalk ramps on east corners of Pima.



FY 2020
\$100k

Findings – Left-Turn Lanes

Left-Turn Lanes have negative offset at all signalized intersections.

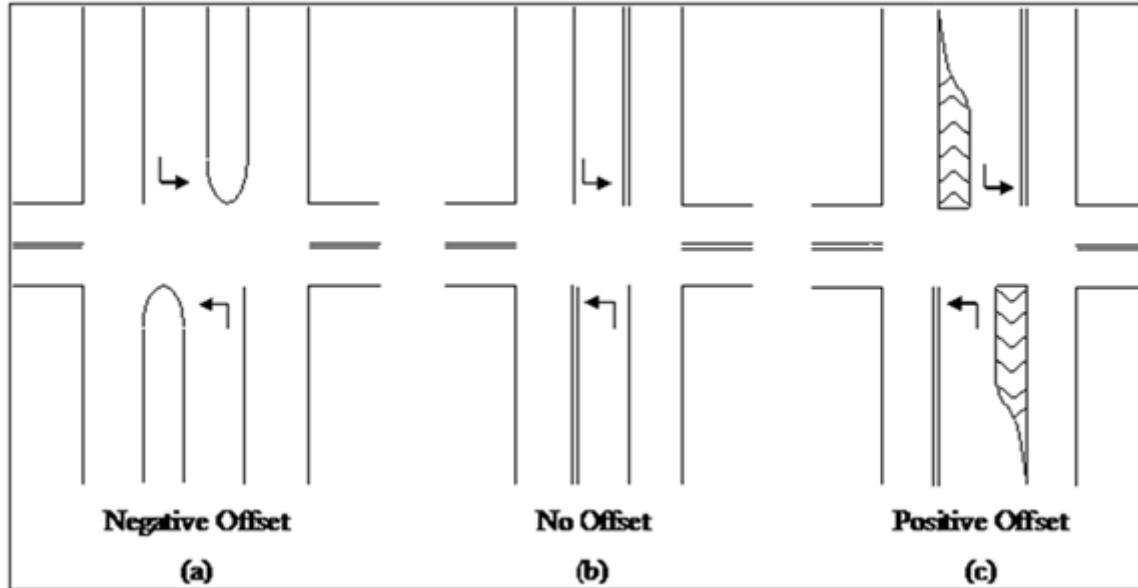
WB Ocotillo



NB Ironwood



Left-turn Lanes



FY 2020
\$520k

Findings – Traffic Signal Controller Cabinets

- Signal cabinets cannot be operated by police officers during an emergency.
- Recommend upgrading signal cabinets so police officers can cycle through phases during emergencies.
- Upgrade cabinets to support EVP.
- Install conduit and traffic cameras
- Connect Intersections to ITS



Ironwood Road Safety Audit Findings



Can Wait

Ultimate Improvement Solution

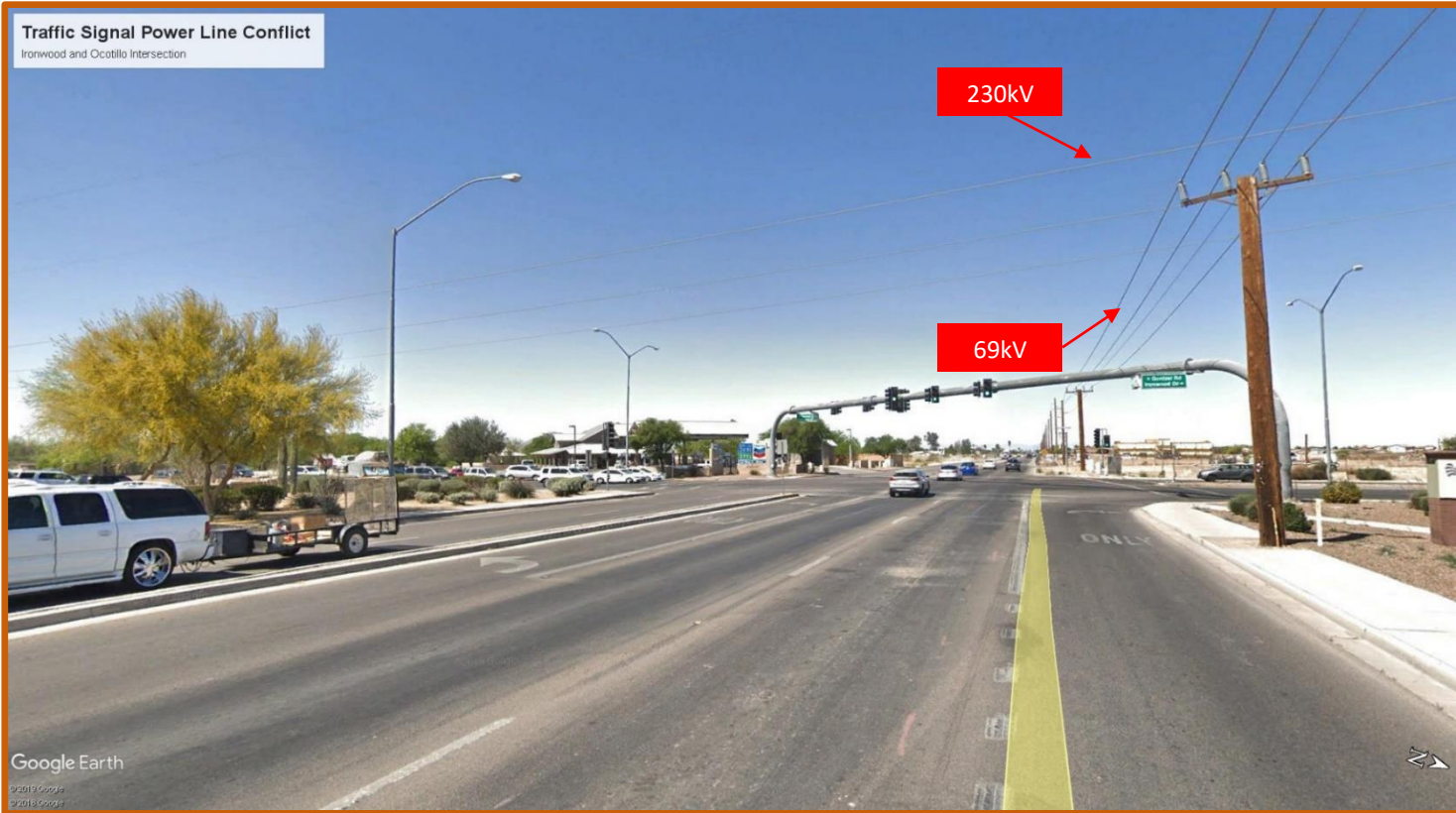
Remove diagonal signal structure and install signal mast arms on all 4 corners of intersection at Ocotillo and Pima.



Ultimate Improvement Solution
\$800k

Traffic Signal – Power Line Conflict

Traffic Signal Power Line Conflict
Ironwood and Ocotillo Intersection



Summary of Costs



- Need Immediate Attention – \$35k
 - Restriping southbound Ironwood Road
 - Misc. Repairs
- Recommended 2020 Budget - \$700k
 - Signage, Curb Repairs, restriping, Intersection upgrades (control cabinets, traffic cameras, etc), etc.
- Ultimate Solution - \$2.3m - \$3.3m
 - Traffic Signal Pole Conversion
 - Adding southbound lane through Ocotillo intersection



Questions/Comments