TRIBAL TRANSPORTATION SAFETY PLAN

FORT MOJAVE INDIAN TRIBE

March 2017

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1.0 Introduction

To address the fatal crash and serious injury problems on Indian Lands, the Federal Highway Administration (FHWA) initiated efforts to improve safety. The following steps were taken by the Administration:

- 2005 Strategic Highway Safety Plan for Indian Lands & Safety Management System
- 2011 Update: Safety Management System Implementation Plan
- 2013 Tribal Transportation Program Safety Fund

The FAST Act (highway bill) provides a 2% Set Aside for Tribal Safety Funding (~$9.5 million/year). Funding is limited to two categories:

- Transportation Safety Planning – *This project is funded under planning*
- Other Eligible Activities as listed in 23 USC 148(a)(4)
    - Engineering Projects
    - Road Safety Audits
    - Pedestrian, Bicycle, and ADA improvements
    - Systemic safety improvements
    - Correct or improve a hazardous location or feature
    - Address a highway safety problem
    - Consistent with a State strategic highway safety plan

Tribes may apply for safety funding **each year**, and they can apply for **more than one project** each year. The intent for the first year of funding is for every Tribe to have a Safety Plan. Then, based upon the completion of your Safety Plan, projects are ranked for funding to implement solutions or strategies to improve safety in your communities.

The Fort Mojave Indian Tribe is committed to reducing the risk of deaths and serious injuries as a result of incidents that occur on the transportation system within the Western Arizona region. This Tribal Transportation Safety Plan document was developed with input from several individuals within the Tribe and in cooperation with Federal, State, and County Government Agencies. A Working Group was formed to identify and analyze the safety problems facing the Tribe, and to recommend emphasis areas to include in the plan. Traffic crash data was collected and analyzed to properly understand the safety risks.

2.0 Vision

The Fort Mojave Indian Tribe developed vision and mission statements and established overall goals for their Safety Plan. These statements provide concise messages to lead the Tribe towards safe travel.

Vision Statement: Zero fatalities on the transportation network serving the Fort Mojave Indian Tribe.

Mission Statement: The Tribe's mission is to eliminate fatalities and reduce severe injuries on the roadways through a cooperative, multi-agency approach that utilizes education, enforcement, engineering, and emergency service strategies.

Goal: Reduce the number of transportation related fatal crashes by 20% over the next 5 years.

3.0 Safety Partners

All Tribal departments were invited to participate in the planning process. The Tribe has a working relationship with the following agencies and partners with them on transportation safety activities.

a. Partner with the list of people or agencies developed for the safety planning process including Tribal Council, Tribal Departments, County Public Works, County Sheriffs, Arizona Department of Transportation (ADOT), Department of Public Safety (Highway Patrol), Emergency Services, and Fire District – see attached list in **Appendix C** and example letters sent to everyone on the contact list.

b. Working Group core people should include:
    i. Timothy Williams. – Tribal Chairman
    ii. Wayne Nelson – Planning
    iii. Joe Garcia Sr. – Road Maintenance
    iv. Craig Gordon – FMIT GIS
    v. George Brown – Tribal Police
    vi. Bill Snodgrass – FMIT Prosecutor
    vii. Sierra Medrano – IHS Health Clinic
    viii. Greg Whaley – Mohave County Traffic Control
    ix. Les Henley – Mohave County Public Works
    x. Ross Tarangle – San Bernardino Sheriff
    xi. Ken Paetz – ADOT Northwest District Traffic
    xii. Justin Hembree – WACOG Planner

4.0 Process

The planning process initiated with this Safety Plan project was guided by the FHWA's *Developing Safety Plans, A Manual for Local Rural Road Owners*. The process generally consists of six steps that continue in a cyclical manner to periodically update the plan. This

Tribal Transportation Safety Plan should be updated every year with community input and Tribal Council oversight to evaluate the progress made on the implementation of transportation safety priorities and strategies.

Developing a Tribal Transportation Safety Plan (TTSP)

Think of the Four E's of Safety – Engineering, Enforcement, Education, and Emergency Services.

Think of the Stakeholders and Partnerships in Transportation who play a role in safety efforts.

A Working Group was established to identify the safety issues facing the Tribe and to prioritize the emphasis areas based upon the data analysis. The Group also developed implementation strategies to improve safety in each emphasis area. A copy of all meeting agendas, attendee lists, and minutes can be found in **Appendix B**.

5.0 Existing Efforts

The Tribe has several programs in place which contribute to the overall transportation safety of its members. The implementation strategies outlined in this report will help coordinate efforts between tribal programs and maximize their resources. The existing efforts are listed below.

a. Road Inventory complete and available in GIS
b. Seat belt law and child safety seat required by law (secondary)
c. Tribal Court is in place for enforcement of traffic citations
d. Tribal Police Department on Reservation, and they work with other local law enforcement agencies since the Reservation is checker boarded
e. Tribal Police Department is currently working on installing a new reporting system called CAPERS. They use CrimeStar now. The new system will be able to capture crash location data.

f. Mutual Aid Agreements are in place for County Law Enforcement and State Departments of Safety
g. Emergency Medical Services provided by Meadow Valley and Mohave Valley EMS in AZ and San Bernardino Co. and Baker in CA - No tribal EMS
h. Fire Departments are local agencies – No tribal Fire Department
i. All Tribal Police, County Sheriff, State Police, US Dept. of Wildlife, and the AZ Game & Fish agencies patrol the Colorado River for safety and accident response
j. All law enforcement agencies report fatal crashes to the State. This data will be captured at the State level. All ***County*** law enforcement agencies report all accidents to the State database.
k. City of Needles did a speed survey recently – this report is available to the Tribe
l. Road Safety Audit completed for SR95 from Bullhead Pkwy to Boundary Cone Rd in approximately 2014
m. A street lighting study was done along SR95 by ADOT
n. IHS Health Clinic has a child safety seat program and child seat training
o. Tribal Police held a bicycle helmet safety campaign
p. Tribe has Substance Abuse Programs and any other assistance tribal members need related to behavioral health or education
q. Tribe has no laws against texting and driving, AZ has no laws against texting and driving, CA and NV do have a law against texting and driving, City of Kingman and other local cities do have a law against texting and driving
r. ADOT and Mohave County described upcoming traffic improvement projects:
    i. SR 95 concrete median from Hammer Lane to Aztec Rd
    ii. SR 95 roundabouts at Aztec Rd and Camp Mohave Rd
    iii. Camp Mohave Rd within next few years
    iv. Corwin Road in Bullhead City new signal programmed
    v. I-40 Interconnect in City of Needles
    vi. ADOT working on a SR 95 Corridor Study from Teller Ln to the Laughlin Bridge
    vii. CR1 roundabout at Golden Shores Pkwy
    viii. New bridge in Topock over the Sacramento Wash
    ix. Roadways with or receiving Flashing LED Radar Activated Speed Limit signs in Mohave County

2 on Oatman Hwy	2 on Northern Ave	3 on Hwy 91
1 on Courtwright Rd	2 on Stockton Hill Rd	4 on Pierce Ferry Rd
2 on Boundary Cone Rd	2 on London Bridge Rd	2 on Chino Dr
2 on Diamond Bar Rd		

6.0 Data Summary

Crash data was gathered from the State of Arizona, State of California, State of Nevada, and Tribal Police databases for the detailed analyses. Traffic accident data is maintained by the States and includes all incident records reported for all crashes statewide, regardless of crash severity type. The data is accurate and consistent with the national fatality database. Other data sources were also used for data specific to Native Americans. The Tribal Police Department furnished records of traffic crashes within the reservation. The following list of resources and data collection summaries were used to generate crash data reports. All data summaries and maps can be found in **Appendix B** – Meeting Notes December 7, 2016 and February 7, 2017.

a. ADOT Traffic Crash Data – Mohave County & FMIT Area 2012-2015
b. California Traffic Crash Data – San Bernardino County & FMIT Area 2012-2015
c. Nevada Traffic Crash Data – Clark County & FMIT Area 2012-2015
d. Tribal Police Department collision statistics for 2010-2015
e. National Highway Traffic Safety Administration (NHTSA) Traffic Safety Facts – AZ, Mohave, CA, San Bernardino, and NV, Clark 2011-2015
f. FMIT Crash Maps
g. WACOG Safety Plan Crash Data Analysis
h. *Engineering and Traffic Survey for the City of Needles*, June 2012, Prepared by Charles Abbott Associates, Inc.
i. *Speed Zone Survey for SR 95 through the City of Needles*, June 2012, Prepared by California Department of Transportation
j. *City of Needles School Traffic Controls* project – installed 22 school crossings and related signs at 14 locations
k. SR95 at Hulet Avenue has consistent accidents – look for detailed intersection data to determine possible causes.
l. Dike Road (Bureau of Reclamation) has speeding and poor road conditions that contribute to high accidents on that road.
m. Aha Macav Parkway has poor drainage conditions and soft or no shoulders which make this road less safe.
n. Aztec Road has soft or no shoulders, no left turn lanes at cross streets or entrance into Avi Resort and Casino; Road needs to be divided with median.

o. Veteran's Parkway has higher accident rates. This road was the original road to the Avi Resort and Casino, used to bypass SR95 traffic, and goes to bridge crossing the Colorado River

Data Analysis Outcome – County Level Data

- Most fatal crashes involved:
  - 1st Road Departures
  - 2nd Speeding
  - 3rd Rollovers

Data Analysis Outcome – FMIT Area State Data

- Most fatal or severe injury crashes involved:
  - 1st Intersections
  - 2nd Head On crashes or Rear End collisions
  - 3rd Single Vehicle crashes
- Most fatalities occurred on State Route 95 in AZ
- Alcohol involved in ~30% of fatal crashes countywide (statewide avg. 34%)

Data Analysis Outcome – Tribal Data

- Most fatal or severe injury crashes involved:
  - 1st Rollover crashes
  - 2nd Head On crashes
  - 3rd Pedestrians involved in crash
- Most fatalities occurred on Aztec Rd or Colorado River
- Most injury accidents occurred on Aha Macav Pkwy
- DUI involved in ~45% of Tribally reported accidents

7.0 Emphasis Areas

A detailed chart for each emphasis area can be found in **Appendix A**. This section provides a summary of those emphasis areas based upon the crash data and safety issues identified by the Tribe.

State Data Driven Emphasis Areas

1) Roadway Departures
2) Speed Management
3) Rollovers

Tribal Data Driven Emphasis Areas

1) Intersection Related
    a) SR 68 MP 12 turn to Davis Dam – trucks / rear ends
    b) SR 95 & Mohave Valley Hwy
    c) SR 95 & Hulet Avenue
2) Impaired Driving
3) Rollover / Overturn Crashes
4) Rear End Crashes
5) Head On Crashes
6) Hazardous locations
7) Pedestrian Involved Crashes
8) No shoulders / Narrow shoulders / Soft shoulders
    a) Aha Macav Pkwy
    b) Laguna Road
    c) Aztec Road
    d) Dike Road
    e) Courtwright Road / CR 1
    f) SR95, Aha Macav Pkwy, and Aztec Road highest problems

Potential Strategies

1) Road Departures / Rollovers
    - Improve data collection and analysis for fatal run-off-the-road crashes
    - Increase fines for serious violations that result in run-off crashes
    - Evaluate pavement strategies (rumble strips, pavement markings)
    - Shoulder improvements / Recovery zone improvements
    - Increase seat belt use
    - Add curve signage

2) Speed Management
    - Develop public outreach
    - Add signage
    - Install driver feedback signs / radar ticketing
    - Increase enforcement (partner with County/State)
    - Increase penalty for repeat offenders
    - Deliver educational packets for repeat offenders
3) Rear End Collisions
    - Create media campaigns about distracted driving
    - Add messaging about following too close/leave room
    - Reduce speed limits in busy commercial areas
    - Add left turn lanes or medians
4) Head On Collisions
    - Create media campaigns about distracted driving
    - Add messaging about drowsy driving
    - Evaluate pavement strategies (rumble strips, pavement markings)
    - Add concrete medians
5) Intersection Collisions
    - Perform a Road Safety Audit at worst locations
    - Reduce the number of conflict points
    - Create intersection safety checklists for existing conditions and new design
    - Upgrade signing, pavement markings, and signals
    - Add advanced street name signs on intersection warning signs
    - Solar-powered, sign-mounted beacons
    - Implement modern roundabouts
    - Update signal timing / central control / adopt consistent signal timing
    - Construct turn lanes where they do not exist
6) Impaired Driving
    - Reduce roadside distractions
    - Stress no texting and driving in driver's education classes
    - Add rumble strips
    - Increase sobriety checkpoints

- Create media campaigns

7) Pedestrian Safety
   - Education outreach for pedestrians
   - Road Safety Assessment of key locations
   - Apply for TTP Safety Funds for trail / sidewalks
8) Roadway Shoulder Improvements
   - Increase shoulder width
   - Install gravel shoulder in soft areas
   - Widen pavement with soil stabilization and chip seal
9) Identify Roadway Hazards at specific locations
   - Engineering analysis of known locations
   - Use traffic counters for intersection turning movement analysis
   - Collect speed data
10) Hazards at Recreational Areas / Colorado River (watercraft)
   - Add pull outs for parking off roadway at known recreational areas
   - Add seasonal signage at known recreational areas
   - Increase water patrols during peak times
   - Media campaigns for river / watercraft safety
   - Add hazard markings on bridge piers

8.0 Evaluation & Implementation

The emphasis areas were ranked by the Working Group and prioritized. A list of tasks to improve safety in each area of concern is presented on the following pages. The list includes the responsible agency along with time frames to complete that task and relative cost. This priority list should be an action plan for the Tribe, and it should be evaluated and updated as conditions change over time.

Fort Mojave Indian Tribe's Tribal Transportation Safety Plan – Implementation Strategies				
Priority	Task/What?	Who?	Target Date?	Cost?
1	Emphasis Area: Impaired Driving			
	Road checkpoints	Police / DPS	May 2018	$
	Control repeat offenders	Court / Police	Dec 2019	$$
	Rumble strips	NDOT/ADOT/SanBernCo	Oct 2019	$$ ½
	Brochure targeting DUI	DHS-IHS	Sept 2018	$
	Driver's education	Schools	Aug 2018	$
	Media campaigns	Tribe	Dec 2018	$
	Primary law for no texting while driving	Court / Police	June 2018	$
2	Emphasis Area: Speed Management			
	Increase Enforcement	Police/ Sheriff/ DPS/ CHP	Dec 2018	$
	Driver feedback signs / radar ticketing	Police/ Sheriff/ DPS/ CHP	Dec 2018	$$
	Driver feedback signs / speed limit sign	ADOT/ Mohave Co/ BIA	Dec 2018	$$
	Add speed limit signs / patrol signs	ADOT/ Mohave Co/ BIA	Dec 2019	$
	Increase penalty for repeat offenders	Court	Dec 2018	$
	Tribal Newsletter	Tribe/Planning/Police	June 2018	$
	Billboards	State Highway Safety	Dec 2018	$$
	Education packets to offenders	Court / Planning	Oct 2018	$
	Light intersections along SR95	ADOT/Mohave Co	Dec 2021	$$$
3	Emphasis Area: Road Departures / Rollovers			
	Rumble Strips	NDOT/ADOT/SanBernCo	Oct 2019	$$ ½
	Pavement Markings	NDOT/ADOT/ Caltrans/ BIA	Oct 2019	$$
	Curve Signage	NDOT/ADOT/ Caltrans/ BIA	Oct 2019	$$
	Shoulder Widening or Repair	NDOT/ADOT/ Caltrans/ BIA	Dec 2026	$$$
	Improve design of roadside hardware	NDOT/ADOT/ Caltrans/ BIA	Oct 2019	$$

$ Low cost – under $2,000 $$ Reasonable cost – under $10,000 $$$ High cost – more than $100,000

Fort Mojave Indian Tribe's Tribal Transportation Safety Plan – Implementation Strategies				
Priority	Task/What?	Who?	Target Date?	Cost?
	Improve design of barrier & attenuation systems	NDOT/ADOT/ Caltrans/ BIA	Dec 2019	$$$
	Remove/relocate objects in hazardous locations	NDOT/ADOT/ Caltrans/ BIA	Dec 2019	$$
	Delineate objects with reflective tape	NDOT/ADOT/ Caltrans/ BIA	Dec 2019	$
	Increase penalty for offenders	Tribal Court	Dec 2019	$
	Tribal Newsletter	Tribe Planning / Police	June 2018	$
	Increase Seat Belt Use	Police/DHS-IHS	Dec 2018	$$
4	Emphasis Area: Intersections			
	Perform a Road Safety Audit	Planning/ITCA/ADOT	July 2019	$$
	Construct turn lanes	ADOT/ Mohave Co/BIA	Nov 2021	$$S
	Create safety checklists for existing and proposed	ADOT/ Mohave Co/BIA	July 2019	$
	Update signal timing on SR95	ADOT/ Mohave Co	March 2020	$ ½
	Construct roundabouts	ADOT/Mohave Co/BIA	Sept 2018	$$$
	Add advanced intersection and street name signs	ADOT/Mohave Co/BIA	Dec 2019	$$
	Add solar powered, sign mounted beacons	ADOT/Mohave Co/BIA	Dec 2019	$$
5	Emphasis Area: Roadway Shoulders Improvements			
	Add pavement width	Mohave Co / BIA	July 2023	$$$
	Install soil stabilization & chip seal surface	Mohave Co / BIA	July 2022	$$ ½
	Install gravel shoulder in soft areas	Mohave Co / BIA	July 2021	$$ ½
6	Emphasis Area: Hazardous Locations			
	Perform engineering analysis at known locations	NDOT/ADOT/ Caltrans/ BIA	July 2020	$$
	Perform traffic counts at intersection(s)	NDOT/ADOT/ Caltrans/ BIA	July 2020	$
	Collect speed data	NDOT/ADOT/ Caltrans/ BIA	Sept 2019	$

$ Low cost – under $2,000 $$ Reasonable cost – under $10,000 $$$ High cost – more than $100,000

Fort Mojave Indian Tribe's Tribal Transportation Safety Plan – Implementation Strategies				
Priority	Task/What?	Who?	Target Date?	Cost?
7	Emphasis Area: Head On Collisions			
	Tribal Newsletter about distracted driving	Planning / Police	Dec 2018	$
	Billboards	State Highway Safety	Dec 2018	$$
	Rumble strips	NDOT/ADOT/SanBernCo	Oct 2019	$$ ½
	Pavement markings	NDOT/ADOT/ Caltrans/ BIA	Oct 2019	$$
	Concrete medians	ADOT	Dec 2021	$$$
8	Emphasis Area: Pedestrian Safety			
	Construct pedestrian trail(s)	BIA / Planning	Dec 2019	$$$
	Tribal Newsletter	Planning	June 2018	$
	Install pedestrian crossings	ADOT / BIA / Planning	Dec 2021	$$$
9	Emphasis Area: Recreational/Colorado River (watercraft)			
	Add gravel pull outs for parking	ADOT / Mohave Co	2018	$$ ½
	Use seasonal signage	ADOT / Mohave Co	2018	$
	Increase water patrols during peak times	All Police/USFW/AZG&F	July 2018	$$
	Media campaigns for river/watercraft safety	Tribe/Natl. Park Service	Dec 2019	$$
	Install hazard markings on bridge piers	Tribe/Natl. Park Service	May 2019	$
10	Emphasis Area: Rear End Collisions			
	Media campaigns	NDOT/ADOT/Caltrans/Tribe	Dec 2018	$$
	Add intersection warning signs	ADOT / Mohave Co / BIA	Mar 2019	$$
	Reduce speed limit in commercial areas	ADOT / Mohave Co	Dec 2018	$$
	Add left turn lanes and/or medians	NDOT / ADOT	Dec 2026	$$$
	Add lighted STOP signs	ADOT / Mohave Co / BIA	Mar 2019	$$

$ Low cost – under $2,000 $$ Reasonable cost – under $10,000 $$$ High cost – more than $100,000

9.0 Resources

Arizona

Arizona Department of Transportation Statewide Safety Data Mart Crash Data for 2012-2015 CD-ROM of data used in this study
Arizona 2014 Strategic Highway Safety Plan
http://www.azdot.gov/about/transportation-safety/arizona-strategic-highway-safety-plan
http://www.azdot.gov/docs/default-source/about/arizona-s-first-shsp.pdf?sfvrsn=0
ADOT Motor Vehicle Crash Facts
http://www.azdot.gov/mvd/Statistics/arizona-motor-vehicle-crash-facts
Arizona Tribal Transportation Resources
http://www.aztribaltransportation.org/resources.asp

California

Caltrans - Strategic Highway Safety Plan
http://www.dot.ca.gov/trafficops/shsp/
CA Highway Patrol - Statewide Integrated Traffic Records System – Crash Data
http://iswitrs.chp.ca.gov/Reports/jsp/RawData.jsp

Nevada

Nevada Department of Public Safety – Zero Fatalities, Drive Safe Nevada
http://www.zerofatalitiesnv.com/safety-plan-what-is-the-shsp/
NDOT Traffic Crash Reports
http://www.nevadadot.com/About_NDOT/NDOT_Divisions/Planning/Traffic_Safety_Engineering/Traffic_Crash_Reports.aspx

National

National Highway Traffic Safety Administration – State Traffic Safety Information
FARS Data Tables – Native American Traffic Safety Facts
http://www-nrd.nhtsa.dot.gov/departments/nrd-30/ncsa/STSI/USA%20WEB%20REPORT.HTM

Research and Innovative Technology Administration (RITA) – State Transportation Facts
http://gis.rita.dot.gov/StateFacts/

Federal Highway Administration, Federal Lands Highway, Tribal Transportation Safety
http://flh.fhwa.dot.gov/programs/ttp/safety/

Developing Safety Plans, A Manual for Local Rural Road Owners
http://safety.fhwa.dot.gov/local_rural/training/fhwasa12017/

Training, Tools, Guidance and Countermeasures for Locals
http://safety.fhwa.dot.gov/local_rural/training/

Tribal Traffic Safety Funding Guide
http://www.aztribaltransportation.org/resources.asp

APPENDIX A

Emphasis Area	Strategic Linkage
Impaired Driving	Identified in Arizona's SHSP as an emphasis area
Objectives	**Success Indicators**
Reduce alcohol related crashes	Reduction in impaired driving related crashes on the reservation and surrounding checkerboard lands.

	Actions	Target Output	Responsible Agency	Date of Completion	Performance Measures	Evaluation
Education	Develop brochure targeting DUI;	No DUIs on the reservation	DHS-IHS	Sept 2018	Citations & crashes	Annual statistics
	Stress no texting in driver's education class;	No texting related crashes	School Districts	August 2018	Citations & crashes	Annual statistics
	Create media campaigns	Increase awareness of impaired or distracted driving	Tribe	Dec 2018	Number of media spots issued	Member feedback
Enforcement	Increase check points;	Hold strategic checks four times a year;	Police Dept. , AZ DPS, CA CHP;	May 2018	No DUIs cited	Annual statistics
	Control repeat offenders;	Reduce repeat DUIs;	Court and Police;	Dec 2019	No DUIs cited	
	Pass a primary law for no texting while driving	Reduce texting while driving	Court and Police	June 2018	No observance of texting while driving	
Engineering	Rumble strips on SR163/SR68/ US95	Warning systems on rural roadways	NDOT/ADOT/ San Bernardino Co	Oct 2019	Rumble strips installed	Annual statistics for crashes / reduction in severity of crashes
EMS						

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Emphasis Area	Strategic Linkage
Speed Management	Speeding is a high priority emphasis area in Arizona's SHSP.
Objectives	**Success Indicators**
Reduce incidents of speeding on interstates & highways.	Reduction in speeding related crashes on US95, SR95, SR163 & SR68 in the areas regularly traveled by tribal members.

	Actions	Target Output	Responsible Agency	Date of Completion	Performance Measures	Evaluation
Education	Tribal newsletters ;	Awareness of the dangers & consequences of excessive speed	Planning Dept.; Emergency Mgmt.; Tribal Police Dept.	June 2018 (continue);	Newsletter issued; public announcements issued	Feedback from tribal members
	Billboards;		State Highway Safety Offices;	2018;	Number of billboards;	
	Education packet to offenders		Planning / Court	Oct 2018	Education packet prepared	
Enforcement	Increase State & County Patrol in tribal areas;	Reduction in speeding violations;	Highway Patrol / Tribal Patrol / County Patrol;	2018	Reduce annual fatalities from 61 in the last 5 years to 55 in 2020 (10%);	Annual statistics
	Driver feedback signs / Radar ticketing;	Increased speed compliance;	Highway Patrol; Tribal Police	2018		
	Increase penalty for repeat offenders;	Reduction in speeding violations;	Tribe;	2018	Law passed;	Less violations
Engineering	Signage;	Increased speed compliance;	NDOT / ADOT / Counties	2019	Reduce speeding on state routes;	Annual statistics
	Driver feedback signs;		NDOT / ADOT / Counties / Tribal Police	2018	Reduce crashes related to speeding	
	Light intersections along SR95	Increase visibility at intersections	ADOT / Mohave Co	2021		
EMS						

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Emphasis Area	Strategic Linkage
Road Departures / Rollovers	Identified in Arizona's SHSP as an emphasis area.
Objectives	**Success Indicators**
Reduce severity of the crash; Minimize likelihood of crash if vehicle travels off the shoulder; Keep vehicles on the road	Reduction in off the road crashes; Reduction in crash severity if vehicles run off the road.

	Actions	Target Output	Responsible Agency	Date of Completion	Performance Measures	Evaluation
Ed	Tribal newsletters	Increase awareness	Planning Dept. ; Police Dept.	June 2018 (continue)	Newsletter issued	Feedback from tribal members
Enforce	Increase penalty for violations resulting in run-off crashes	Reduction in road departures	Tribal Court	Dec 2019	Law passed	Annual statistics
Engineering	Rumble strips;	Warning systems on rural highways;	NDOT / ADOT / San Bernardino Co	Oct 2019	Rumble strips installed	Annual statistics for crashes / reduction in severity of crashes
	Pavement markings / signage;	Increase visibility / add curve signs;	NDOT / ADOT / Caltrans / BIA	Oct 2019	Visible striping and signage	
	Shoulder widening or repair;	Min. 4' along SR95, Min. 2' local roads;	NDOT / ADOT / Caltrans /BIA local roads;	Dec 2026	Min. shoulders on roads	
	Improve design of roadside hardware;	All hardware has breakaway feature;	NDOT / ADOT / Caltrans /BIA local roads;	Oct 2019	Upgraded hardware	
	Improve design & application of barrier & attenuation systems;	All barrier systems meet current FHWA standards;	NDOT / ADOT / Caltrans /BIA local roads;	Dec 2019	Upgraded barrier systems	
	Remove/relocate objects in hazardous locations;	Eliminate obstacles where possible;	NDOT / ADOT / Caltrans /BIA local roads;	Dec 2019	Objects removed from clear zone	
	Delineate objects with reflective tape	Increase visibility of hazardous objects	NDOT / ADOT / Caltrans /BIA local roads	Dec 2019	Objects marked	
EMS						

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Emphasis Area	Strategic Linkage
Intersections	Coordination with Counties, State, and Bureau of Indian Affairs
Objectives	**Success Indicators**
Improve road geometry for turn lanes, safe stopping and line of sight	Vehicles have adequate queuing lanes and clear lines of sight

	Actions	Target Output	Responsible Agency	Date of Completion	Performance Measures	Evaluation
Ed						
Enforce						
Engineering	Perform a Road Safety Audit;	Identification of intersection deficiencies;	Tribe Planning /ITCA / ADOT;	July 2019	RSA Complete	Report Recom-mendations
	Construct turn lanes;	Safety turning movements;	ADOT / Mohave Co / BIA	Nov 2021	Construction complete	Reduced crashes
	Create safety checklists for intersections;	Reduce risk at intersections;	ADOT / Mohave Co / BIA	July 2019	Checklist complete	Traffic statistics
	Update signal timing on SR95;	Prevent vehicles from running red lights;	ADOT / Mohave Co.	March 2020	Signals coordinated	Reduced crashes
	Construct roundabouts;	Reduce T-bone accidents;	ADOT / Mohave Co / BIA	Sept 2018	Construction complete	Reduced crashes
	Add advance warning and street name signs	Reduce vehicle maneuvers;	ADOT / Mohave Co / BIA	Dec 2019	Signs installed	Reduced crashes
	Add beacons	Increase visibility	ADOT / Mohave Co / BIA	Dec 2019	Beacons installed	Reduced crashes
EMS						

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Emphasis Area	Strategic Linkage
Roadway Shoulder Improvements	Coordination with Counties, State, and Bureau of Indian Affairs
Objectives	**Success Indicators**
Identify and correct hazardous roadway conditions on high travel routes.	All necessary data collected and hazardous locations identified.

	Actions	Target Output	Responsible Agency	Date of Completion	Performance Measures	Evaluation
Education						
Enforcement						
Engineering	Add pavement width; Add gravel to sandy or soft areas; Stabilize soil and chip seal	Reduce hazard locations; Soft zones identified and corrected Soft zones identified and corrected	Mohave Co / BIA Mohave Co / BIA Mohave Co / BIA	July 2023 July 2021 July 2022	Shoulders widened; Shoulders hardened; Shoulders hardened	Reduction in crashes caused by loss of control after lane departure
EMS						

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Emphasis Area	Strategic Linkage
Identify Roadway Hazards at Specific Locations	Coordination with Counties, State, and Bureau of Indian Affairs
Objectives	**Success Indicators**
Identify and correct hazardous roadway conditions on high travel routes.	All necessary data collected and hazardous locations identified.

	Actions	Target Output	Responsible Agency	Date of Completion	Performance Measures	Evaluation
Education						
Enforcement						
Engineering	Perform engineering analysis at known locations;	High hazard locations identified;	NDOT / ADOT / Caltrans / BIA	July 2020	Inventory Complete;	Report Recom-mendations;
	Perform traffic counts for intersection turning movement analysis;	Intersection warrants identified;	NDOT / ADOT / Caltrans / BIA	July 2020	Study Complete;	Report Recom-mendations;
	Collect speed data;	Speed zones identified ;	NDOT / ADOT / Caltrans / BIA	Sept 2019	Data collected;	Report summary;
EMS						

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Emphasis Area	Strategic Linkage
Head On Collisions	Identified in Arizona's SHSP as an emphasis area.
Objectives	**Success Indicators**
Reduce severity of the crash; Keep vehicles in their lane.	Reduction in head on crashes.

	Actions	Target Output	Responsible Agency	Date of Completion	Performance Measures	Evaluation
Education	Tribal newsletters; Billboards	Increase awareness; Increase awareness	Planning Dept. / Police Dept.; State Highway Safety Office	June 2018 (continue) Dec 2018	Newsletter issued Messaging placed	Feedback from tribal members Less distracted driving
Enforcement						
Engineering	Rumble strips; Pavement markings; Concrete medians	Warning systems on rural highways; Increase visibility; Barrier to crossing centerline	NDOT / ADOT / San Bernardino Co NDOT / ADOT / Caltrans / BIA ADOT	Oct 2019 Oct 2019 Dec 2021	Rumble strips installed Visible striping Concrete median installed	Annual statistics for crashes / reduction in severity of crashes
EMS						

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Emphasis Area	Strategic Linkage
Pedestrian Safety	Tribal staff identified the need for pedestrian trails and safe bike routes.
Objectives	**Success Indicators**
Add trail along Plantation Road from Barrackman to Peck	Improved safety for pedestrians and bicycles.

	Actions	Target Output	Responsible Agency	Date of Completion	Performance Measures	Evaluation
Education	Tribal newsletter	Awareness of the dangers of walking on roadways	Planning Dept. newsletter	June 2018 (continue)	Newsletter issued	Feedback from tribal members
Enforcement						
Engineering	Install sidewalks around Boys & Girls Club, along Plantation Rd Install pedestrian crossings;	Add sidewalks at high traffic areas between center and housing; Add pedestrian crossings at various locations;	BIA / Planning ADOT / BIA / Planning	Dec 2019 Dec 2021	Reduce the number of people walking along roadway; Crossings installed	Observe pedestrian traffic; Number of pedestrians using crossings;
EMS						

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Emphasis Area	Strategic Linkage
Hazards at Recreational Areas and/or Colorado River-watercrafts	Coordination with Counties, State, and Bureau of Indian Affairs
Objectives	**Success Indicators**
Identify and correct hazardous roadway conditions at recreational areas and on the Colorado River.	All necessary data collected and hazardous locations identified.

	Actions	Target Output	Responsible Agency	Date of Completion	Performance Measures	Evaluation
Education	Develop brochure targeting DUI and boating; Create media campaigns	No DUIs on the water; Increase awareness of impaired or distracted driving	 Tribe/ Natl. Park Service (NPS)	Sept 2018 Dec 2019	Citations & crashes Number of media spots issued	Annual statistics Public feedback
Enforcement	Increase water patrols during peak times	Reduce incidents on the river	All Police Depts. /USFW/AZG&F	July 2018	Citations & crashes	Annual statistics
Engineering	Add pull outs or signage during recreational season Add hazard markings on bridge piers;	Vehicles safely off roadway; Locations identified;	ADOT / Mohave Co Tribe / NPS	2018 (seasonal) May 2019	Warning signs temporarily installed; Markings installed;	Vehicles not parked on shoulder; Annual statistics;
EMS						

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Emphasis Area	Strategic Linkage
Rear End Collisions	Coordination with ADOT, Caltrans, NDOT, Mohave County, San Bernardino County, and Clark County.
Objectives	**Success Indicators**
Reduce rear end accidents.	Reduction in rear end collisions and/or less severe injuries for rear end accidents.

	Actions	Target Output	Responsible Agency	Date of Completion	Performance Measures	Evaluation
Education	Media campaigns	Awareness of following too close and Distracted Driving	NDOT / ADOT / Caltrans / Counties / Tribal Planning / Tribal Police	Dec 2018 (continue)	Number of media spots issued	Feedback from tribal members
Enforcement						
Engineering	Sign messaging;	Improve intersection warning signs;	ADOT / Mohave Co / BIA ;	Mar 2019	Signs installed;	Reduced collisions;
	Reduce speed limits in commercial areas;	Severity of accidents reduced;	ADOT / Mohave County;	Dec 2018	Speed limit reduced;	Accident severity statistics;
	Left turn lanes or medians (SR95) (SR163) (SR68);	Rear end collisions reduced;	NDOT / ADOT	Dec 2026	Turn lanes installed;	Annual crash data;
	Add lighted STOP signs	Rear end collisions reduced	ADOT / Mohave Co / BIA	March 2019	Signed installed	Annual crash data
EMS						

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APPENDIX B

Fort Mojave Tribal Transportation Safety Plan Kick-Off Meeting
October 25, 2016 at 9:30 am
Location: Tribal Offices, 500 Merriman St., Needles, CA

Meeting Notes

1. Introductions – Sign In Sheet attached
2. Overview of a Tribal Safety Plan – Presentation slides attached
3. Stakeholders / Working Group
    a. Partner with the list of people or agencies developed for the safety planning process including Tribal Council, Tribal Departments, County Public Works, County Sheriffs, ADOT, Dept. of Public Safety (Highway Patrol), Emergency Services, and Fire District – see attached list
    b. Working Group core people should include:
        i. Timothy Williams. – Tribal Chairman
        ii. Wayne Nelson – Planning
        iii. Joe Garcia Sr. – Road Maintenance
        iv. Craig Gordon – FMIT GIS
        v. Andrew Davis – Tribal Police
        vi. Bill Snodgrass – FMIT Prosecutor
        vii. Sierra Medrano – IHS Health Clinic
        viii. Greg Whaley – Mohave County Traffic Control
        ix. Les Henley – Mohave County Public Works
        x. Ross Tarangle – San Bernardino Sheriff
        xi. Ken Paetz – ADOT Northwest District Traffic
        xii. Justin Hembree – WACOG Planner

4. Vision, Mission Statement, and Goals for the Fort Mojave Tribe – The Tribe will decide on these statements outside of the meeting.
5. Existing Safety Efforts
    a. Road Inventory complete and available in GIS
    b. Seat belt law and child safety seat required by law (secondary)
    c. Tribal Court is in place for enforcement of traffic citations
    d. Tribal Police Department on Reservation, and they work with other local law enforcement agencies since the Reservation is checker boarded
    e. Mutual Aid Agreements are in place for County Law Enforcement and State Departments of Safety
    f. Emergency Medical Services provided by Meadow Valley and Mohave Valley EMS in AZ and San Bernardino Co. and Baker in CA - No tribal EMS
    g. Fire Departments are local agencies – No tribal Fire Department
    h. All law enforcement agencies report fatal crashes to the State. This data will be captured at the State level. All ***County*** law enforcement agencies report <u>all</u> accidents to the State database.
    i. City of Needles did a speed survey recently – this report is available to the Tribe
    j. IHS Health Clinic has a child safety seat program and child seat training
    k. Tribal Police held a bicycle helmet safety campaign
    l. Tribe has Substance Abuse Programs and any other assistance tribal members need related to behavioral health or education
    m. Tribe has no laws against texting and driving, AZ has no laws against texting and driving, CA and NV do have a law against texting and driving, City of Kingman and other local cities do have a law against texting and driving

n. ADOT and Mohave County described upcoming traffic improvement projects

i. Hammer Lane & SR95
ii. Camp Mohave within next few years
iii. Corwin Road in Bullhead City new signal next year
iv. I-40 Interconnect in City of Needles
v. CR1 Traffic Circle at Golden Shores Pkwy
vi. SR 95 Traffic Circle at Aztec Rd
vii. New bridge in Topock over the Sacramento Wash
viii. Roadways with or receiving Flashing LED Radar Activated Speed Limit signs in Mohave County
2 on Oatman Hwy
1 on Courtwright Rd
2 on Boundary Cone Rd
3 on Hwy 91
4 on Pierce Ferry Rd
2 on Northern Ave
2 on Stockton Hill Rd
2 on London Bridge Rd
2 on Chino Dr
2 on Diamond Bar Rd

6. Available Crash Data

a. State of Arizona Crash Data

b. State of California Crash Data

c. State of Nevada Crash Data

d. Fatality Analysis Reporting System (FARS)

e. Tribal Police have citation and accident data available electronically

f. Aztec Road and SR 95 are the worst routes for accidents

g. Need pedestrian facility for kids going to the Boys & Girls Club

7. Next steps in the process – See presentation slides

8. Next meeting date tentatively set for Tuesday, December 6, 2016 at 10:00am, in the tribal conference room.

FMIT Safety Plan Meeting
October 25, 2016 at 9:30 am
Headquarters, Needles, CA

Sign In Sheet

Name	Department	Telephone	Email
1. KEN PAETZ	ADOT REGIONAL TRAFFIC	(928)681-6022	KPAETZ@AZ.DOT.GOV
2. Wayne Nelson	Planning	(928) 201.5347	Waynenelson@fortmojave.com
3. Gregg Whaley	Mohave County PW	928 757-0924	gregg.whaley@mohavecounty.us
4. CRAIG GORDON	FMIT GIS	928-346-1801	CGORDON@FTMOJAVE.COM
5. ANDREW DAVIS	FORT MOJAVE TRIBAL P.D.	928-346-1521	adavis@fmtpd.org
6. ROSS TARANGLE	SAN BERNARDINO SHERIFF	760-326-9200	rtarangle@sbcsd.org
7. BILL SWAGGRASS	FMIT-PROSECUTOR	928-346-2480	BILL_SWAGGRASS@FTMOJAVE.COM
8. Les Henley	Mohave Co P.W.	928 757 0910	leslie.henley@mohavecounty.us
9. Sierra Medrano	Health Center	928-444-6070	Sierra.Schaffer@ihs.gov
10. Tim Williams	Exec Admin	760 629-4591	timothy.williams@fort-mojave.com
11. JOE GARCIA SR	Road maint	928-330-2045	joe.garcia@fortmojave.com
12. Elisabeth Whitlock	High Road Engineering	435-767-8481	ewhitlock@highroadengineering.com
13.			
14.			
18.			
19.			
20.			

TRIBAL SAFETY PLAN

Elisabeth Whitlock, PE

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Fort Mojave Indian Tribe

Agenda

Fort Mojave Indian Tribe Safety Plan

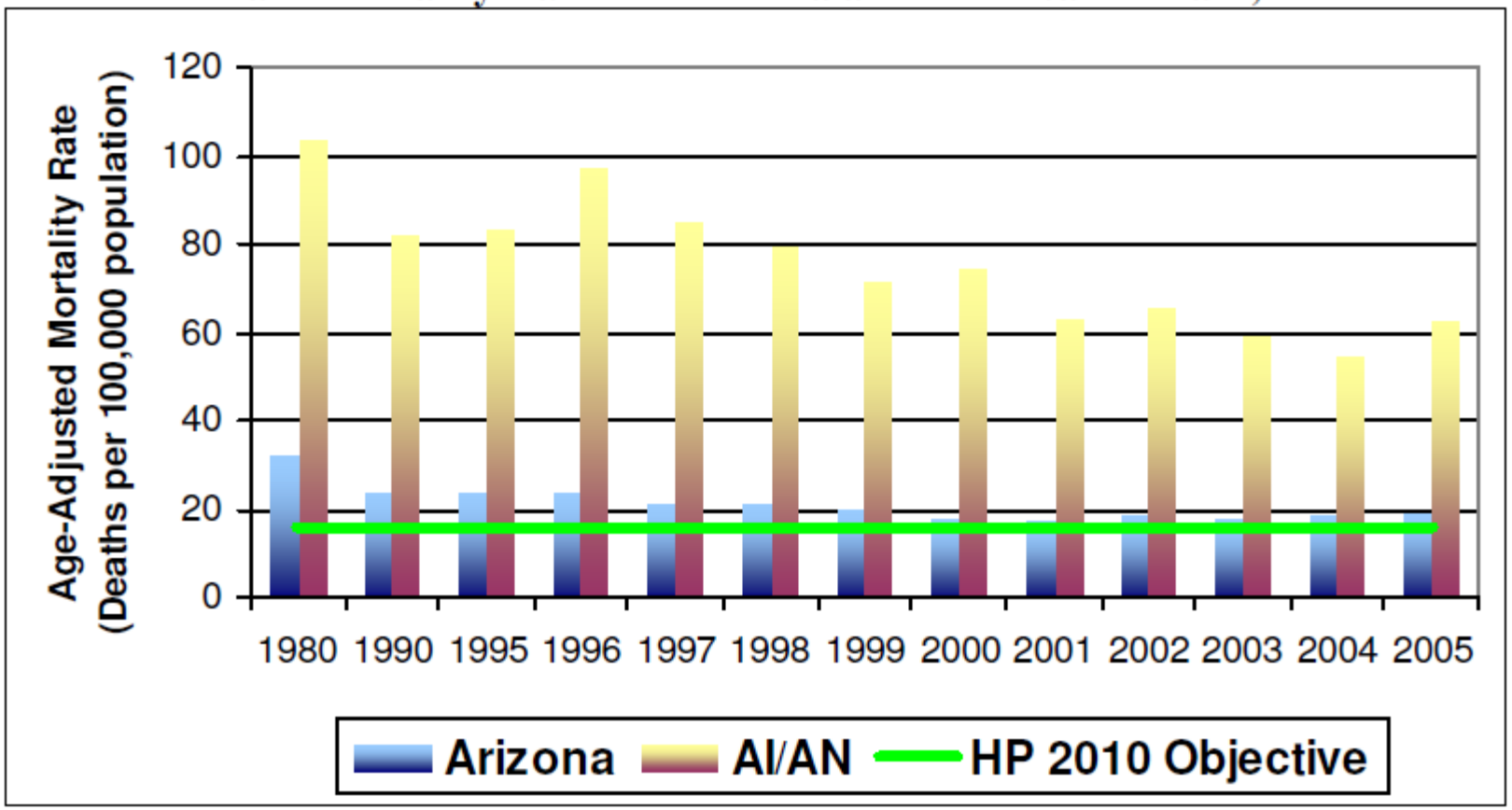
Kick-Off Meeting

1. Introductions
2. Background
3. Overview of a Tribal Safety Plan
4. Stakeholders / Working Group
5. Vision, Mission Statement & Goals
6. Existing Safety Efforts
7. Available Crash Data
8. Next Steps in the Process
9. Next meeting date in November?

Safety Statistics in Indian Country

- Five year (2007-2011) total of 2,752 Native American roadway fatalities (FARS) minimum
- From 1975 to 2002, fatal crash rates in the US declined for the overall population
- From 1975 to 2002, Native American and Alaska Native fatal crash rates increased 53%
- In many states, Native Americans are several times over represented in fatal crashes
- In Arizona, from 1980-2005, traffic death rates were **2 to 3 times higher for Native Americans**.

Exhibit 6: Crash Mortality Rates for Arizona and American Indians, 1980–2005[11]



Source: ITCA and Arizona Health Status and Vital Statistics 2005

Background

To address the fatal crash and serious injury problems on Indian Lands, the Federal Highway Administration initiated efforts to improve safety.

- 2005 Strategic Highway Safety Plan for Indian Lands & Safety Management System
- 2011 Update: Safety Management System Implementation Plan
- 2013 Tribal Transportation Program Safety Fund under MAP-21
- 2016 TTP Safety Fund continues under FAST Act

Background

FAST Act (highway bill) provides a 2% Set Aside for Tribal Safety Funding (~$9.5 million/year). Funding limited to two categories:

- Transportation Safety Planning – *This project is funded under planning*
- Other Eligible Activities as listed in 23 USC 148(a)(4)
  - Engineering Projects
  - Road Safety Audits
  - Pedestrian, Bicycle, and ADA improvements
  - Systemic safety improvements
  - Correct or improve a hazardous location or feature
  - Address a highway safety problem
  - Consistent with a State strategic highway safety plan

Tribes may apply for safety funding **each year**, and they can apply for **more than one project** each year. The intent for the first year of funding is for every Tribe to have a Safety Plan. Then, based upon the completion of your Safety Plan, projects are ranked for funding to implement solutions or strategies to improve safety in your communities.

What is a Tribal Transportation Safety Plan?

The purpose of a Tribal Transportation Safety Plan (TTSP) is to identify key safety needs and guide investment decisions to achieve **reductions in fatalities and serious injuries** on local public roadways.

A Tribal Transportation Safety Plan is

- Not an Emergency Management Plan
- Not a Worker Safety Plan
- Not exactly a Safe Routes to School Plan

It is your Tribal Government's strategic prioritization of transportation safety issues and multi-disciplinary strategies that, if implemented, will result in a reduction of fatal and serious injury crashes.

4 – E's of Safety

Comprehensive Approach!

Work together with all Stakeholders!

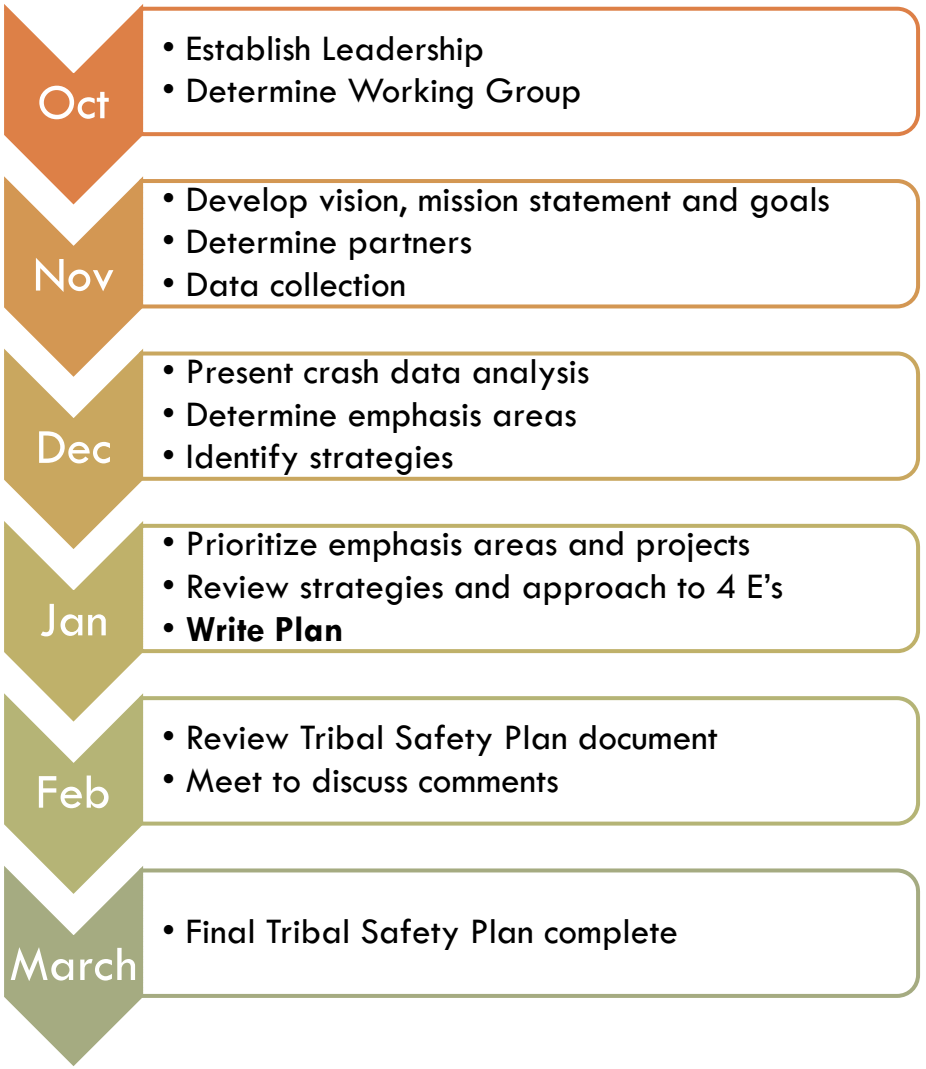
Small pieces add up to overall safety!

Put out a unified message!

Benefits

- ✓ Fewer Fatalities and Serious Injuries
- ✓ Safer Roadways
- ✓ More Competitive for Safety Funding
- ✓ Proactive Approach
- ✓ Develop Partnerships
- ✓ Leverage Resources

Tribal Safety Plan Timeline



Developing a Tribal Transportation Safety Plan (TTSP)

Think of the Four E's of Safety –

Engineering
Enforcement
Education
Emergency Services

Think of the Stakeholders and Partnerships in Transportation who play a role in safety efforts –

Police Officers
EMS Providers
CHR / IHS / BIA
ADOT / County Roads
TTAP / LTAP
School District

Process of a Tribal Transportation Safety Plan (TTSP)

Step 1: Establish Leadership

- Identify a Champion
- Convene a Working Group
- Identify and Contact Stakeholders
- Develop a Vision, Mission Statement & Goals

* Support from Tribal Government Leaders

Stakeholders

- Who do you want to partner with?
- Who do you want to invite to working group meetings?

Bullhead City

County Engineers

Local Law Enforcement

Local Fire Department

ADOT / NDOT

Caltrans

School District

Planning Organizations (MPO/RPO)

BIA / IHS

Your Vision & Mission

❖ Example Vision Statements:

"To improve road safety within our communities in order to reduce the number of people being killed and seriously injured."

"All transportation users arrive safely at their destinations."

"Zero fatalities on Arizona roads, your life depends on it" (the Every One Counts vision).

A vision statement describes what the group is striving to achieve.

❖ Example Mission Statements:

"Implement effective transportation safety programs to save lives by fostering communication, coordination, collaboration, and cooperation."

"Toward Zero Deaths aims to eliminate fatalities on Delaware's roadways through a multiagency approach that utilizes education, enforcement, engineering, and emergency service strategies."

The mission statement defines the purpose of the plan, what it does, and what it is about.

Your Goals

- Example Goals:

"To prevent and reduce the number of people killed and injured in transportation related crashes."

"Saving lives and preventing serious injuries over the next decade on our local county roads."

"Reduce the number of fatalities across the state by 15% over the next 5 years."

What does the group hope to achieve in a specified amount of time? Goals should be realistic and measurable and can evolve over time.

Process of a TTSP

Step 2: Analyze Safety Data

- Identify Existing Efforts
- Gather Data
- Data Analysis with Crash Data
- Data Analysis with other Safety Data

This data can be formal or by local knowledge.

Existing Safety Efforts

- What are you doing currently?
- Do you have MOUs with law enforcement or EMS?
- Do you have a primary seat belt law?
- Do you have education programs?

Policies or Ordinances

Coordination with other local gov't

Road Inventory

Sign Inventory

Driver Education Program

Traffic Court

Local Data Collection

Substance Abuse Program

Helmet Campaign

Data Collection

Available Sources

- State of Arizona Crash Data
- State of California Crash Data
- Fatality Analysis Reporting System (FARS) Data (includes Native American data)
- Research and Innovative Technology Administration (RITA), Bureau of Transportation Statistics, USDOT

Potential Sources

- Police Reports / Citations (speeding, etc.)
- Community Survey
- Other Agency Safety Programs
- Traffic Court Statistics

Do we need to make data collection an Emphasis Area?

Process of a TTSP

Step 3: Determine Emphasis Areas

- Identify Emphasis Area Objectives & Performance Measures
- List Problem Areas from Data Analyzes
- List Projects or Tasks to Address Safety Issues

Example Emphasis Areas

- Distracted and / or drowsy driving
- Occupant protection
- Impaired driving
- Speed management
- Teen drivers
- Hazardous locations
- Roadway departures
- Intersection safety
- Older drivers
- Incident response time
- Nighttime crashes
- Crash data collection

Process of a TTSP

- Step 4: Identify Strategies
  - ✓ Categorize and Review
  - ✓ Propose Ordinances & Policies
  - ✓ Propose Actions

Example Strategies

Emphasis Area: Road Departures / Rollovers
Rumble Strips
Pavement Markings
Shoulder Widening
Improve design of roadside hardware
Improve design of barrier & attenuation systems
Remove/relocate objects in hazardous locations
Delineate objects with reflective tape
Increase penalty for offenders
Tribal Newsletter
Increase Enforcement

Emphasis Area: Speed Management
Signage
Speed Humps or Dips
Increase Enforcement
Driver Feedback Signs
Tribal Newsletter
Billboards

Emphasis Area: Occupant Protection
Child seat / booster seat program
Seat belt technician training
Booth at Tribal Health Fair

Emphasis Area: Identify Roadway Hazards
Perform Road Safety Audit along SR66
Perform engineering analysis at known locations
Perform traffic counts at intersection(s)
Collect speed data

Emphasis Area: Distracted or Drowsy Driving
Education outreach
Partner with Driver's Ed Classes
Rumble strips
Review roadside distractions

Process of a TTSP

- Step 5: Prioritize and Incorporate Strategies
  - Identify Priorities
  - Determine Implementation Approach for Strategies
  - Outline an Action Plan

Process of a TTSP

Step 6: Evaluate and Update the TTSP

- Monitor Progress
- Plan Evaluation – are the strategies working?
- Living Document – update yearly with annual planning

Resources – See Handouts

Federal Lands Highway Tribal Transportation Program Safety Section
http://flh.fhwa.dot.gov/programs/ttp/safety/stsp-toolkit.htm

Arizona Department of Transportation (ADOT) – Transportation Safety
http://www.azdot.gov/about/transportation-safety/arizona-strategic-highway-safety-plan
http://www.azdot.gov/docs/default-source/about/arizona-s-first-shsp.pdf?sfvrsn=0

ADOT Motor Vehicle Crash Facts
http://www.azdot.gov/mvd/Statistics/arizona-motor-vehicle-crash-facts

Safe Road Maps
http://saferoadmaps.org/

National Highway Traffic Safety Administration – State Traffic Safety Information
FARS Data Tables – Native American Traffic Safety Facts
http://www-nrd.nhtsa.dot.gov/departments/nrd-30/ncsa/STSI/USA%20WEB%20REPORT.HTM

Research and Innovative Technology Administration (RITA) – State Transportation Facts
http://gis.rita.dot.gov/StateFacts/StateFacts.aspx?StateName=Utah

Questions or Ideas?

Contact me:

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ewhitlock@highroadengineering.com

Next meeting date?

High Road Engineering, Inc.
Civil Engineering & Consulting

Resources for Tribal Safety Planning

Arizona

Arizona Department of Transportation (ADOT) – Transportation Safety
http://www.azdot.gov/about/transportation-safety/arizona-strategic-highway-safety-plan
http://www.azdot.gov/docs/default-source/about/arizona-s-first-shsp.pdf?sfvrsn=0
ADOT Motor Vehicle Crash Facts
http://www.azdot.gov/mvd/Statistics/arizona-motor-vehicle-crash-facts

California

Caltrans - Strategic Highway Safety Plan
http://www.dot.ca.gov/trafficops/shsp/
CA Highway Patrol - Statewide Integrated Traffic Records System – Crash Data
http://iswitrs.chp.ca.gov/Reports/jsp/RawData.jsp

Nevada

Nevada Department of Public Safety – Zero Fatalities, Drive Safe Nevada
http://www.zerofatalitiesnv.com/safety-plan-what-is-the-shsp/
NDOT Traffic Crash Reports
http://www.nevadadot.com/About_NDOT/NDOT_Divisions/Planning/Traffic_Safety_Engineering/Traffic_Crash_Reports.aspx

Utah

Zero Fatalities – A Goal We Can All Live With
http://ut.zerofatalities.com/
http://ut.zerofatalities.com/safety-plan/
Utah Department of Public Safety – Crash Data Summaries
http://publicsafety.utah.gov/highwaysafety/crashsummaries.html
Utah Department of Public Safety – Highway Safety Main Page
http://publicsafety.utah.gov/highwaysafety/

National – Search for State

Federal Highway Administration – Strategic Highway Safety Plan
http://safety.fhwa.dot.gov/hsip/shsp/state_links.cfm

FHWA Tribal Transportation Safety Planning Resources
https://flh.fhwa.dot.gov/programs/ttp/safety/stsp-resources.htm

Safe Road Maps
http://saferoadmaps.org/

National Highway Traffic Safety Administration (NHTSA)
State Traffic Safety Information - https://cdan.nhtsa.gov/stsi.htm
FARS Data Tables – http://www-fars.nhtsa.dot.gov/Main/index.aspx
Native American Traffic Safety Facts - https://cdan.nhtsa.gov/NA_report/NA_Report.htm

Research and Innovative Technology Administration (RITA) – State Transportation Facts
http://gis.rita.dot.gov/StateFacts/

Fort Mojave Indian Tribe
Safety Plan Contact List

Tribal Council	First Name	Last Name	Title	Telephone	Email
Council	Timothy	Williams	Chairman	760-629-4591	TimothyWilliams@fortmojave.com
Council	Shan	Lewis	Vice Chairman	702-334-2611	ShanLewis@fortmojave.com
Council	Colleen	Garcia	Secretary	702-493-1128	ColleenGarcia@fortmojave.com
Council	Norvin	McCord	Member	760-362-2488	NorvinMcCord@fortmojave.com
Council	Martha	McCord	Member	702-525-8279	MarthaMcCord@fortmojave.com
Council	Johnny	Hemmers	Member	928-234-7465	JohnnyHemmers@fortmojave.com
Council	Nichole	Garcia	Member	760-861-4213	NDenson@fortmojave.com

Tribal Departments	First Name	Last Name	Title	Telephone	Email
Agriculture, Land and Water Resources	John	Algots	Director	928-346-1606	algots@aol.com
Aha Macav Housing Authority	Angela	Rios-Howard	Tenant Occupant Specialist	928-346-1330	rios-howard.a@fmitamhe.org
Education Department	Christina	Cameron-Otero	Director	928-346-1121	tribaled1@ftmojave.com
GIS Department	Craig	Gordon	Director	928-346-1801	cgordon@ftmojave.com
Health Department / Health Clinic	Sierra	Medrano	Safety Officer	928-346-4679	sierra.schaffer@ihs.gov
Roads Department	Joe	Garcia	Director	928-330-2045	joegarcia@fortmojave.com
Tribal Court	Bill	Snodgrass	Prosecutor	928-346-2400	billsnodgrass@ftmojave.com
Police Department	Andrew	Davis	Detective	928-346-1521	adavis@fmtpd.org
Planning Department	Wayne	Nelson	Tribal Planner	760-629-4591	WayneNelson@fortmojave.com

Safety Partners	First Name	Last Name	Title	Telephone	Email
BIA Colorado River Agency	Kellie	Youngbear	Superintendent	928-669-7111	kellie.youngbear@bia.gov
Mohave County Public Works	Steven	Latoski	Director	928-757-0924	steven.latoski@mohavecounty.us
Mohave County Public Works	Gregg	Whaley	Traffic Control Supervisor	928-757-0924	gregg.whaley@mohavecounty.us
Mohave County Public Works	Les	Henley	Engineering Manager	928-757-0910	leslie.henley@mohavecounty.us
City of Needles	Rick	Daniels	City Manager	760-326-2113	ndlscitymgr@citlink.net
Bullhead City Public Works	Pawan	Agrawal	Director	928-763-0128	pagrawal@bullheadcity.com
Clark County Public Works	Denis	Cederburg	Director	702-455-6000	dlc@ClarkCountyNV.gov
San Bernardino County Public Works	Gerry	Newcombe	Director	909-387-8104	gnewcombe@dpw.sbcounty.gov
WACOG Plannng	Justin	Hembree	Planner	928-377-1070	justinh@wacog.com
Mohave County Emergency Services	Byron	Steward	Coordinator	928-757-0930	Byron.Steward@mohavecounty.us
ADOT Northwest District Office	Alvin	Stump	District Engineer	928-777-5879	astump@azdot.gov

Fort Mojave Indian Tribe
Safety Plan Contact List

ADOT Northwest District Office	Ken	Paetz	Regional Traffic	928-681-6022	kpaetz@azdot.gov
Mohave County Sheriff	Jim	McCabe	Sheriff	928-753-0753	mcso@mohavecounty.us
San Bernardino County Sheriff	Ross	Tarangle	Captain	760-326-9200	needlesstation@sbcsd.org
Northern Arizona Consolidated Fire District	Patrick	Moore	Fire Chief	928-757-3151	p.moore@northernazfire.com
Arizona Department of Public Safety - Kingm	Jamie	Clark	Captain	928-753-5552	district1@azdps.gov

FMIT Tribal Transportation Safety Planning
Wednesday, December 7, 2016 at 10:00 am (AZ time)
Tribal Offices, 500 Merriman Street, Needles, CA

Meeting Notes

1. Greeting / Introductions – Sign In Sheet attached
2. Review Meeting Notes from October 25, 2016
    a. Add to Item 5. Existing Safety Efforts: Road Safety Audit completed for SR95 from Bullhead Pkwy to Boundary Cone Rd in approximately 2014.
3. Complete Vision, Mission Statement, and Goals
    a. Vision – Zero fatalities on the transportation network serving the Fort Mojave Indian Tribe.
    b. Mission – The Tribe's mission is to eliminate fatalities and reduce severe injuries on the roadways through a cooperative, multi-agency approach that utilizes education, enforcement, engineering, and emergency service strategies.
    c. Goal – Reduce the number of transportation related fatal crashes by 20% over the next 5 years.
4. Present crash data analysis
    a. ADOT Traffic Crash Data – Mohave County & FMIT Area 2012-2015
    b. California Traffic Crash Data – San Bernardino County & FMIT Area 2012-2015
    c. Nevada Traffic Crash Data – Clark County & FMIT Area 2012-2015
    d. National Highway Traffic Safety Administration (NHTSA) Traffic Safety Facts – AZ, Mohave, CA, San Bernardino, and NV, Clark 2011-2015
    e. Crash Maps
    f. WACOG Safety Plan Crash Data Analysis

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E-mail ewhitlock@highroadengineering.com

g. *Engineering and Traffic Survey for the City of Needles*, June 2012, Prepared by Charles Abbott Associates, Inc.

h. *Speed Zone Survey for SR 95 through the City of Needles*, June 2012, Prepared by California Department of Transportation

i. *City of Needles School Traffic Controls* project – installed 22 school crossings and related signs at 14 locations

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FMIT Safety Plan Meeting
December 7, 2016 at 10:00 am
Headquarters, Needles, CA

Sign In Sheet

Name	Department	Telephone	Email
1. KEN PAETZ	ADOT	(928) 681-6022	KPAETZ@AZDOT.GOV
2. JOE GARCIA SR	FMIT Road Maint	928-730-1045	JOEGARCIA@FORTMOJAVE.COM
3. CRAIG GORDON	GIS	928-346-1801	CGORDON@FTMOJAVE.COM
4. GEORGE BROWN	POLICE	928-346-1521	GBROWN@FMTPD.ORG
5. Wayne Nelson	Planning	760.629 4591	Waynenelson@fortmojave.com
6. Les Henley	Mohave Co	928 757 9810	Lester.Henley@mohavecounty.us
7. Gregg Whaley	Mohave County	928-757-0924	gregg.whaley@mohavecounty.us
8. Elisabeth Whitlock	High Road Engineering	435-767-8481	ewhitlock@highroadengineering.com
9.			
10.			
11.			
12.			
13.			
14.			
18.			
19.			
20.			

AREA MAP

N35°15'

N35°09'

N35°03'

N34°51'

N34°45'

N34°39'

W114°39'34"

W115°03'

W114°57'

W114°51'

W114°45'

W114°33'

W114°27'

W114°21'

W114°15'

W114°09'

Golden Valley

Kingman

Bullhead City

Fort Mohave

Mohave Valley

Yucca

163

68

93

95

12.34 mi

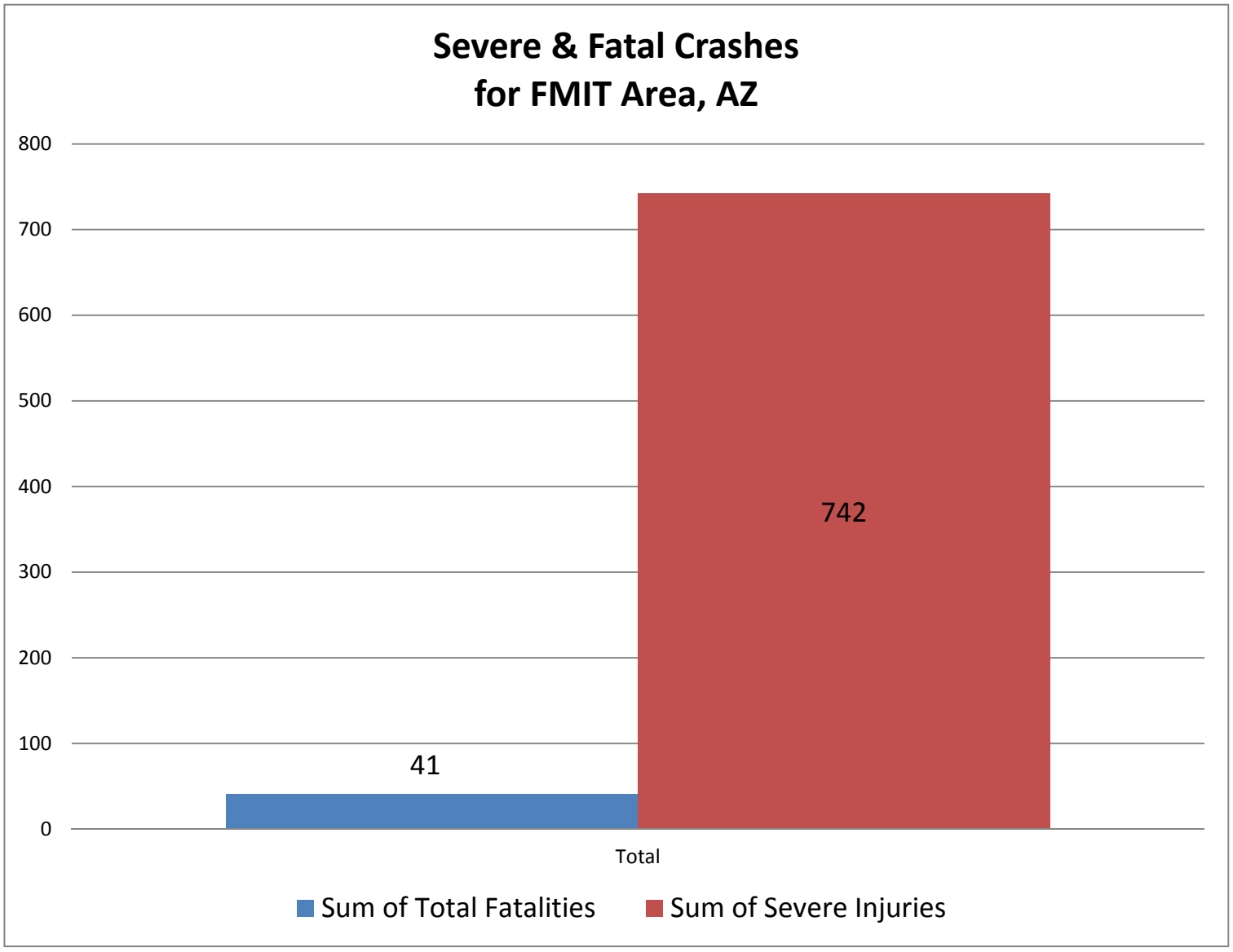
© 2016 Google

Google earth

Imagery Date: 11/7/2015 34°57'01.55" N 114°35'50.18" W elev 479 ft eye alt 53.97 mi

2012-2015 ADOT Data	Mohave Co.	San Bern Co.	Clark Co.	FMIT Area
Total Fatalities	41	11	7	59
Total Serious Injuries	742	35	24	801
Total Injuries	1,502	180	79	1,761

Note: All data is within study area only, see Area Map.



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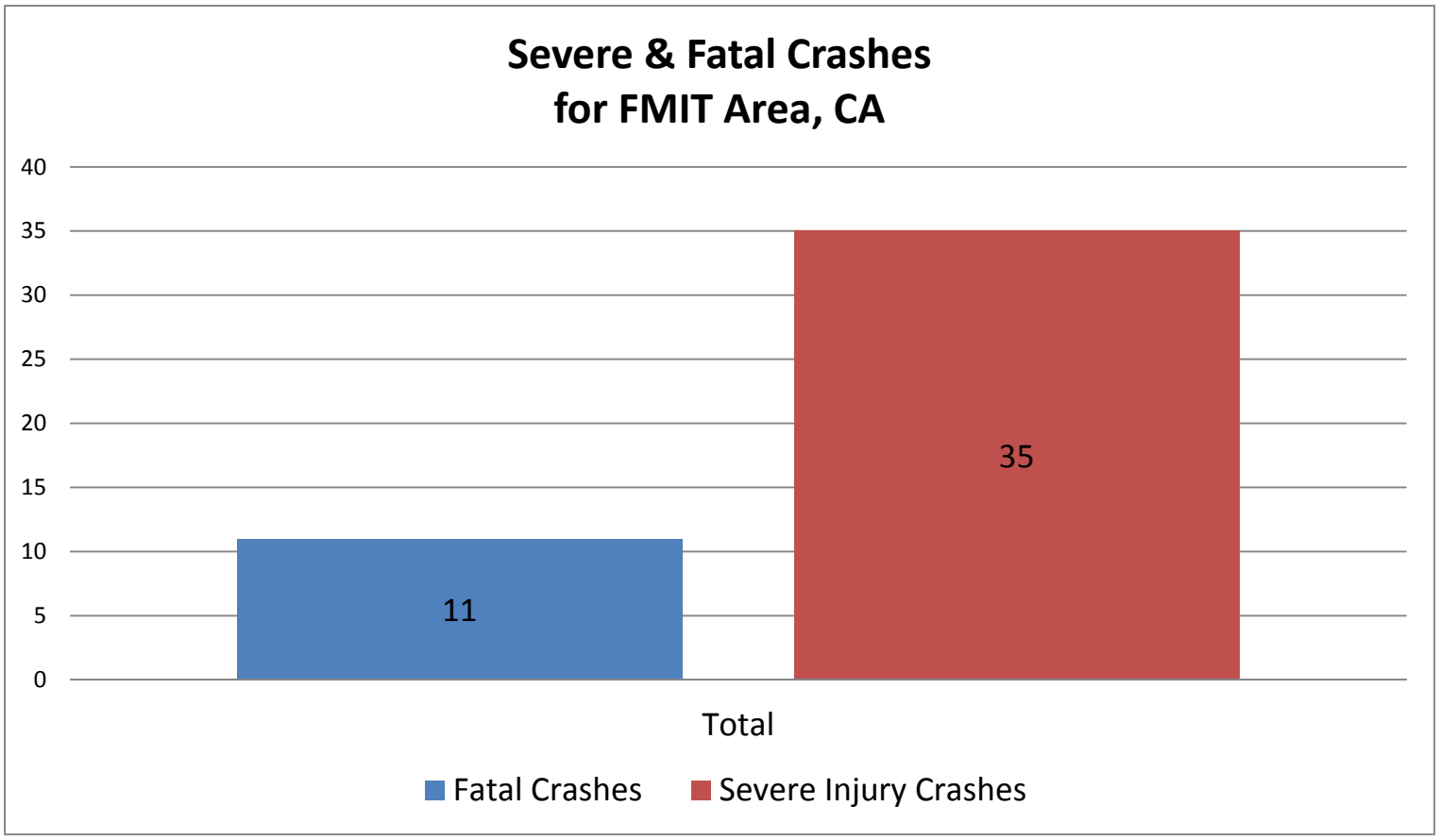

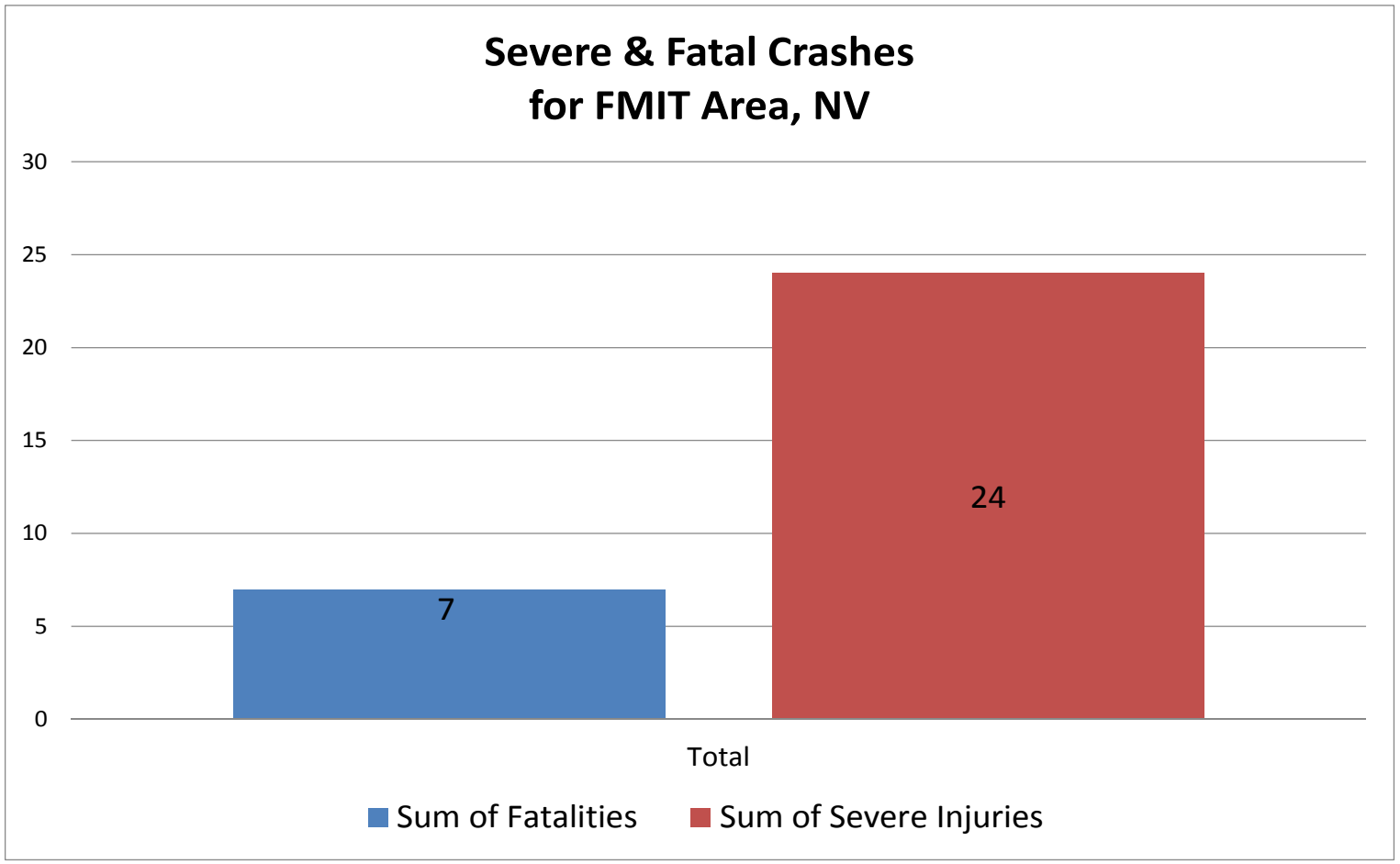

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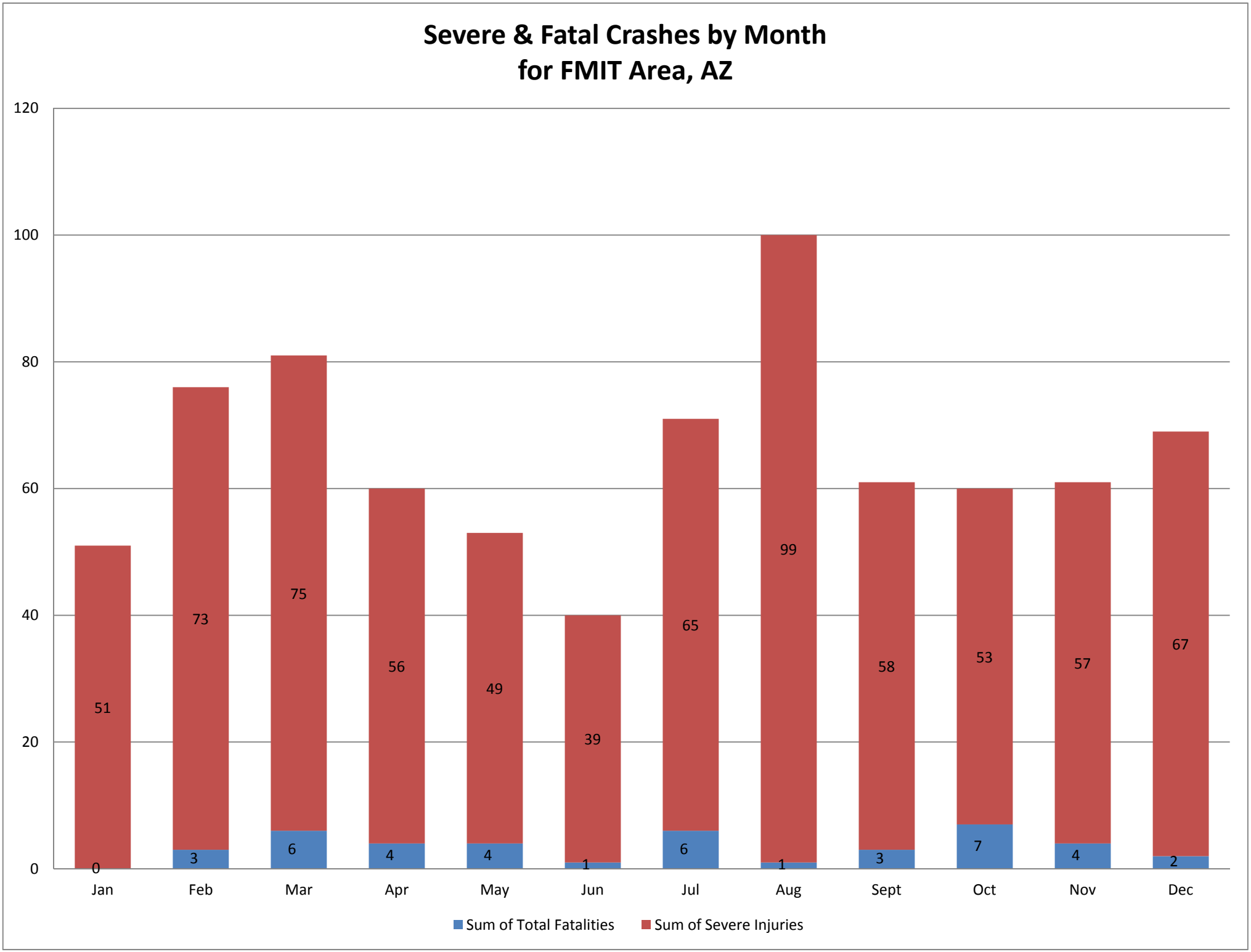
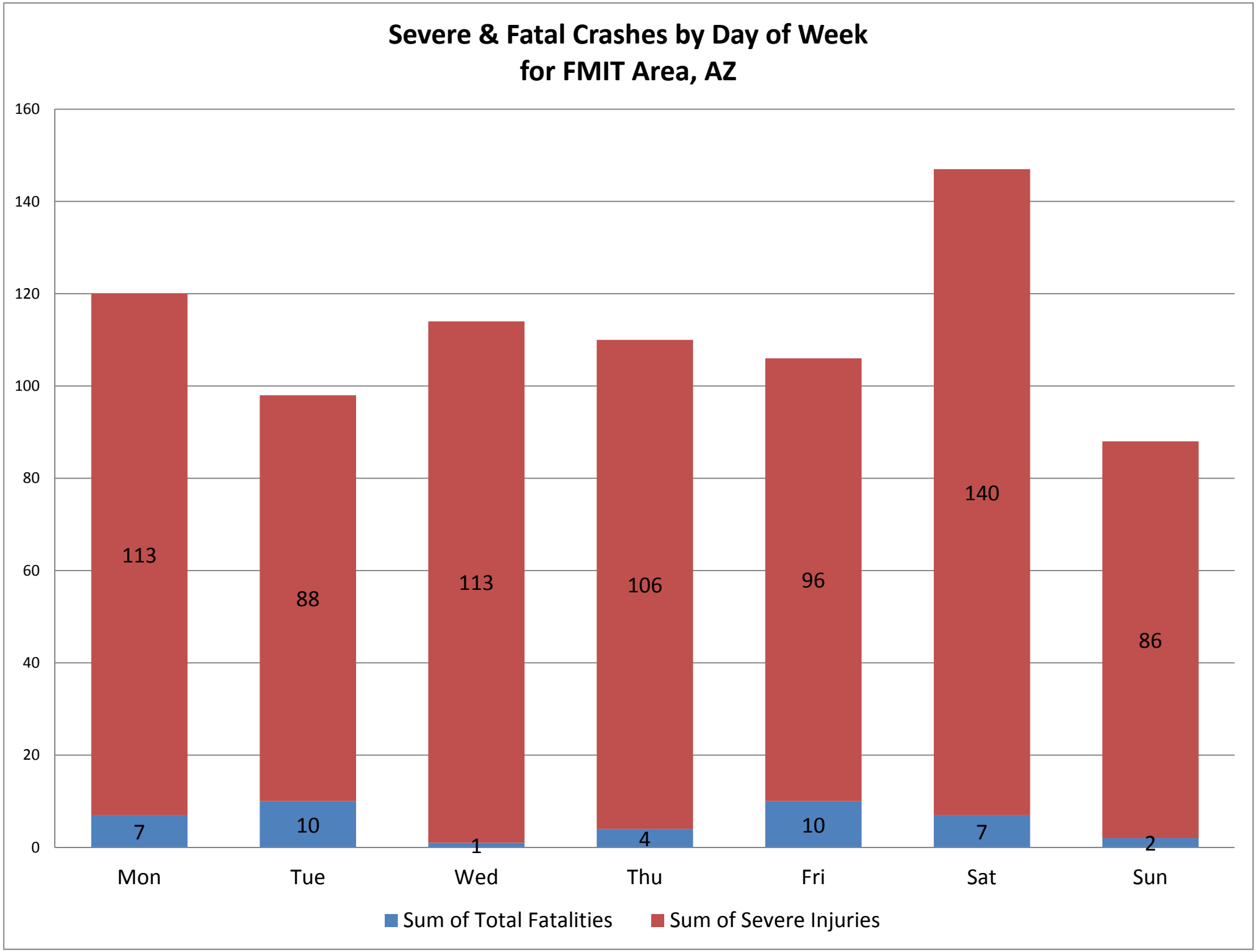
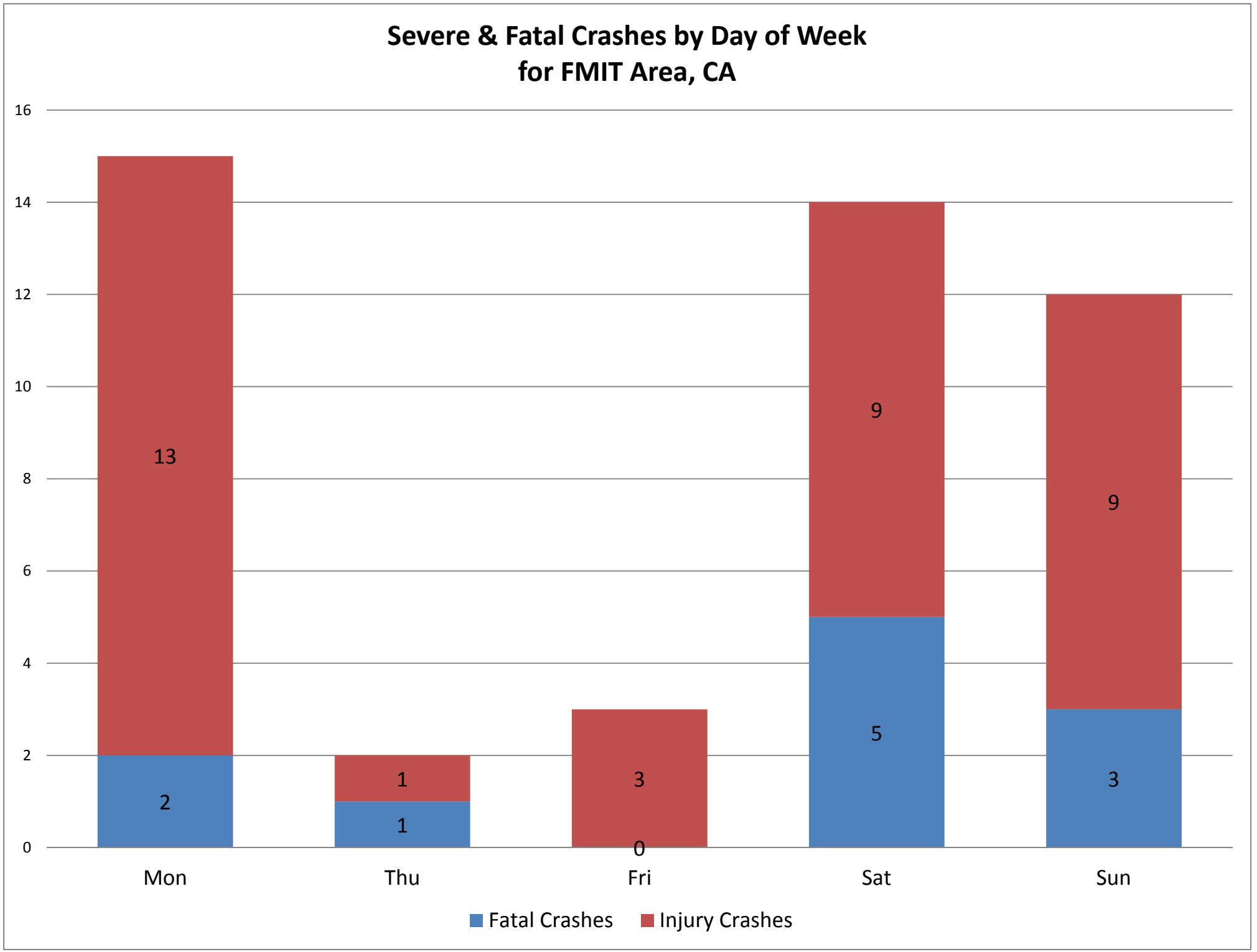
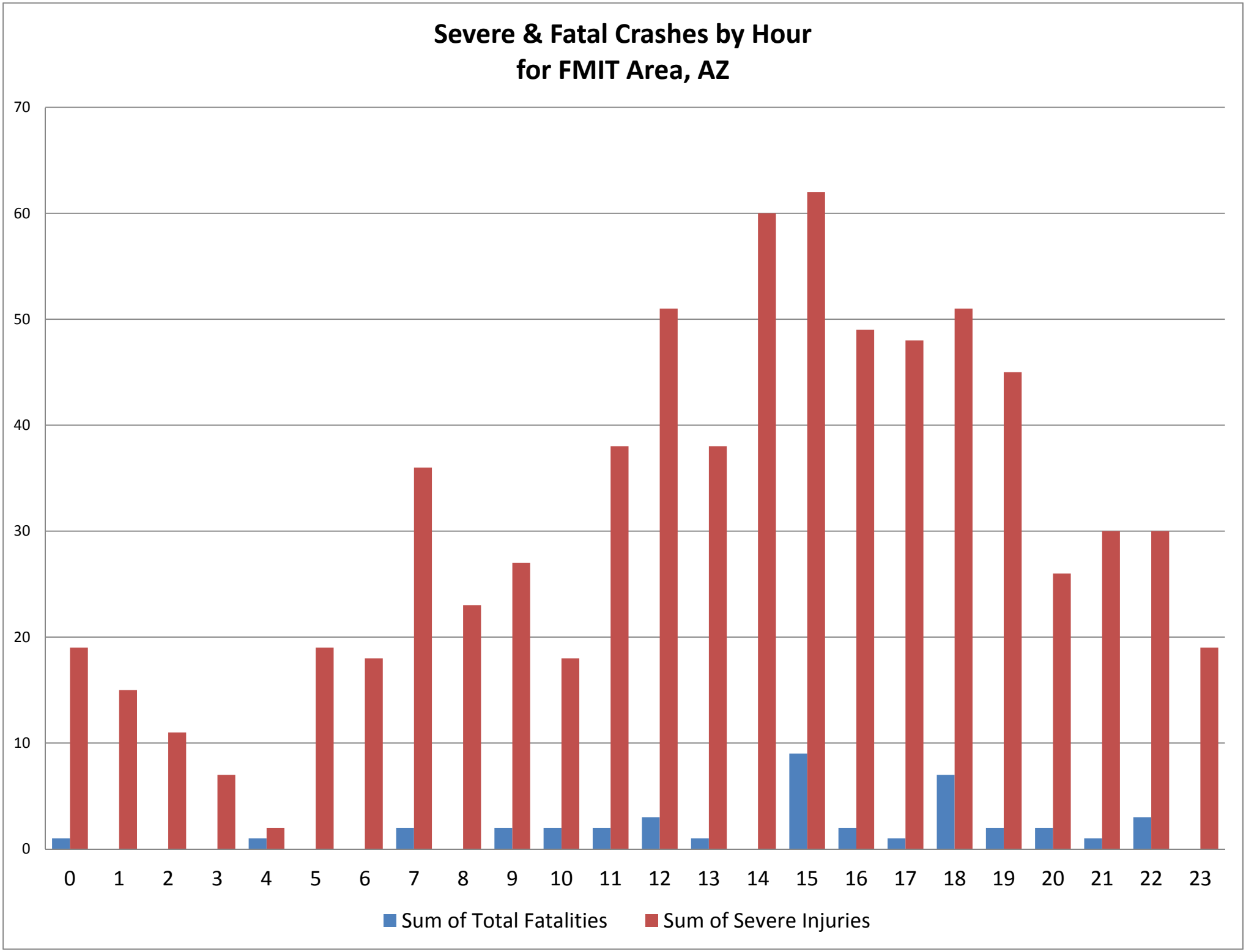
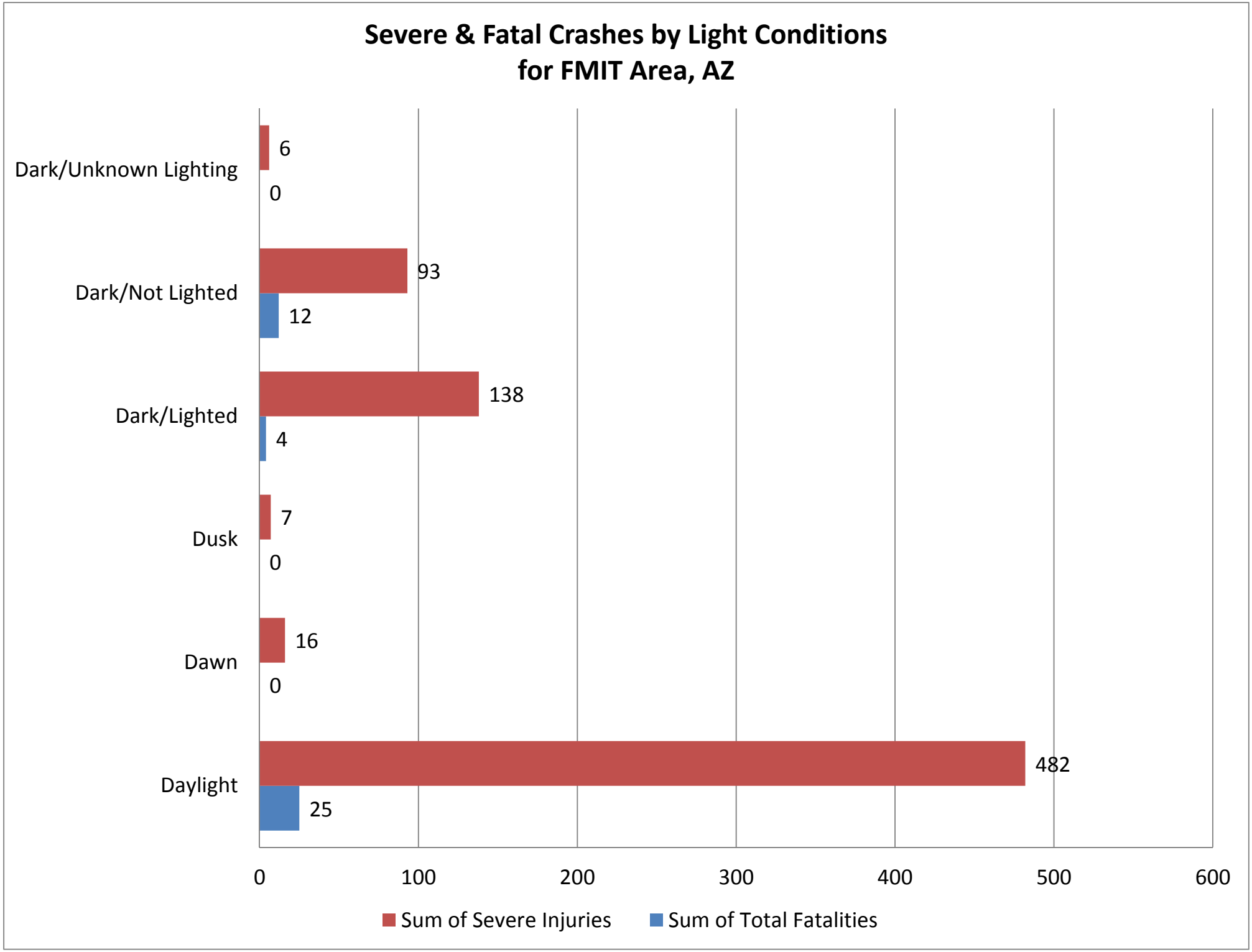
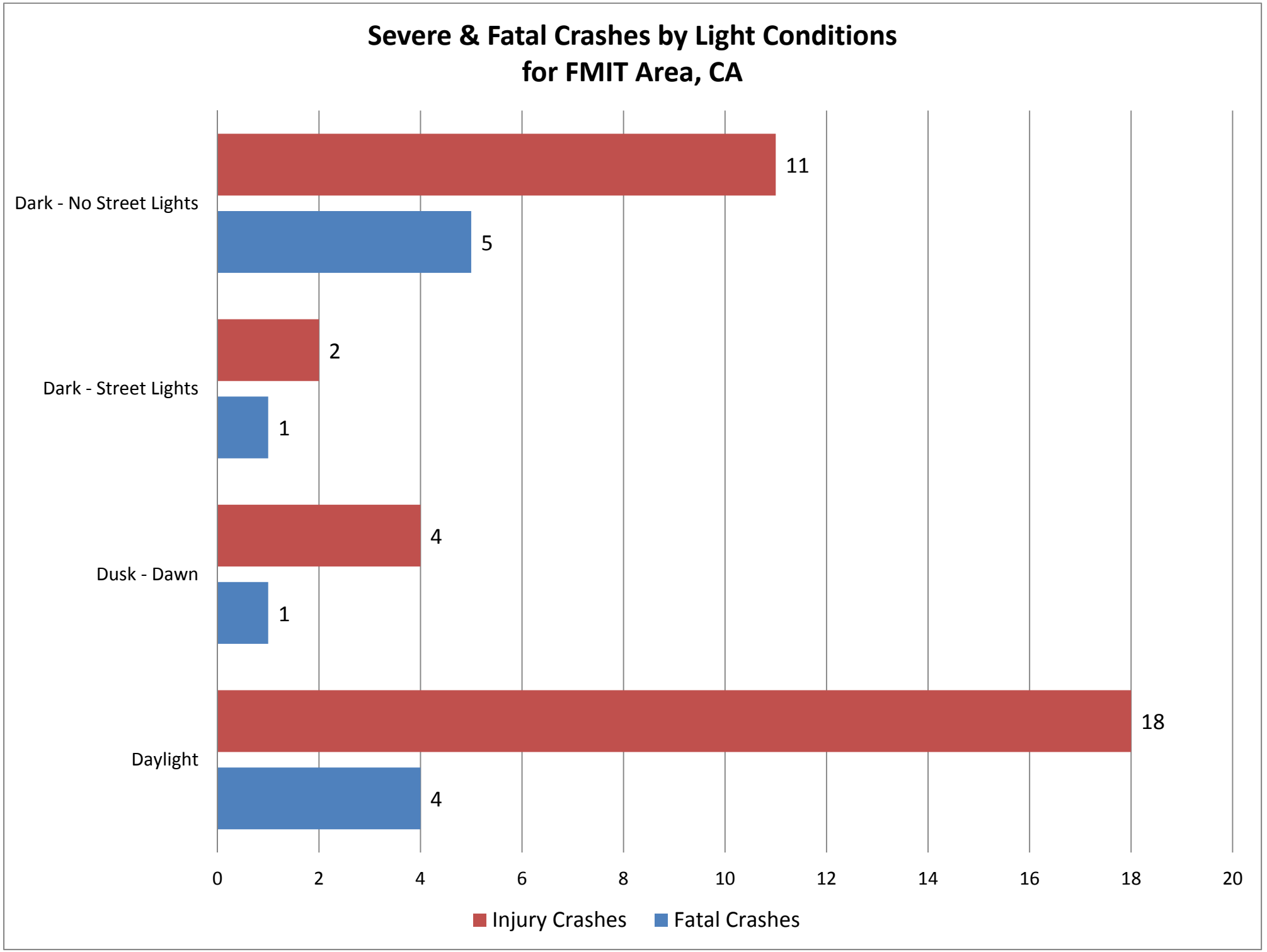

Severe & Fatal Crashes by Month
for FMIT Area, AZ
120
100
80
60
40
20
0
Jan
Feb
Mar
Apr
May
Jun
Jul
Aug
Sept
Oct
Nov
Dec
0
51
3
73
6
75
4
56
4
49
1
39
6
65
1
99
3
58
7
53
4
57
2
67
Sum of Total Fatalities
Sum of Severe Injuries

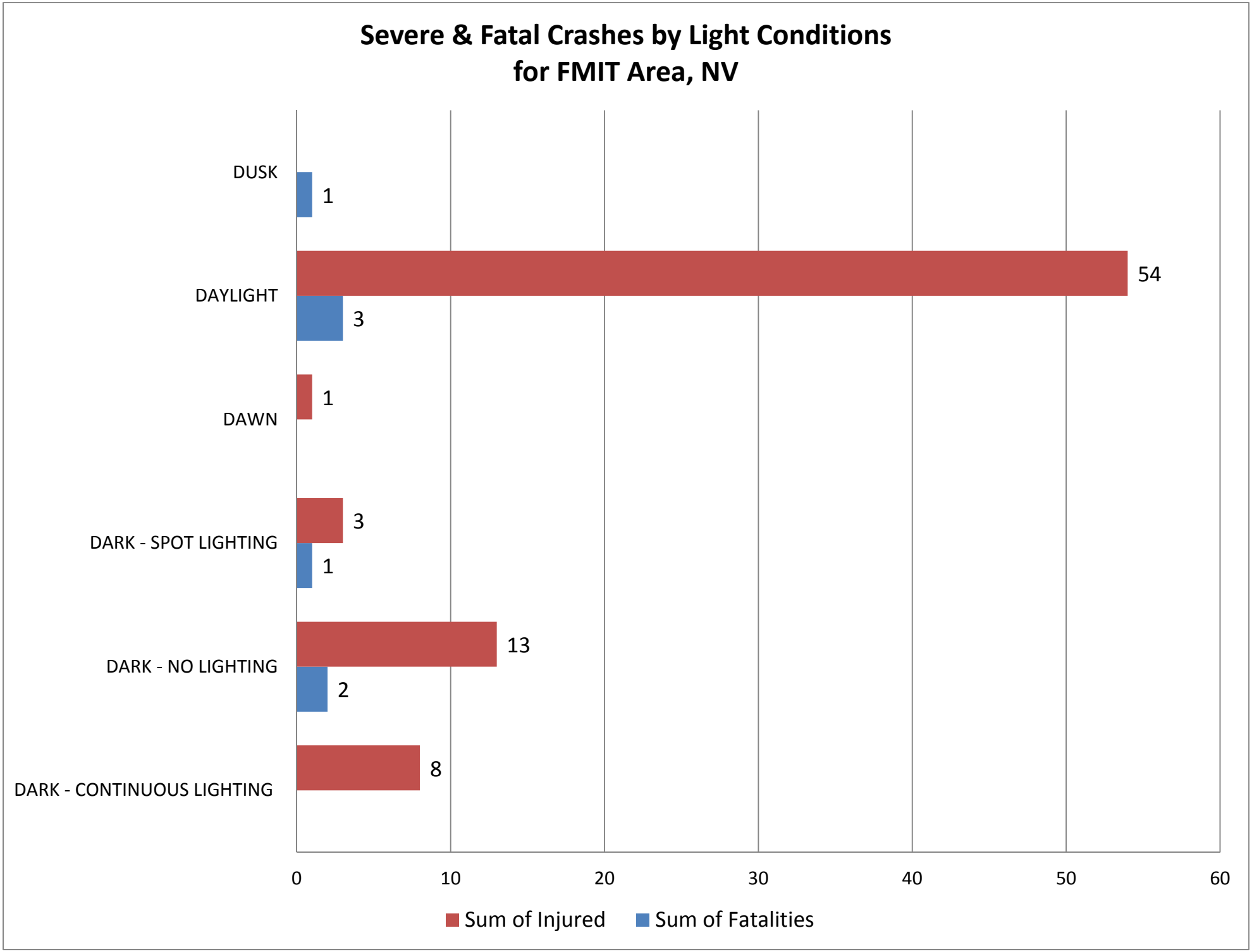

Severe & Fatal Crashes by Day of Week
for FMIT Area, AZ
160
140
120
100
80
60
40
20
0
113
88
113
106
96
140
86
7
10
1
4
10
7
2
Mon
Tue
Wed
Thu
Fri
Sat
Sun
Sum of Total Fatalities
Sum of Severe Injuries

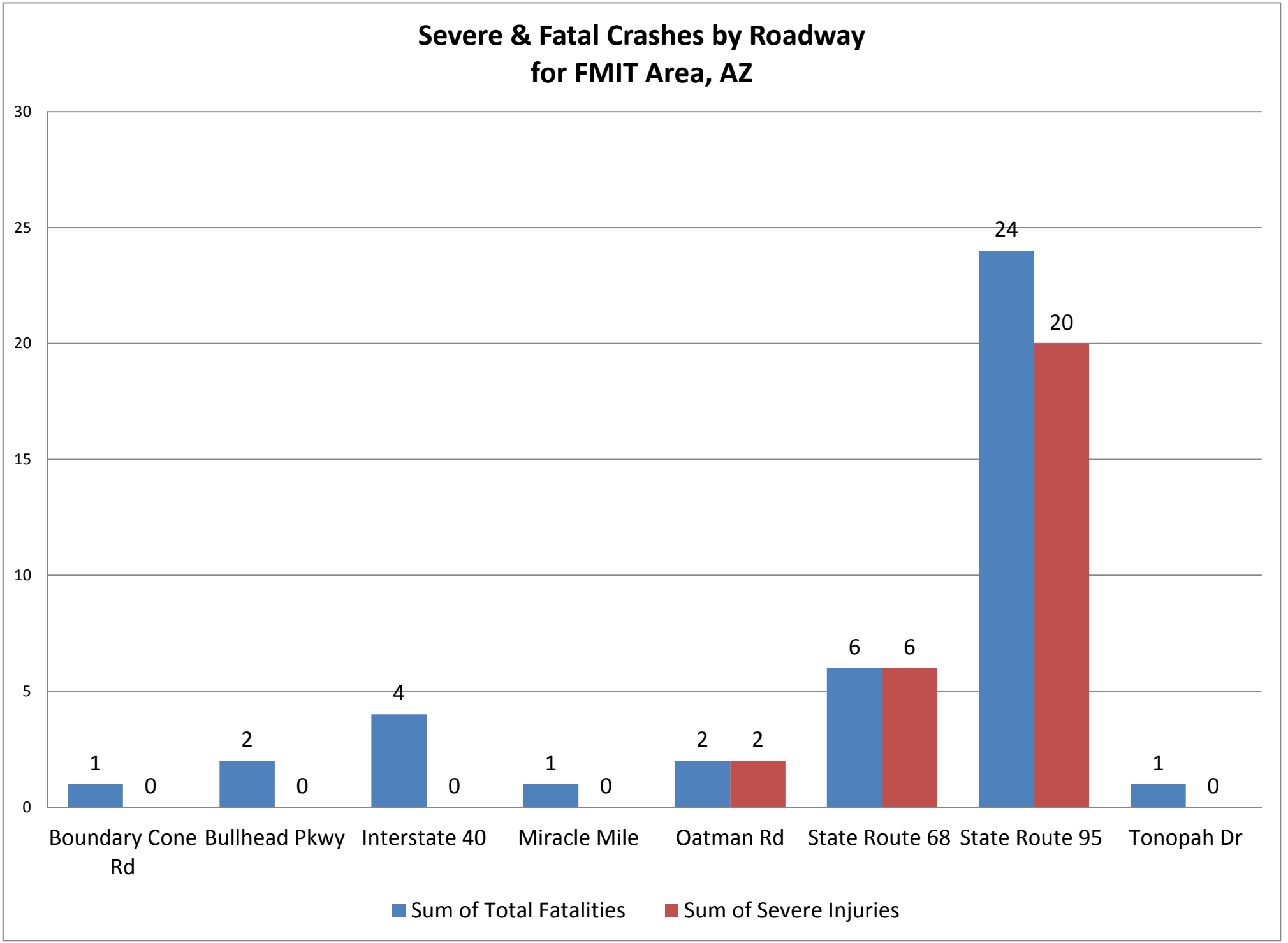

Severe & Fatal Crashes by Day of Week
for FMIT Area, CA
16
14
12
10
8
6
4
2
0
13
2
1
1
3
0
9
5
9
3
Mon
Thu
Fri
Sat
Sun
Fatal Crashes
Injury Crashes

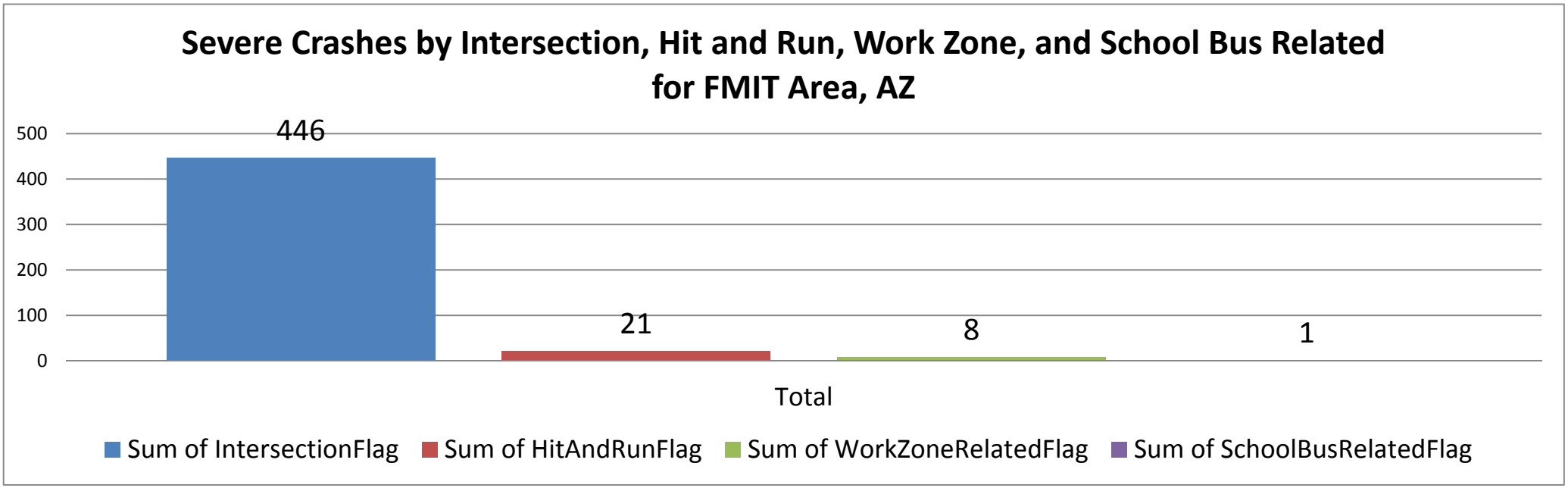

Severe & Fatal Crashes by Hour
for FMIT Area, AZ
70
60
50
40
30
20
10
0
0 1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20 21 22 23
Sum of Total Fatalities
Sum of Severe Injuries


Severe & Fatal Crashes by Light Conditions for FMIT Area, AZ
Dark/Unknown Lighting
6
0
Dark/Not Lighted
93
12
Dark/Lighted
138
4
Dusk
7
0
Dawn
16
0
Daylight
482
25
0
100
200
300
400
500
600
Sum of Severe Injuries
Sum of Total Fatalities


Severe & Fatal Crashes by Light Conditions for FMIT Area, CA
Dark - No Street Lights
11
5
Dark - Street Lights
2
1
Dusk - Dawn
4
1
Daylight
18
4
0
2
4
6
8
10
12
14
16
18
20
Injury Crashes
Fatal Crashes


Severe & Fatal Crashes by Light Conditions for FMIT Area, NV
DUSK
DAYLIGHT
DAWN
DARK - SPOT LIGHTING
DARK - NO LIGHTING
DARK - CONTINUOUS LIGHTING
1
54
3
1
3
1
13
2
8
0
10
20
30
40
50
60
Sum of Injured
Sum of Fatalities

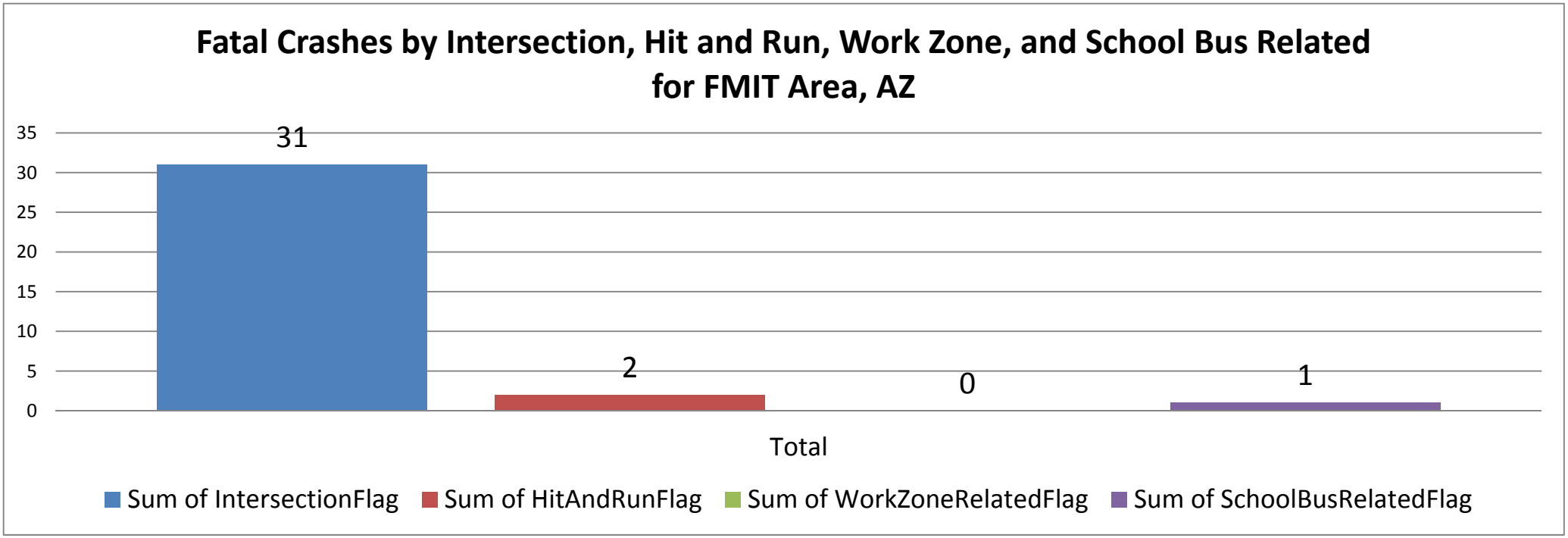

Severe & Fatal Crashes by Roadway for FMIT Area, AZ
30
25
20
15
10
5
0
1
0
2
0
4
0
1
0
2
2
6
6
24
20
1
0
Boundary Cone Rd
Bullhead Pkwy
Interstate 40
Miracle Mile
Oatman Rd
State Route 68
State Route 95
Tonopah Dr
Sum of Total Fatalities
Sum of Severe Injuries

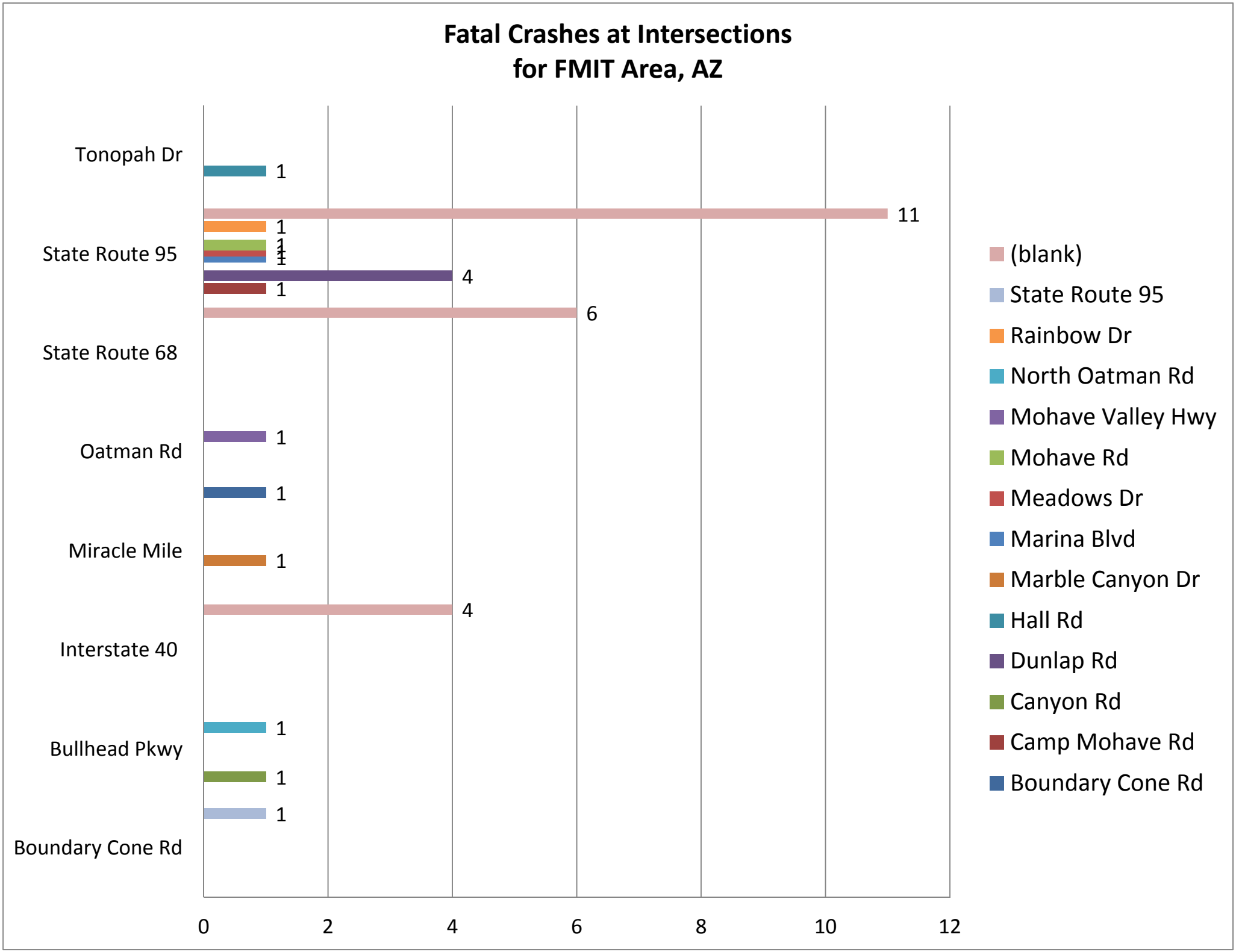


Total Severe Crashes = 742
Total Fatal Crashes = 41

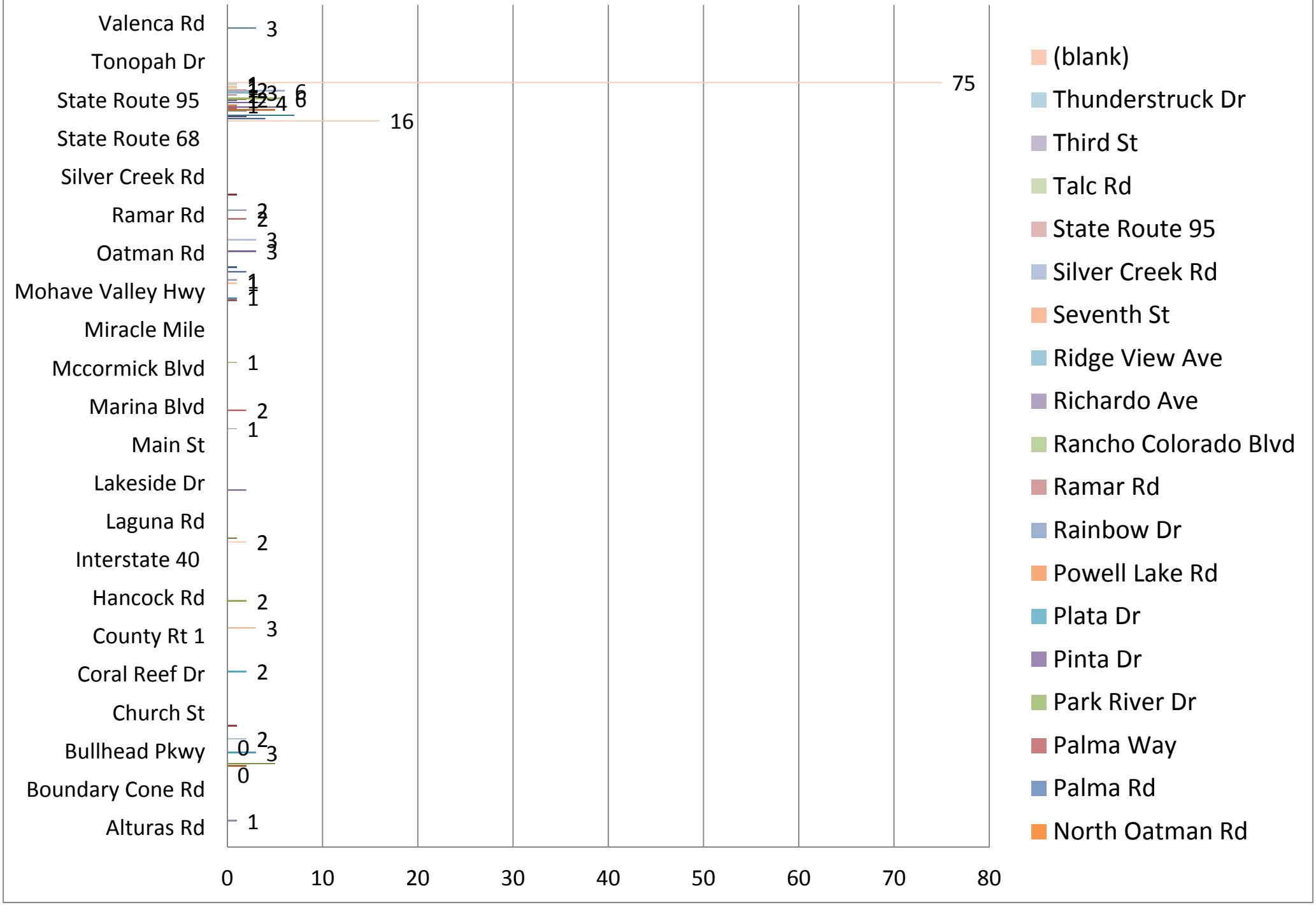
Total Severe Crashes in Intersection Related = 446
Total Fatal Crashes in Intersection Related = 31

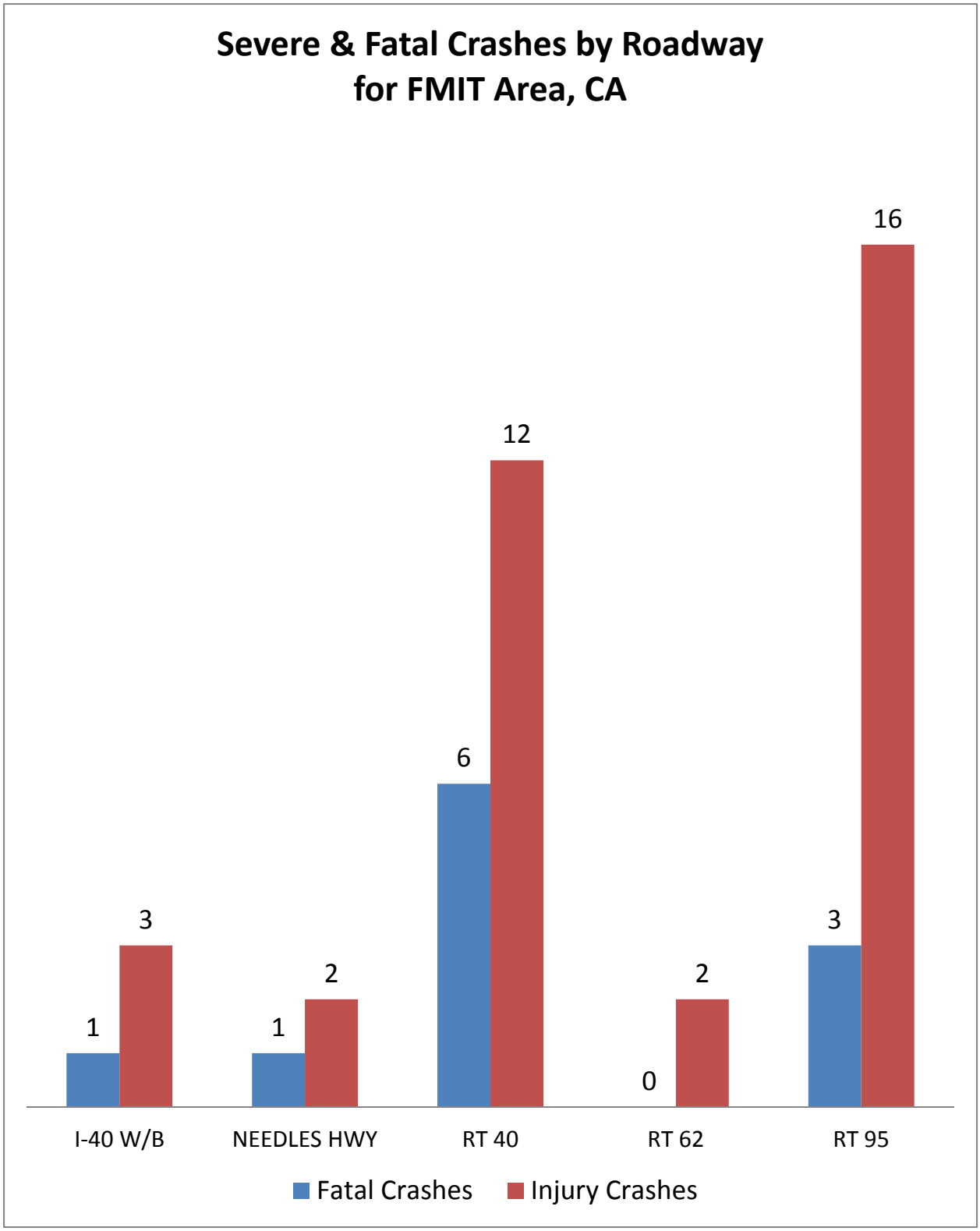
60% Severe Crashes in Intersections
76% Fatal Crashes in Intersections




Fatal Crashes at Intersections
for FMIT Area, AZ
Tonopah Dr
State Route 95
State Route 68
Oatman Rd
Miracle Mile
Interstate 40
Bullhead Pkwy
Boundary Cone Rd
1
11
1
1
1
1
4
1
6
1
1
1
4
1
1
1
0
2
4
6
8
10
12
(blank)
State Route 95
Rainbow Dr
North Oatman Rd
Mohave Valley Hwy
Mohave Rd
Meadows Dr
Marina Blvd
Marble Canyon Dr
Hall Rd
Dunlap Rd
Canyon Rd
Camp Mohave Rd
Boundary Cone Rd

Severe Crashes at Intersections for FMIT Area, AZ





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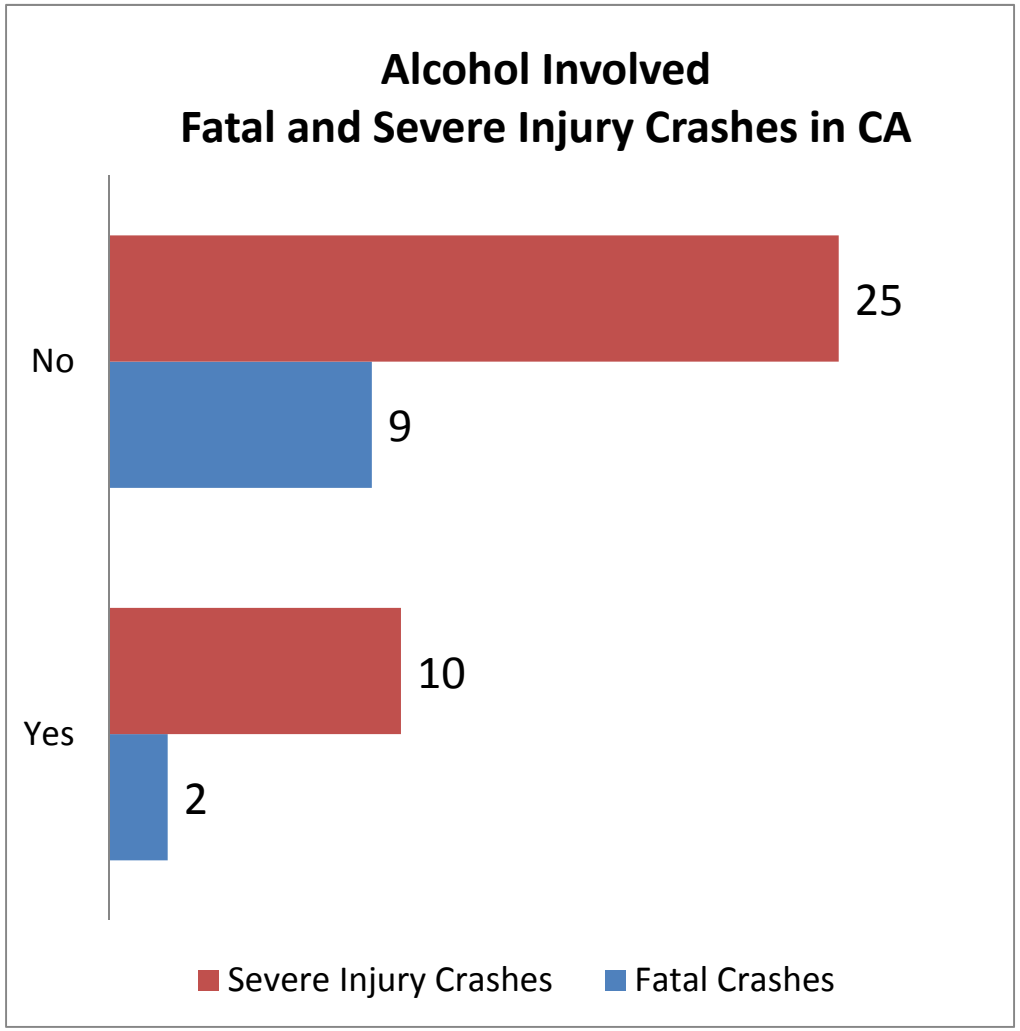
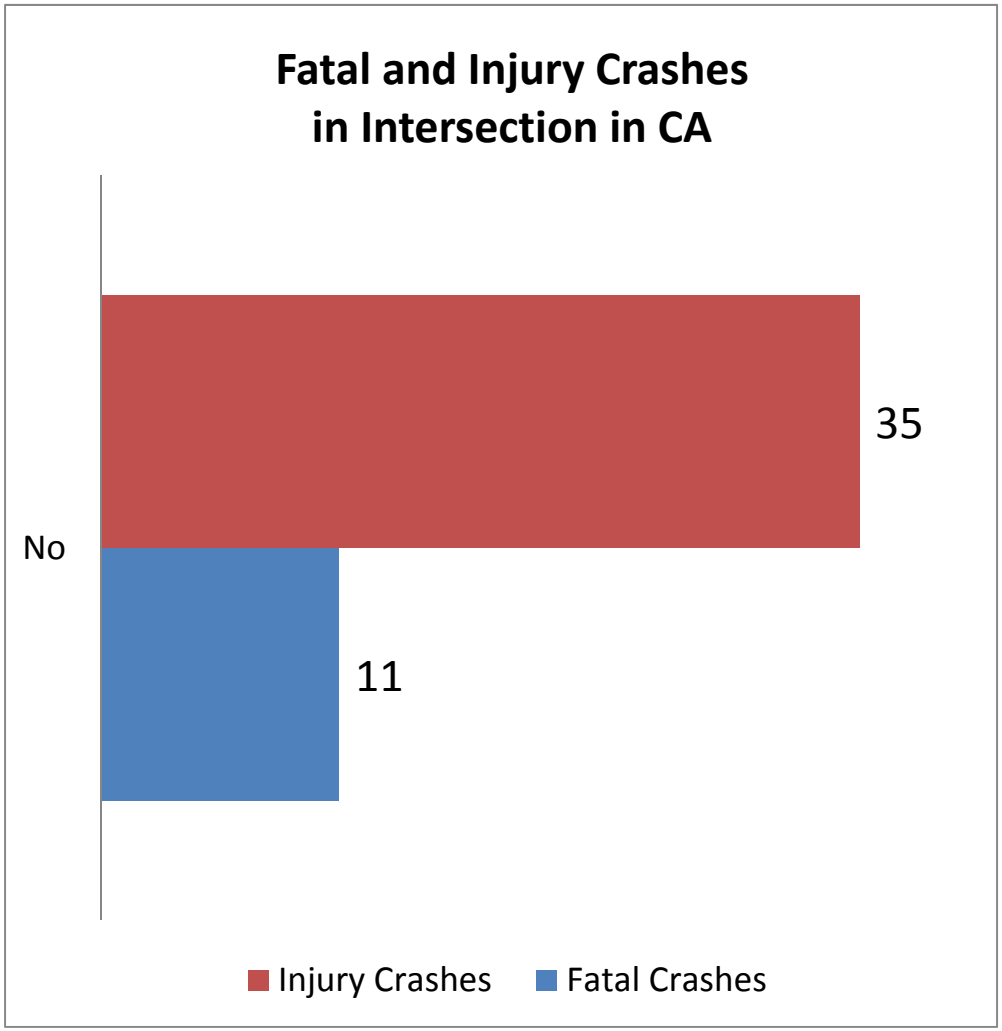
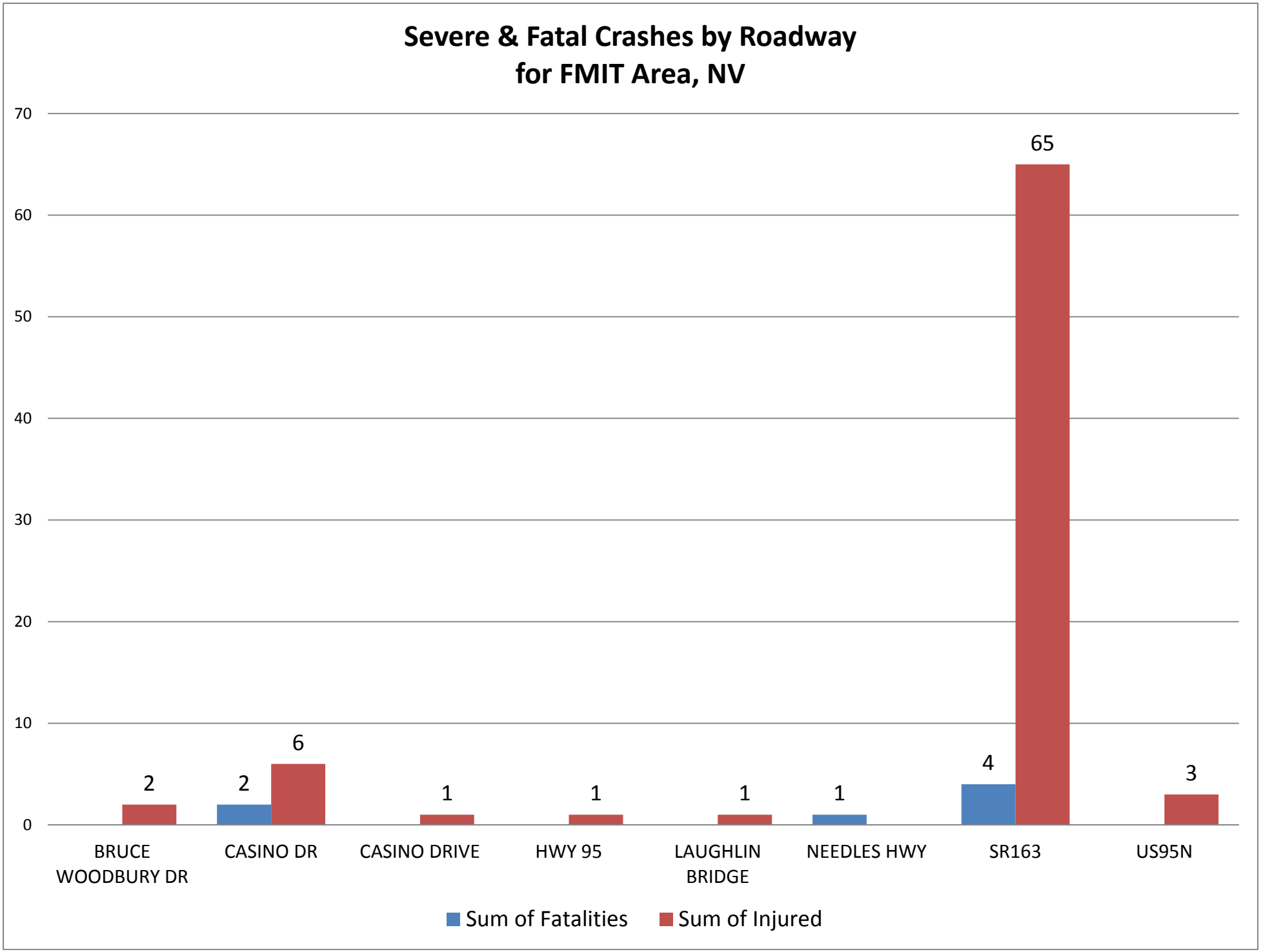




Of the 35 Severe Injury Crashes, 10 are Alcohol Related and 0 are in an Intersection.

Of the 11 Fatal Crashes, 2 are Alcohol Related and 0 are in an Intersection.


Severe & Fatal Crashes by Roadway for FMIT Area, NV
70
60
50
40
30
20
10
0
2
2
6
1
1
1
1
4
65
3
BRUCE WOODBURY DR
CASINO DR
CASINO DRIVE
HWY 95
LAUGHLIN BRIDGE
NEEDLES HWY
SR163
US95N
Sum of Fatalities
Sum of Injured

2015 NHTSA Data	AZ Mohave Co.	CA San Bernardino Co.	NV Clark Co.	Ranking
Total Fatalities	49	242	243	
Alcohol Related Fatal Crashes	13	**76**	**70**	High
Speed Related Fatal Crashes	25	**76**	**77**	**2nd**
Rollover Involved Fatal Crashes	**20**	**74**	69	**3rd**
Roadway Departure Fatal Crashes	**23**	116	114	1st
Unrestrained Occupant Fatalities	15	53	56	

Note: Data is for the whole county

2012-2015 State Crash Data	Fatal Crashes	Injury Crashes	Ranking
Total Crashes	59	856	
Intersection Related Crashes	31	446	1st
Single Vehicle Related Crashes	**7**	**31**	**2nd**
Rollover / Overturn Crashes	**4**	**11**	**3rd**
Rear End Crashes	0	**31**	
Unrestrained Occupant			
SR 163 (NV)	4	65	
US 95 (CA)	3	16	
SR 95 (AZ)	24	20	Worst

Note: Data is for FMIT Area only, see Area Map.

See attached Crash Map for FMIT Area

See attached WACOG Crash Analysis

See attached WACOG Crash Maps

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Data Analysis Outcome – County Level Data

- Most fatal crashes involved:
  - 1st Road Departures
  - 2nd Speeding
  - 3rd Rollovers
- Most fatalities occurred on SR 95 in AZ

Data Analysis Outcome – FMIT Area Data

- Most fatal or severe injury crashes involved:
  - 1st Intersections
  - 2nd Single Vehicle crashes or Rear End collisions
  - 3rd Rollover or Overturn crashes
- Most fatalities occurred on State Route 95 in AZ
- Alcohol involved in ~30% of fatal crashes countywide (statewide avg. 34%)
- DUI involved in ~45% of Tribally reported accidents

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5. Determine emphasis areas from analysis / include local projects of concern

   County Wide Emphasis Areas

   1) Roadway Departures
   2) Speed Management
   3) Rollovers

   Tribal Area Emphasis Areas

   1) Intersection Related
   2) Single Vehicle Related
   3) Rollover / Overturn Crashes
   4) SR95, US 95, and SR 163/SR 68 highest problems within FMIT Area

6. Identify strategies for each emphasis area

   (Think of the Four E's of Safety – Engineering, Enforcement, Education, and Emergency Services. Think of the Stakeholders and Partnerships in Transportation who play a role in safety efforts.)

   Potential Strategies

   1) Road Departures
      - Improve data collection and analysis for fatal run-off-the-road crashes
      - Increase fines for serious violations that result in run-off crashes
      - Evaluate pavement strategies (rumble strips, pavement markings)
      - Shoulder improvements / Recovery zone improvements
   2) Speed Management
      - Develop public outreach
      - Add signage

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- Install driver feedback signs / radar ticketing
- Increase enforcement (partner with County/ADOT/State)
- Increase penalty for repeat offenders
- Deliver educational packets for repeat offenders

3) Rollovers
   - Shoulder improvements / Recovery zone improvements
   - Evaluate pavement strategies (rumble strips, pavement markings)
   - Increase seatbelt use
4) Rear End Collisions
   - Create media campaigns about distracted driving
   - Add messaging about following too close/leave room
   - Reduce speed limits in busy commercial areas
   - Add left turn lanes or medians
5) Intersection Collisions
   - Reduce the number of conflict points
   - Create intersection safety checklists for existing conditions and new design
   - Upgrade signing, pavement markings, and signals
   - Add advanced street name signs on intersection warning signs
   - Solar-powered, sign-mounted beacons
   - Implement modern roundabouts
   - Update signal timing / central control / adopt consistent signal timing
6) Impaired Driving
   - Reduce roadside distractions
   - Stress no texting and driving in driver's education classes

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- Add rumble strips
- Increase sobriety checkpoints
- Create media campaigns

7) Pedestrian Safety
   - Education outreach for pedestrians
   - Road Safety Assessment of key locations
   - Apply for TTP Safety Funds for trail / sidewalks
8) Identify Roadway Hazards at specific locations
   - Engineering analysis of known locations
   - Use traffic counters for intersection turning movement analysis
   - Collect speed data

7. Next meeting date February 7, 2017 (Tuesday) at 10:00 am AZ time.

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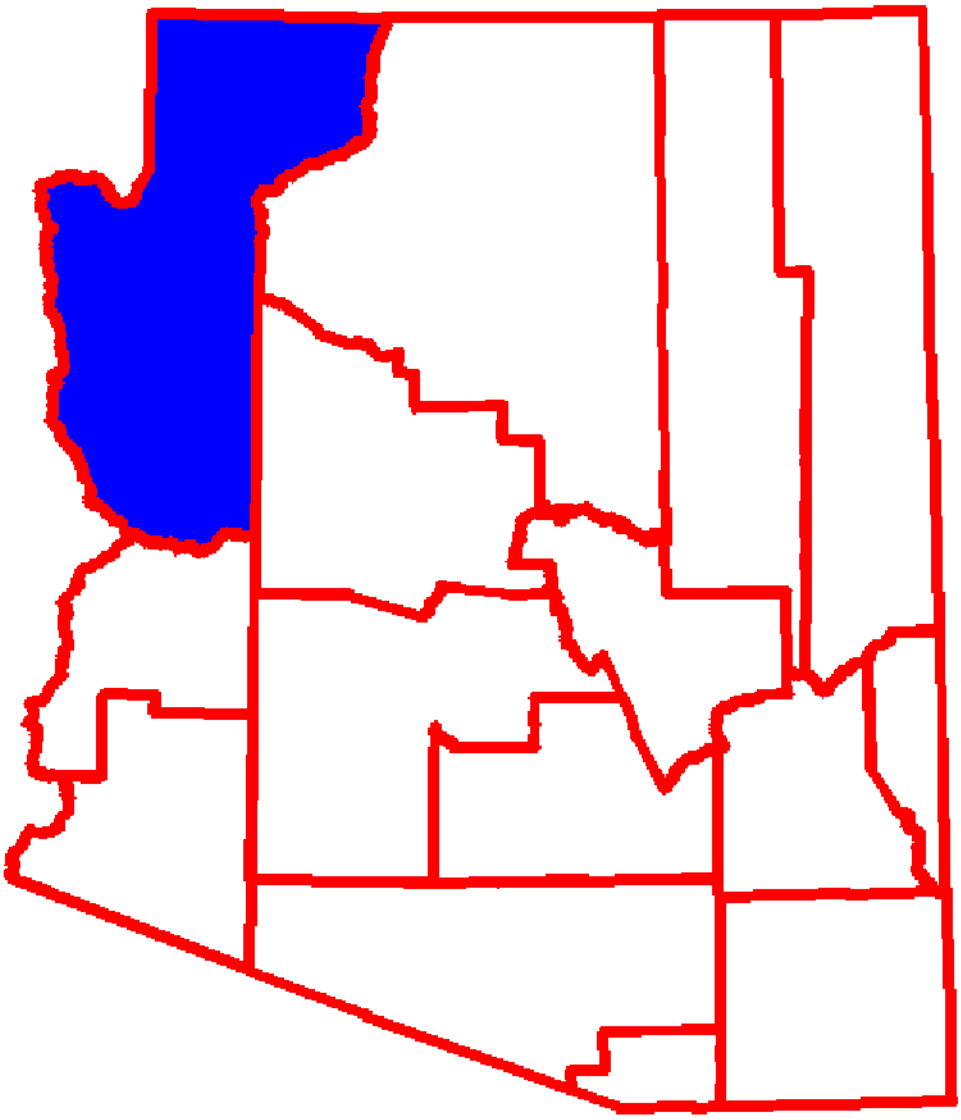
Traffic Safety Facts
Mohave County, Arizona
2011-2015



This Report Contains Data From the Following Sources:
Fatality Data - NCSA Fatality Analysis Reporting System (FARS): 2011-2014 Final File and 2015 Annual Report File (ARF)
Population Data - U.S. Bureau of the Census

Fatalities by Person/Crash Type

Fatality Type	Fatalities					Fatalities Per 100,000 Population				
	2011	2012	2013	2014	2015	2011	2012	2013	2014	2015
Total Fatalities (All Crashes)*	39	45	55	29	49	19.24	22.14	27.12	14.26	23.93
(1) Alcohol-Impaired Driving (BAC=.08+) Fatalities	6	14	12	6	13	2.96	6.89	5.92	2.95	6.35
(2) Single Vehicle Crash Fatalities	23	29	31	20	29	11.35	14.27	15.28	9.84	14.16
(3) Large Truck Involved Crash Fatalities	4	7	3	0	5	1.97	3.44	1.48	0.00	2.44
(4) Speeding Involved Crash Fatalities	18	23	28	9	25	8.88	11.32	13.80	4.43	12.21
(5) Rollover Involved Crash Fatalities	14	22	23	8	20	6.91	10.83	11.34	3.93	9.77
(6) Roadway Departure Involved Crash Fatalities	22	28	30	16	23	10.86	13.78	14.79	7.87	11.23
(7) Intersection (or Intersection Related) Crash Fatalities	7	4	10	4	13	3.45	1.97	4.93	1.97	6.35
Passenger Car Occupant Fatalities	13	9	15	6	18	6.41	4.43	7.40	2.95	8.79
Light Truck Occupant Fatalities	13	17	16	9	12	6.41	8.36	7.89	4.43	5.86
Motorcyclist Fatalities	8	9	12	6	7	3.95	4.43	5.92	2.95	3.42
Pedestrian Fatalities	2	2	7	6	5	0.99	0.98	3.45	2.95	2.44
Bicyclist (or Other Cyclist) Fatalities	0	0	3	0	2	0.00	0.00	1.48	0.00	0.98

(1) Crash Involved at Least One Driver or Motorcycle Rider With a BAC of .08 or Above
(2) Crash Involved Only One Vehicle In Transport
(3) Crash Involved at Least One Large Truck
(4) Crash Involved at Least One Vehicle Speeding
(5) Crash Involved at Least One Vehicle that Rolled Over
(6) Crash Involved at Least One Vehicle that Departed the Roadway (FHWA Definition)
(7) Crash Occured Within an Intersection or Within the Approach to an Intersection
*A Fatality Can Be in More Than One Category. Therefore Sum of the Individual Cells Will Not Equal the Total Due to Double Counting

Passenger Vehicle Occupant Fatalities by Restraint Use

Restraint Use	Fatalities					Fatalities Per 100,000 Population				
	2011	2012	2013	2014	2015	2011	2012	2013	2014	2015
Restrained	15	8	15	8	12	7.40	3.94	7.40	3.93	5.86
Unrestrained	10	15	16	7	15	4.93	7.38	7.89	3.44	7.33
Unknown Restraint Use	1	3	0	0	3	0.49	1.48	0.00	0.00	1.47
Total	26	26	31	15	30	12.83	12.79	15.28	7.38	14.65

Motorcyclist Fatalities by Helmet Use

Helmet Use	Fatalities					Fatalities Per 100,000 Population				
	2011	2012	2013	2014	2015	2011	2012	2013	2014	2015
Helmet Used	4	6	6	3	2	1.97	2.95	2.96	1.48	0.98
No Helmet Used	3	3	5	3	5	1.48	1.48	2.47	1.48	2.44
Unknown Helmet Use	1	0	1	0	0	0.49	0.00	0.49	0.00	0.00
Total	8	9	12	6	7	3.95	4.43	5.92	2.95	3.42

Fatalities by Person Type and Race/Hispanic Origin

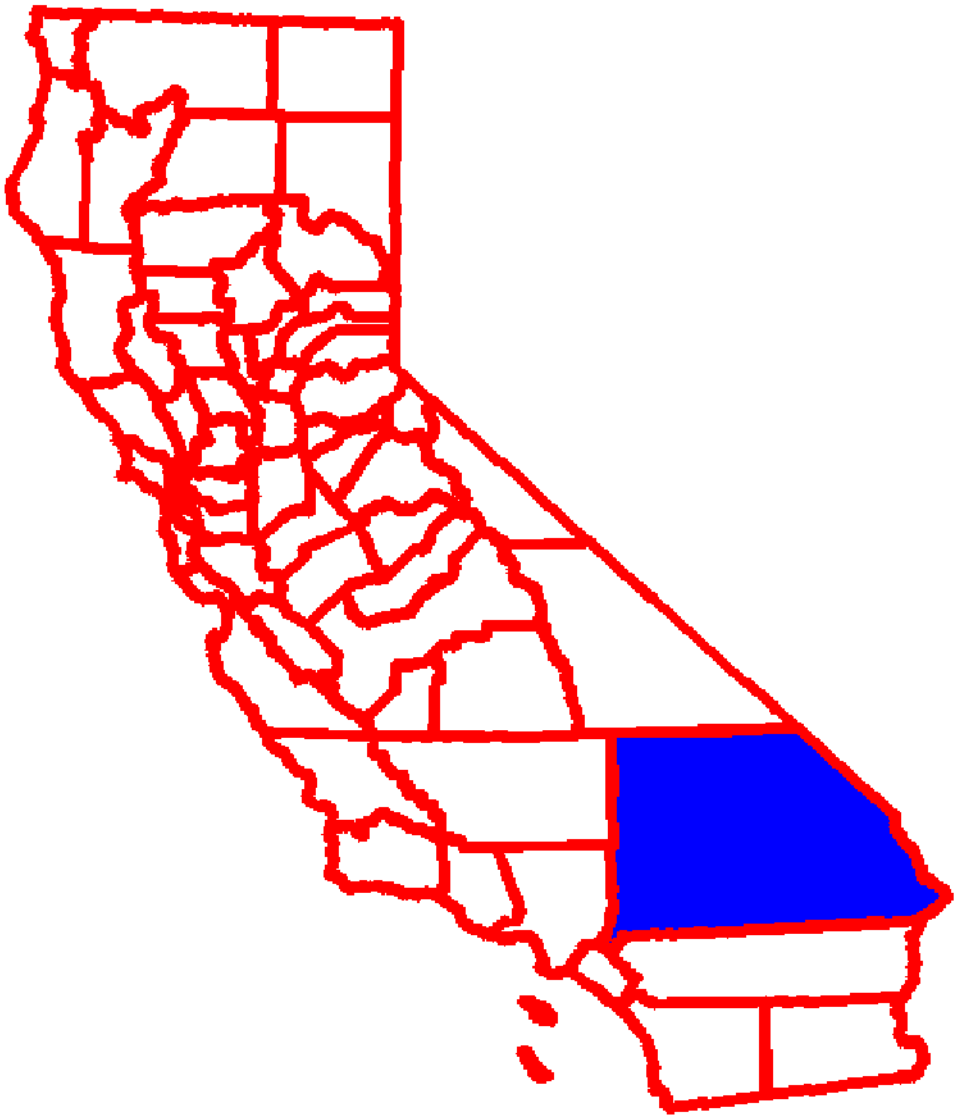
Person Type by Race/Hispanic Origin		2011	2012	2013	2014
Occupants (All Vehicle Types)	Hispanic	3	5	4	1
	White Non-Hispanic	22	33	36	17
	Black, Non-Hispanic	2	0	1	2
	American Indian, Non-Hispanic/Unknown	0	2	0	2
	Asian, Non-Hispanic/Unknown	0	0	2	0
	All Other Non-Hispanic or Race	1	3	2	1
	Unknown Race and Unknown Hispanic	9	0	0	0
	Total	37	43	45	23
Non-Occupants (Pedestrians, Pedalcyclists and Other/Unknown Non-Occupants)					
	Hispanic	1	1	0	0
	White Non-Hispanic	1	1	8	6
	Black, Non-Hispanic	0	0	1	0
	American Indian, Non-Hispanic/Unknown	0	0	0	0
	Asian, Non-Hispanic/Unknown	0	0	0	0
	All Other Non-Hispanic or Race	0	0	1	0
	Unknown Race and Unknown Hispanic	0	0	0	0
	Total	2	2	10	6
Total					
	Hispanic	4	6	4	1
	White Non-Hispanic	23	34	44	23
	Black, Non-Hispanic	2	0	2	2
	American Indian, Non-Hispanic/Unknown	0	2	0	2
	Asian, Non-Hispanic/Unknown	0	0	2	0
	All Other Non-Hispanic or Race	1	3	3	1

(Continued)

Person Type by Race/Hispanic Origin		2011	2012	2013	2014
Total	**Unknown Race and Unknown Hispanic**	9	0	0	0
	Total	39	45	55	29

2015 Race/Hispanic Origin Data is Not Yet Complete

Traffic Safety Facts
San Bernardino County, California
2011-2015



This Report Contains Data From the Following Sources:
Fatality Data - NCSA Fatality Analysis Reporting System (FARS): 2011-2014 Final File and 2015 Annual Report File (ARF)
Population Data - U.S. Bureau of the Census

Fatalities by Person/Crash Type

Fatality Type	Fatalities					Fatalities Per 100,000 Population				
	2011	2012	2013	2014	2015	2011	2012	2013	2014	2015
Total Fatalities (All Crashes)*	235	243	262	285	242	11.38	11.69	12.53	13.50	11.37
(1) Alcohol-Impaired Driving (BAC=.08+) Fatalities	64	70	67	89	76	3.10	3.37	3.20	4.22	3.57
(2) Single Vehicle Crash Fatalities	143	139	148	165	109	6.93	6.68	7.08	7.82	5.12
(3) Large Truck Involved Crash Fatalities	33	31	23	34	35	1.60	1.49	1.10	1.61	1.64
(4) Speeding Involved Crash Fatalities	77	77	92	90	76	3.73	3.70	4.40	4.26	3.57
(5) Rollover Involved Crash Fatalities	83	69	90	73	74	4.02	3.32	4.30	3.46	3.48
(6) Roadway Departure Involved Crash Fatalities	113	114	131	126	116	5.47	5.48	6.26	5.97	5.45
(7) Intersection (or Intersection Related) Crash Fatalities	48	51	45	71	53	2.33	2.45	2.15	3.36	2.49
Passenger Car Occupant Fatalities	73	94	108	87	100	3.54	4.52	5.16	4.12	4.70
Light Truck Occupant Fatalities	69	57	47	64	51	3.34	2.74	2.25	3.03	2.40
Motorcyclist Fatalities	35	29	32	51	35	1.70	1.39	1.53	2.42	1.64
Pedestrian Fatalities	42	46	50	62	51	2.03	2.21	2.39	2.94	2.40
Bicyclist (or Other Cyclist) Fatalities	5	7	10	10	2	0.24	0.34	0.48	0.47	0.09

(1) Crash Involved at Least One Driver or Motorcycle Rider With a BAC of .08 or Above
(2) Crash Involved Only One Vehicle In Transport
(3) Crash Involved at Least One Large Truck
(4) Crash Involved at Least One Vehicle Speeding
(5) Crash Involved at Least One Vehicle that Rolled Over
(6) Crash Involved at Least One Vehicle that Departed the Roadway (FHWA Definition)
(7) Crash Occured Within an Intersection or Within the Approach to an Intersection
*A Fatality Can Be in More Than One Category. Therefore Sum of the Individual Cells Will Not Equal the Total Due to Double Counting

Passenger Vehicle Occupant Fatalities by Restraint Use

Restraint Use	Fatalities					Fatalities Per 100,000 Population				
	2011	2012	2013	2014	2015	2011	2012	2013	2014	2015
Restrained	77	89	105	84	90	3.73	4.28	5.02	3.98	4.23
Unrestrained	56	56	45	55	53	2.71	2.69	2.15	2.61	2.49
Unknown Restraint Use	9	6	5	12	8	0.44	0.29	0.24	0.57	0.38
Total	142	151	155	151	151	6.88	7.26	7.41	7.16	7.10

Motorcyclist Fatalities by Helmet Use

Helmet Use	Fatalities					Fatalities Per 100,000 Population				
	2011	2012	2013	2014	2015	2011	2012	2013	2014	2015
Helmet Used	30	29	27	46	29	1.45	1.39	1.29	2.18	1.36
No Helmet Used	4	0	5	4	5	0.19	0.00	0.24	0.19	0.23
Unknown Helmet Use	1	0	0	1	1	0.05	0.00	0.00	0.05	0.05
Total	35	29	32	51	35	1.70	1.39	1.53	2.42	1.64

Fatalities by Person Type and Race/Hispanic Origin

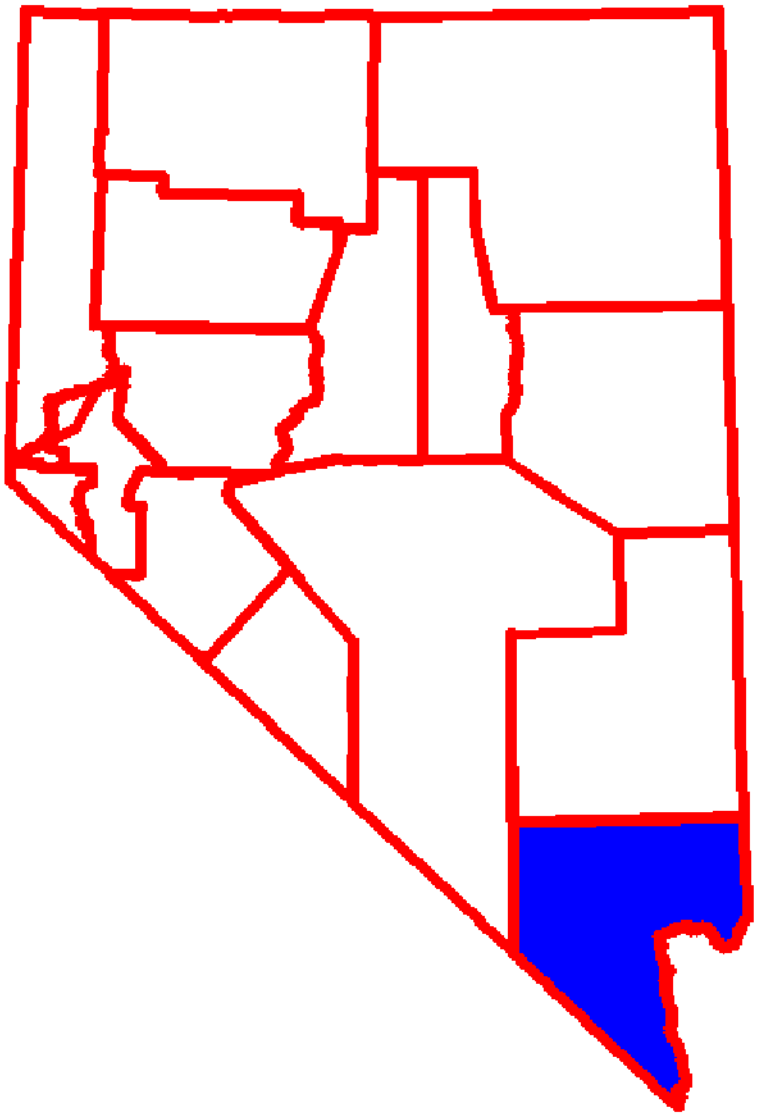
Person Type by Race/Hispanic Origin		2011	2012	2013	2014
Occupants (All Vehicle Types)	Hispanic	60	77	67	79
	White Non-Hispanic	83	77	94	100
	Black, Non-Hispanic	16	16	16	17
	American Indian, Non-Hispanic/Unknown	2	1	0	2
	Asian, Non-Hispanic/Unknown	3	3	5	8
	Pacific Islander, Non-Hispanic/Unknown	0	0	0	0
	Multiple Races, Non-Hispanic/Unknown	6	1	1	0
	All Other Non-Hispanic or Race	7	6	3	2
	Unknown Race and Unknown Hispanic	8	3	12	0
	Total	185	184	198	208
Non-Occupants (Pedestrians, Pedalcyclists and Other/Unknown Non-Occupants)					
	Hispanic	18	12	25	30
	White Non-Hispanic	20	33	28	29
	Black, Non-Hispanic	2	4	6	13
	American Indian, Non-Hispanic/Unknown	0	0	0	1
	Asian, Non-Hispanic/Unknown	3	2	2	2
	Pacific Islander, Non-Hispanic/Unknown	0	0	0	2
	Multiple Races, Non-Hispanic/Unknown	4	2	0	0
	All Other Non-Hispanic or Race	1	3	1	0
	Unknown Race and Unknown Hispanic	2	3	2	0
	Total	50	59	64	77

(Continued)

Person Type by Race/Hispanic Origin		2011	2012	2013	2014
Total					
	Hispanic	78	89	92	109
	White Non-Hispanic	103	110	122	129
	Black, Non-Hispanic	18	20	22	30
	American Indian, Non-Hispanic/Unknown	2	1	0	3
	Asian, Non-Hispanic/Unknown	6	5	7	10
	Pacific Islander, Non-Hispanic/Unknown	0	0	0	2
	Multiple Races, Non-Hispanic/Unknown	10	3	1	0
	All Other Non-Hispanic or Race	8	9	4	2
	Unknown Race and Unknown Hispanic	10	6	14	0
	Total	235	243	262	285

2015 Race/Hispanic Origin Data is Not Yet Complete

Traffic Safety Facts
Clark County, Nevada
2011-2015



This Report Contains Data From the Following Sources:
Fatality Data - NCSA Fatality Analysis Reporting System (FARS): 2011-2014 Final File and 2015 Annual Report File (ARF)
Population Data - U.S. Bureau of the Census

Fatalities by Person/Crash Type

Fatality Type	Fatalities					Fatalities Per 100,000 Population				
	2011	2012	2013	2014	2015	2011	2012	2013	2014	2015
Total Fatalities (All Crashes)*	117	172	190	174	210	5.95	8.61	9.37	8.41	9.93
(1) Alcohol-Impaired Driving (BAC=.08+) Fatalities	37	60	64	54	68	1.88	3.00	3.16	2.61	3.22
(2) Single Vehicle Crash Fatalities	69	101	100	98	118	3.51	5.05	4.93	4.74	5.58
(3) Large Truck Involved Crash Fatalities	7	9	13	9	13	0.36	0.45	0.64	0.43	0.61
(4) Speeding Involved Crash Fatalities	40	72	74	64	78	2.03	3.60	3.65	3.09	3.69
(5) Rollover Involved Crash Fatalities	24	46	35	30	33	1.22	2.30	1.73	1.45	1.56
(6) Roadway Departure Involved Crash Fatalities	47	66	67	64	69	2.39	3.30	3.30	3.09	3.26
(7) Intersection (or Intersection Related) Crash Fatalities	34	67	76	60	72	1.73	3.35	3.75	2.90	3.40
Passenger Car Occupant Fatalities	32	66	52	51	61	1.63	3.30	2.56	2.46	2.88
Light Truck Occupant Fatalities	28	28	29	23	32	1.42	1.40	1.43	1.11	1.51
Motorcyclist Fatalities	25	29	46	44	43	1.27	1.45	2.27	2.13	2.03
Pedestrian Fatalities	29	41	51	50	55	1.47	2.05	2.51	2.42	2.60
Bicyclist (or Other Cyclist) Fatalities	1	2	5	4	8	0.05	0.10	0.25	0.19	0.38

(1) Crash Involved at Least One Driver or Motorcycle Rider With a BAC of .08 or Above
(2) Crash Involved Only One Vehicle In Transport
(3) Crash Involved at Least One Large Truck
(4) Crash Involved at Least One Vehicle Speeding
(5) Crash Involved at Least One Vehicle that Rolled Over
(6) Crash Involved at Least One Vehicle that Departed the Roadway (FHWA Definition)
(7) Crash Occured Within an Intersection or Within the Approach to an Intersection
*A Fatality Can Be in More Than One Category. Therefore Sum of the Individual Cells Will Not Equal the Total Due to Double Counting

Passenger Vehicle Occupant Fatalities by Restraint Use

Restraint Use	Fatalities					Fatalities Per 100,000 Population				
	2011	2012	2013	2014	2015	2011	2012	2013	2014	2015
Restrained	24	51	42	37	47	1.22	2.55	2.07	1.79	2.22
Unrestrained	25	40	36	30	35	1.27	2.00	1.77	1.45	1.66
Unknown Restraint Use	11	3	3	7	11	0.56	0.15	0.15	0.34	0.52
Total	60	94	81	74	93	3.05	4.70	3.99	3.58	4.40

Motorcyclist Fatalities by Helmet Use

Helmet Use	Fatalities					Fatalities Per 100,000 Population				
	2011	2012	2013	2014	2015	2011	2012	2013	2014	2015
Helmet Used	22	19	40	35	32	1.12	0.95	1.97	1.69	1.51
No Helmet Used	3	8	4	6	10	0.15	0.40	0.20	0.29	0.47
Unknown Helmet Use	0	2	2	3	1	0.00	0.10	0.10	0.14	0.05
Total	25	29	46	44	43	1.27	1.45	2.27	2.13	2.03

Fatalities by Person Type and Race/Hispanic Origin

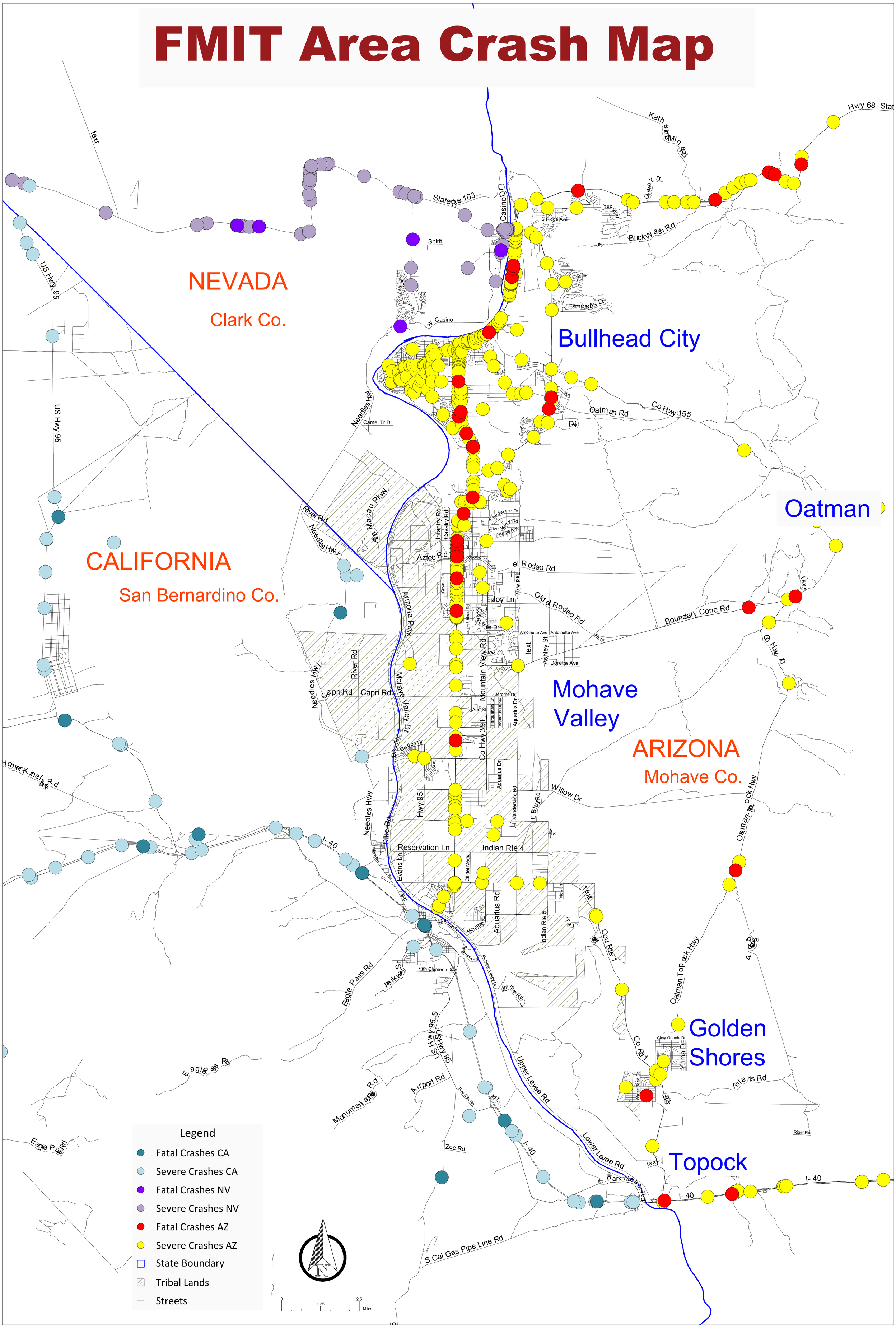
Person Type by Race/Hispanic Origin		2011	2012	2013	2014
Occupants (All Vehicle Types)	Hispanic	22	26	31	31
	White Non-Hispanic	47	77	72	61
	Black, Non-Hispanic	10	12	13	17
	American Indian, Non-Hispanic/Unknown	1	2	1	0
	Asian, Non-Hispanic/Unknown	4	5	0	0
	Multiple Races, Non-Hispanic/Unknown	0	1	1	0
	All Other Non-Hispanic or Race	0	4	12	9
	Unknown Race and Unknown Hispanic	2	0	1	1
	Total	86	127	131	119
Non-Occupants (Pedestrians, Pedalcyclists and Other/Unknown Non-Occupants)					
	Hispanic	5	10	9	11
	White Non-Hispanic	17	23	36	25
	Black, Non-Hispanic	4	7	8	14
	American Indian, Non-Hispanic/Unknown	1	0	0	0
	Asian, Non-Hispanic/Unknown	3	4	1	0
	Multiple Races, Non-Hispanic/Unknown	0	0	0	1
	All Other Non-Hispanic or Race	1	1	5	3
	Unknown Race and Unknown Hispanic	0	0	0	1
	Total	31	45	59	55
Total					
	Hispanic	27	36	40	42
	White Non-Hispanic	64	100	108	86
	Black, Non-Hispanic	14	19	21	31
	American Indian, Non-Hispanic/Unknown	2	2	1	0
	Asian, Non-Hispanic/Unknown	7	9	1	0

(Continued)

Person Type by Race/Hispanic Origin		2011	2012	2013	2014
Total	**Multiple Races, Non-Hispanic/Unknown**	0	1	1	1
	All Other Non-Hispanic or Race	1	5	17	12
	Unknown Race and Unknown Hispanic	2	0	1	2
	Total	117	172	190	174

2015 Race/Hispanic Origin Data is Not Yet Complete

FMIT Area Crash Map



FMIT Crash Map

NEVADA

Clark Co.

ARIZONA

Mohave Co.

CALIFORNIA

San Bernardino Co.

Mohave Valley

Needles

Legend

- Fatal Crashes CA
- Severe Crashes CA
- Fatal Crashes NV
- Severe Crashes NV
- Fatal Crashes AZ
- Severe Crashes AZ
- State Boundary
- Tribal Lands
- Streets

0 1.75 3.5 Miles

Agency Fort Mohave Indian Reservation

Collision Manner	Fatal	Incapacitating Injury	Non Incapacitating Injury	Possible Injury	No Injury	Grand Total
Rear End		2	19	10	46	77
Single Vehicle	7	10	8	13	37	75
Left Turn		1	4	10	19	34
Angle		2	2	6	18	28
Sideswipe Same Direction			1		26	27
Other	1	1			7	9
Sideswipe Opposite Direction			1	1	4	6
Head On		2	1	1	2	6
Rear To Side			1	1		2
Rear To Rear			1			1
Grand Total	**8**	**18**	**38**	**42**	**159**	**265**

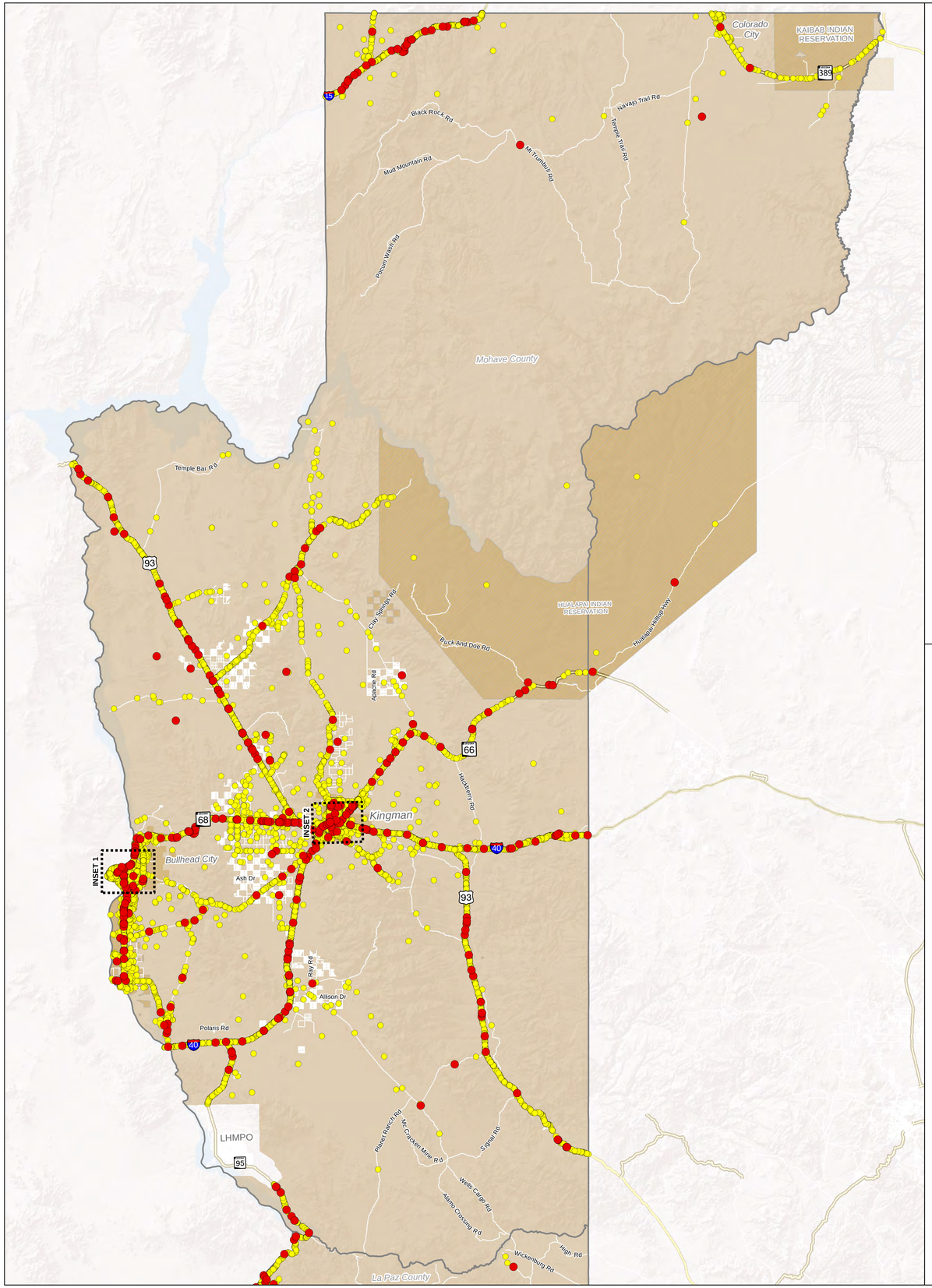
Agency Fort Mohave Indian Reservation

Event First Harmful	Fatal	Incapacitating Injury	Non Incapacitating Injury	Possible Injury	No Injury	Grand Total
Motor Vehicle In Transport		8	29	28	114	179
Overturn Rollover	4	5	3	3	8	23
Other Non Collision		2	1	3	2	8
Other Fixed Object	1		2	1	4	8
Other Non Fixed Object		1		1	5	7
Pedestrian	2	2		1	1	6
Not Reported			1	1	3	5
Embankment				1	3	4
Utility Pole Light Support				2	1	3
Ditch	1				2	3

Curb					3	3
Tree Bush Stump Standing				1	1	2
Traffic Signal Support					2	2
Parked Motor Vehicle					2	2
Traffic Sign Support			1		1	2
Other Post Pole Or Support					2	2
Animal Pet					1	1
Animal Livestock					1	1
Fence			1			1
Thrown Or Falling Object					1	1
Animal Wild Game					1	1
Mailbox					1	1
Grand Total	**8**	**18**	**38**	**42**	**159**	**265**

Agency	Fort Mohave Indian Reservation

Light Condition	Fatal	Incapacitating Injury	Non Incapacitating Injury	Possible Injury	No Injury	Grand Total
Daylight	2	9	30	31	129	201
Dark	6	8	6	9	24	53
Dawn		1		2	5	8
Dusk			2		1	3
Grand Total	**8**	**18**	**38**	**42**	**159**	**265**



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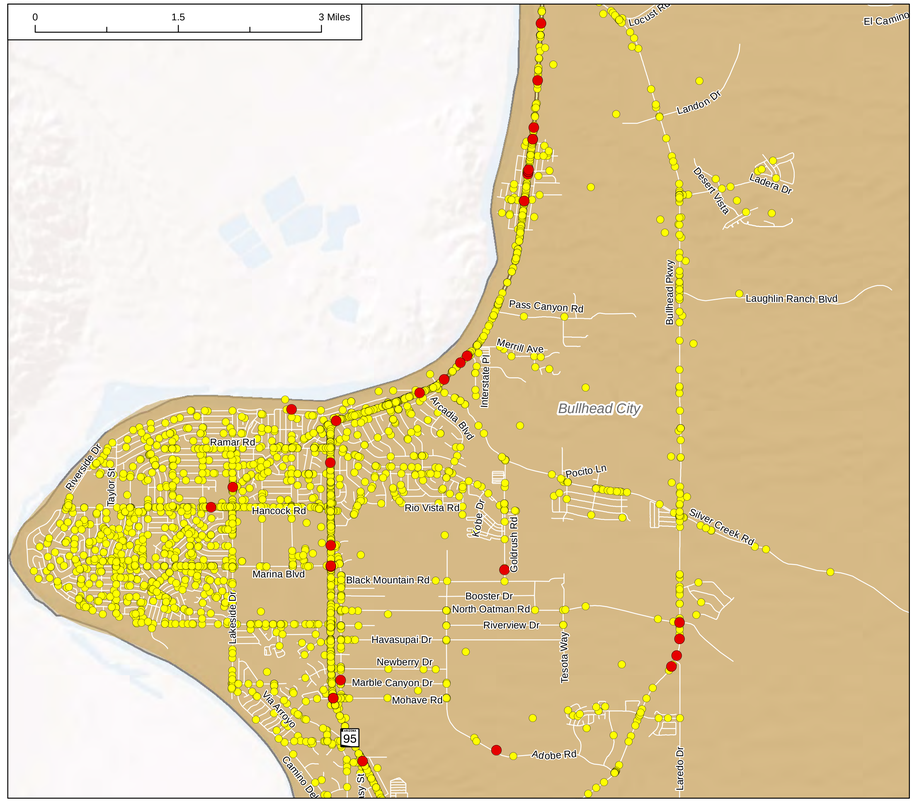

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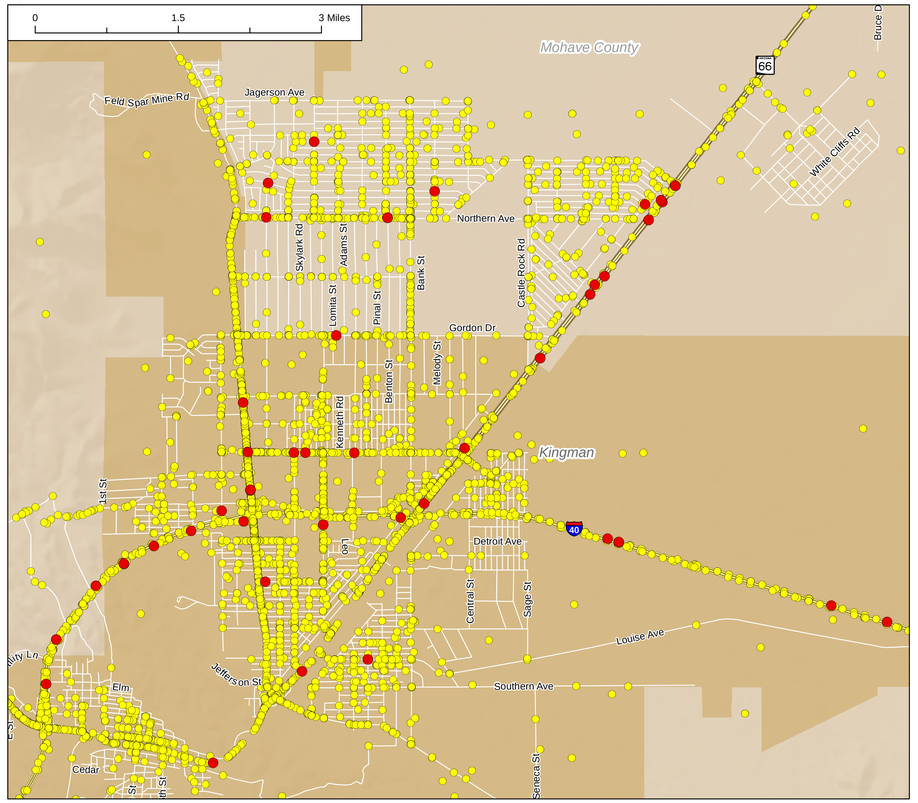

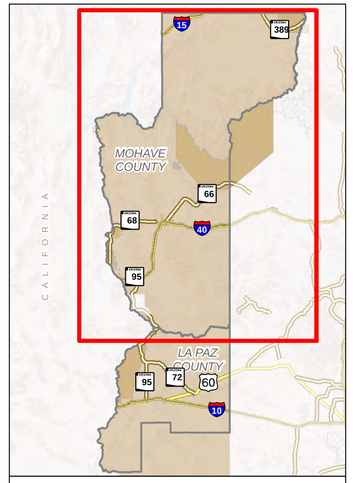

Overview Map

Legend

- Fatal Crashes
- Non-Fatal Crashes

2006 - 2015 Bullhead City Crash Totals	
No Injury Crashes	4420
Possible Injury Crashes	1237
Non-Incapacitating Injury Crashes	525
Serious Injury Crashes	276
Fatal Crashes	40
Total Crashes	**6498**

2006 - 2015 Kingman Crash Totals	
No Injury Crashes	3624
Possible Injury Crashes	860
Non-Incapacitating Injury Crashes	739
Serious Injury Crashes	149
Fatal Crashes	31
Total Crashes	**5403**

2006 - 2015 Mohave County (Unincorporated) Crash Totals	
No Injury Crashes	6609
Possible Injury Crashes	1138
Non-Incapacitating Injury Crashes	1774
Serious Injury Crashes	828
Fatal Crashes	276
Total Crashes	**10625**

2006 - 2015 WACOG Crash Totals	
No Injury Crashes	17375
Possible Injury Crashes	3578
Non-Incapacitating Injury Crashes	3849
Serious Injury Crashes	1523
Fatal Crashes	515
Total Crashes	**26840**

WACOG
Western Arizona Council of Governments

Western Arizona Council of Governments
Strategic Transportation Safety Plan

Mohave County
Fatal and Non-Fatal Injury Crash Data 2006 to 2015

0 10 20 30 Miles

N

FIGURE 1

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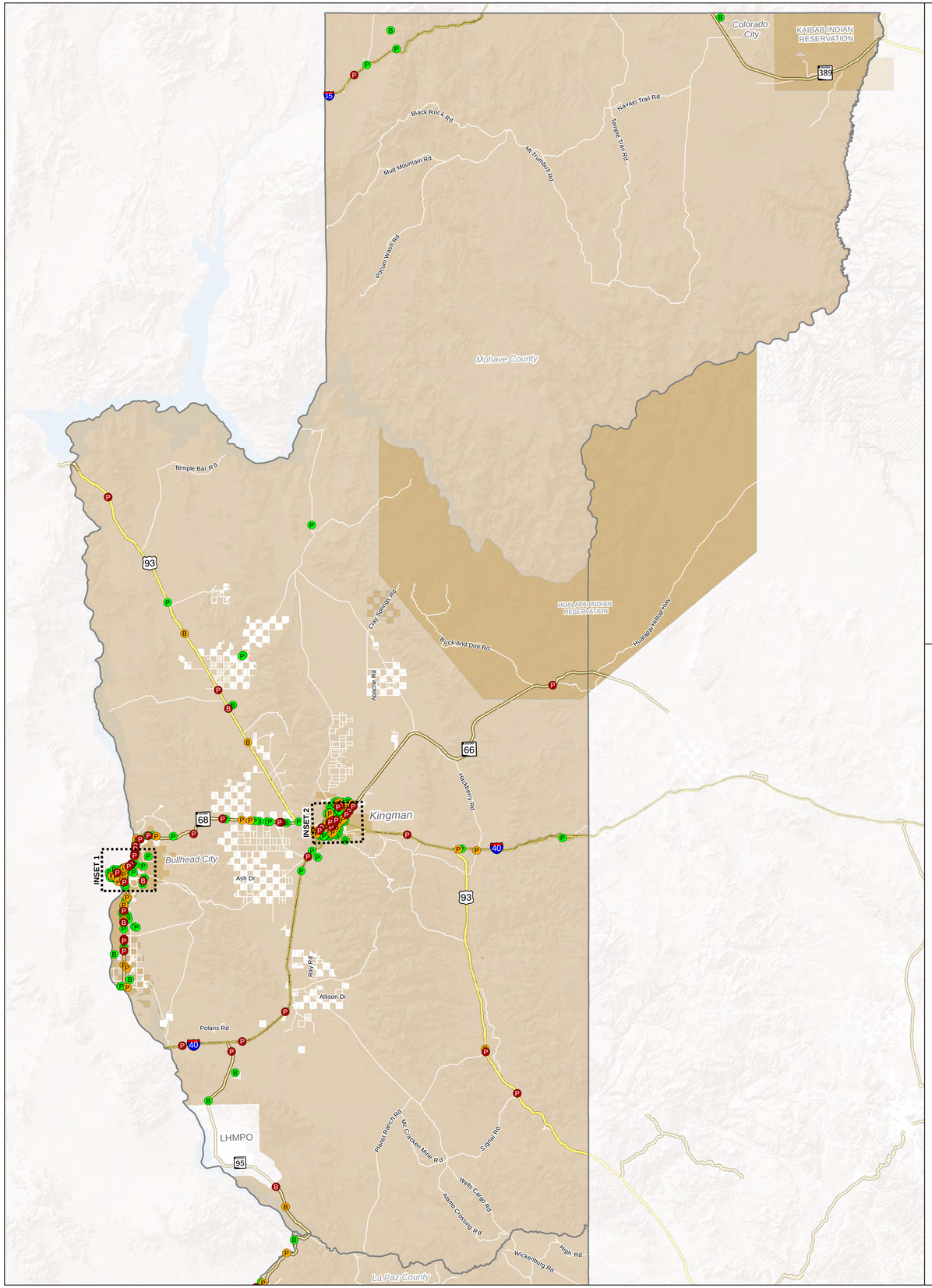
Job No. 3720165005
PM: MB
Date: 8/12/2016
Scale: 1 inch = 10.5 miles

amec foster wheeler



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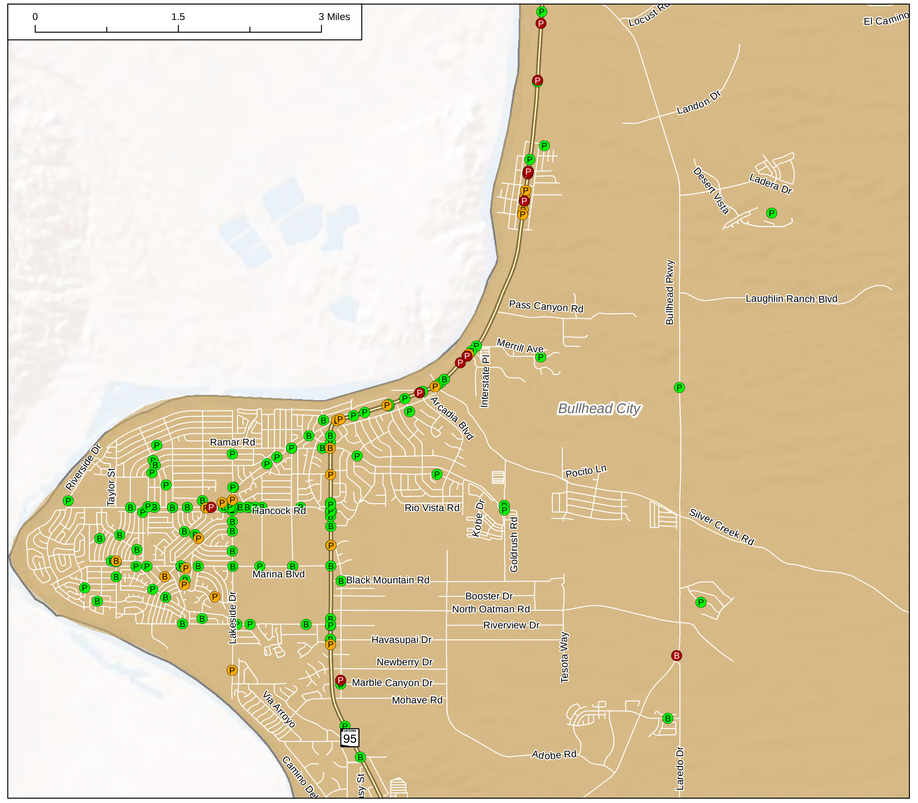

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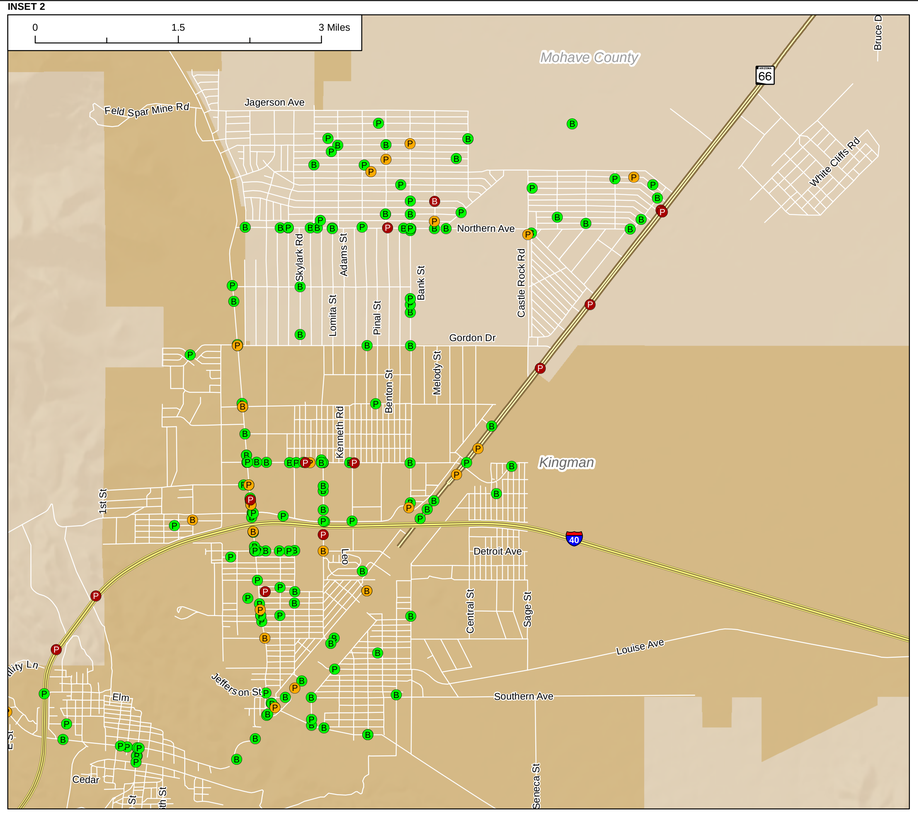

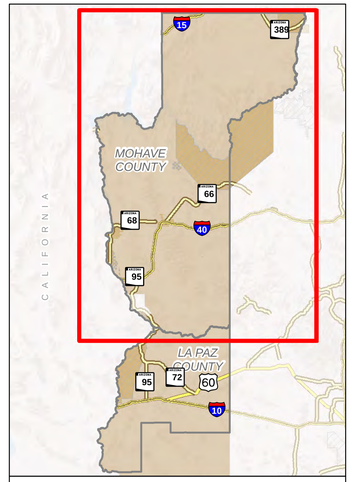

Overview Map

Legend

- Bicycle / Pedestrian Minor / No Injury Crash
- Bicycle / Pedestrian Serious Injury Crash
- Bicycle / Pedestrian Fatal Crash

2006 - 2015 Mohave County Pedestrian Crash Total	
No Injury Crashes	15
Possible Injury Crashes	59
Non-Incapacitating Injury Crashes	91
Serious Injury Crashes	52
Fatal Crashes	45
Total Crashes	**262**

2006 - 2015 Mohave County Bicycle Crash Total	
No Injury Crashes	27
Possible Injury Crashes	68
Non-Incapacitating Injury Crashes	103
Serious Injury Crashes	19
Fatal Crashes	6
Total Crashes	**223**

WACOG
Western Arizona Council of Governments

Western Arizona Council of Governments
Strategic Transportation Safety Plan

Mohave County
Bicycle and Pedestrian Injury Crash Data 2006 to 2015

0 10 20 30 Miles

N

FIGURE 2

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Scale:	1 inch = 10.5 miles

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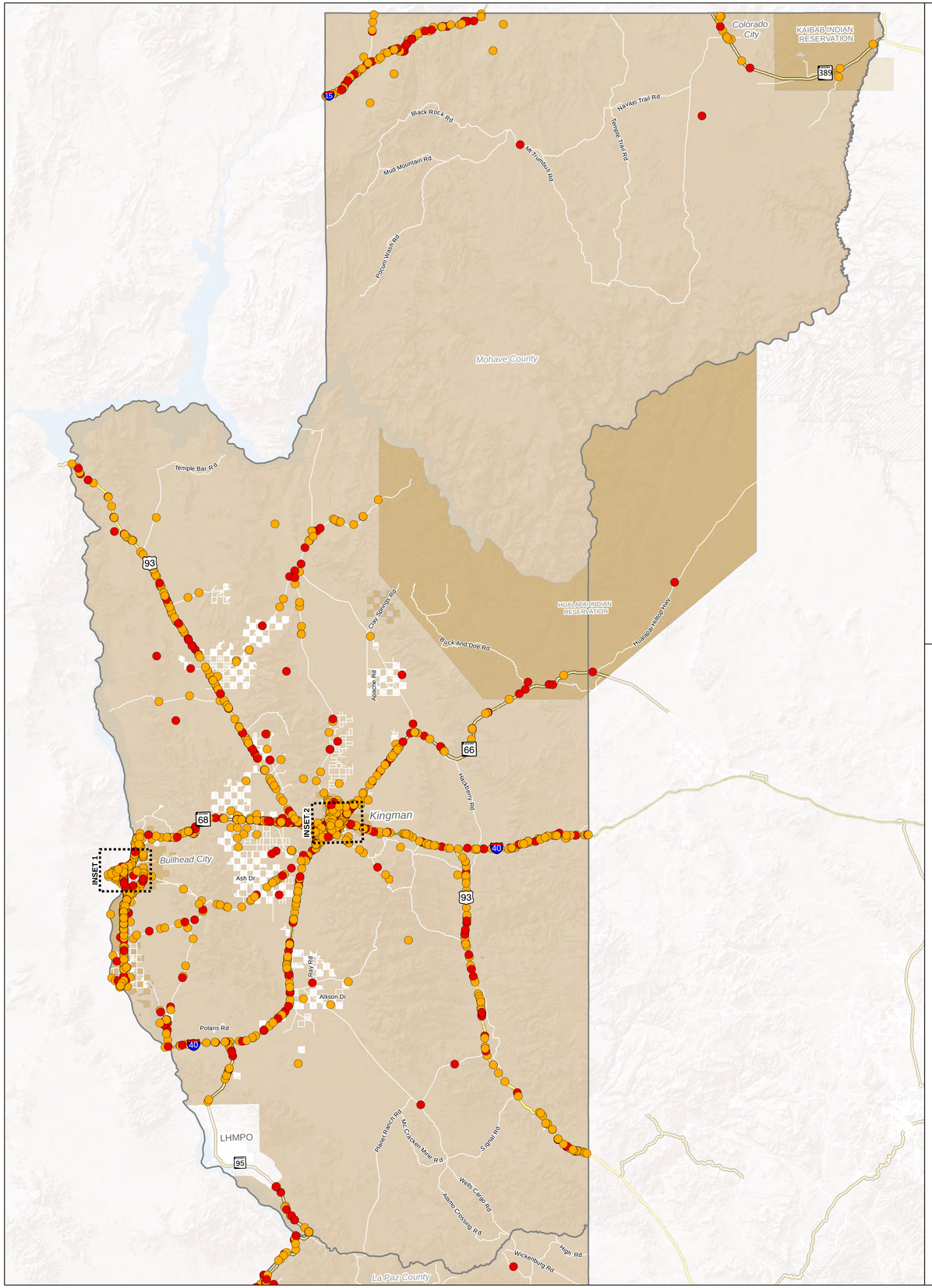

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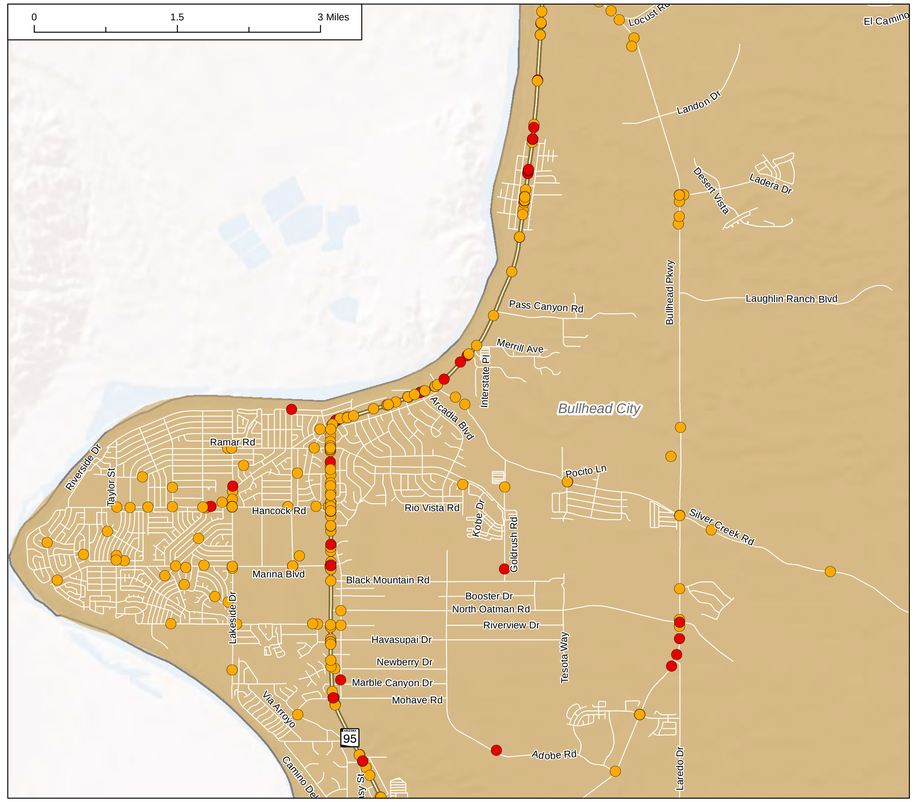

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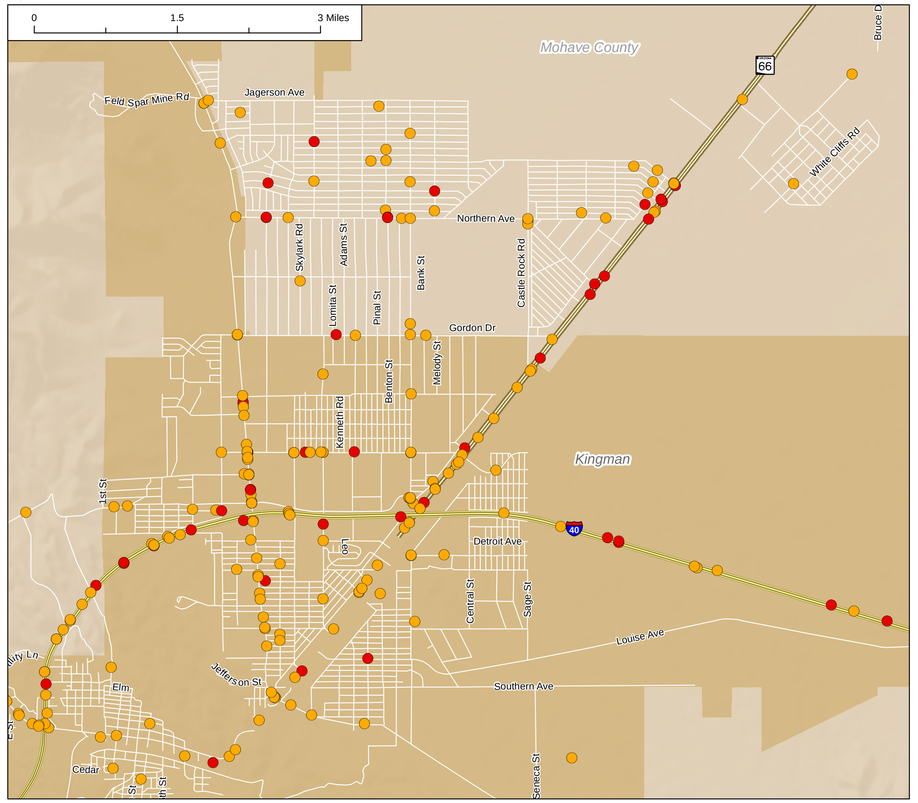

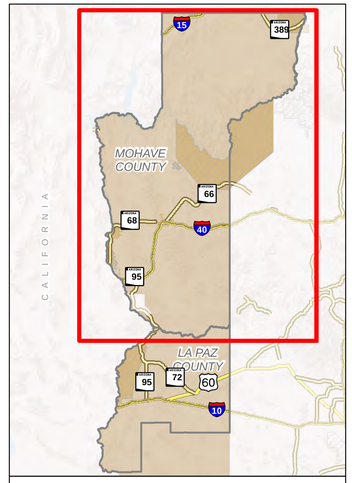

Overview Map

Legend

- Serious Injury Crash
- Fatal Injury Crash

2006 - 2015 Bullhead City Crash Totals	
No Injury Crashes	4420
Possible Injury Crashes	1237
Non-Incapacitating Injury Crashes	525
Serious Injury Crashes	276
Fatal Crashes	40
Total Crashes	**6498**

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Possible Injury Crashes	860
Non-Incapacitating Injury Crashes	739
Serious Injury Crashes	149
Fatal Crashes	31
Total Crashes	**5403**

2006 - 2015 Mohave County (Unincorporated) Crash Totals	
No Injury Crashes	6609
Possible Injury Crashes	1138
Non-Incapacitating Injury Crashes	1774
Serious Injury Crashes	828
Fatal Crashes	276
Total Crashes	**10625**

2006 - 2015 WACOG Crash Totals	
No Injury Crashes	17375
Possible Injury Crashes	3578
Non-Incapacitating Injury Crashes	3849
Serious Injury Crashes	1523
Fatal Crashes	515
Total Crashes	**26840**

WACOG
Western Arizona Council of Governments

Western Arizona Council of Governments
Strategic Transportation Safety Plan

Mohave County
Fatal and Serious Injury Crash Data 2006 to 2015

0 10 20 30 Miles

N

FIGURE 3

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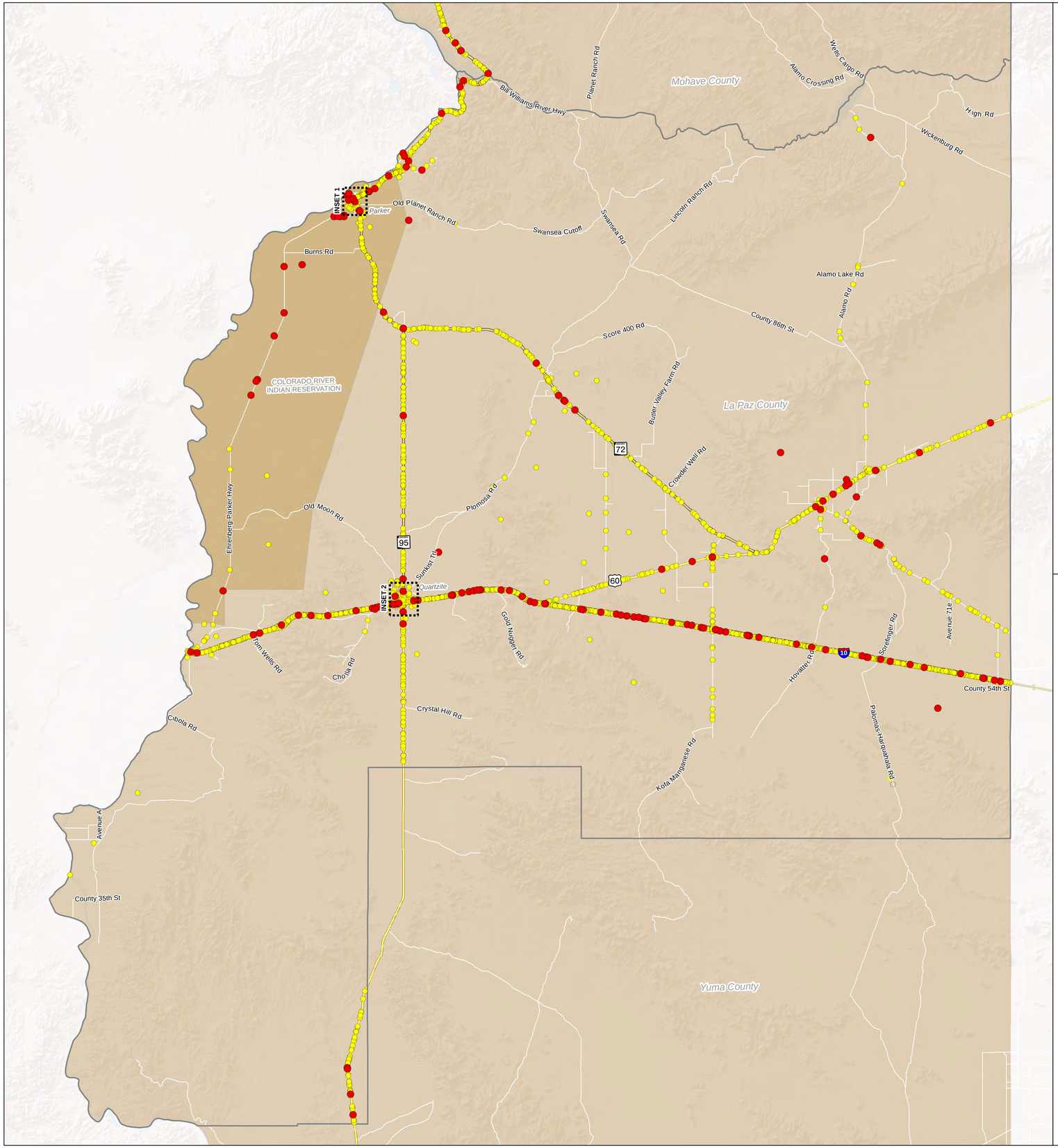
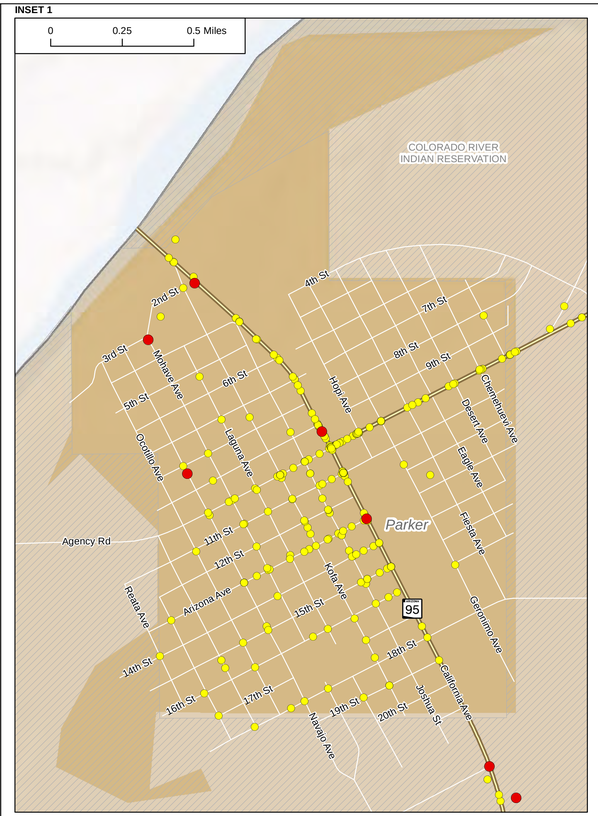
Job No. 3720165005
PM: MB
Date: 8/12/2016
Scale: 1 inch = 10.5 miles

amec foster wheeler



INSET 1



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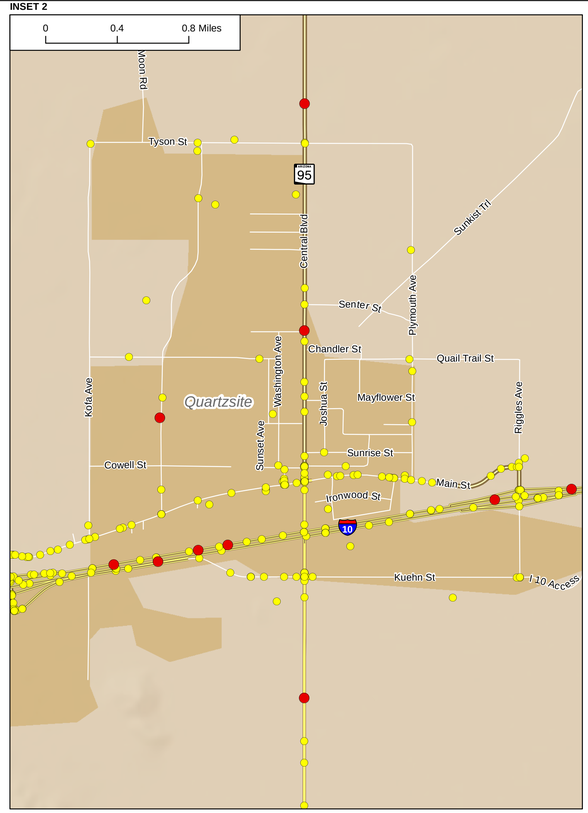

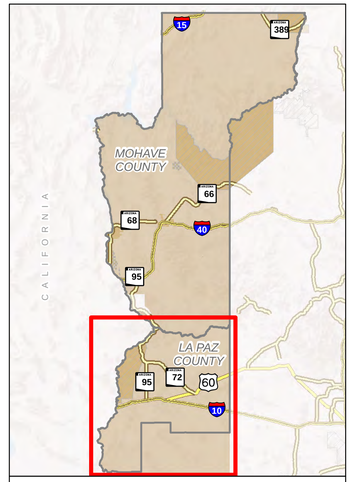

Overview Map

Legend

- Fatal Crashes
- Non-Fatal Crashes

2006 - 2015 Quartzite Crash Totals	
No Injury Crashes	115
Possible Injury Crashes	19
Non-Incapacitating Injury Crashes	19
Serious Injury Crashes	5
Fatal Crashes	6
Total Crashes	**164**

2006 - 2015 Parker Crash Totals	
No Injury Crashes	228
Possible Injury Crashes	33
Non-Incapacitating Injury Crashes	23
Serious Injury Crashes	6
Fatal Crashes	5
Total Crashes	**295**

2006 - 2015 La Paz County (Unincorporated) Crash Total	
No Injury Crashes	2063
Possible Injury Crashes	217
Non-Incapacitating Injury Crashes	692
Serious Injury Crashes	214
Fatal Crashes	122
Total Crashes	**3308**

WACOG
Western Arizona Council of Governments

Western Arizona Council of Governments
Strategic Transportation Safety Plan

La Paz County
Fatal and Non-Fatal Injury Crash Data 2006 to 2015

0 5 10 15 Miles

N

FIGURE 4

The map shown here has been created with all due and reasonable care and is strictly for use with Amec Foster Wheeler Proposal Number 3720165005. This map has not been certified by a licensed land surveyor, and any third party use of this map comes without warranties of any kind. Amec Foster Wheeler assumes no liability, direct or indirect, whatsoever for any such third party or unintended use.

Job No. 3720165005
PM: MB
Date: 8/17/2016
Scale: 1 inch = 5 miles

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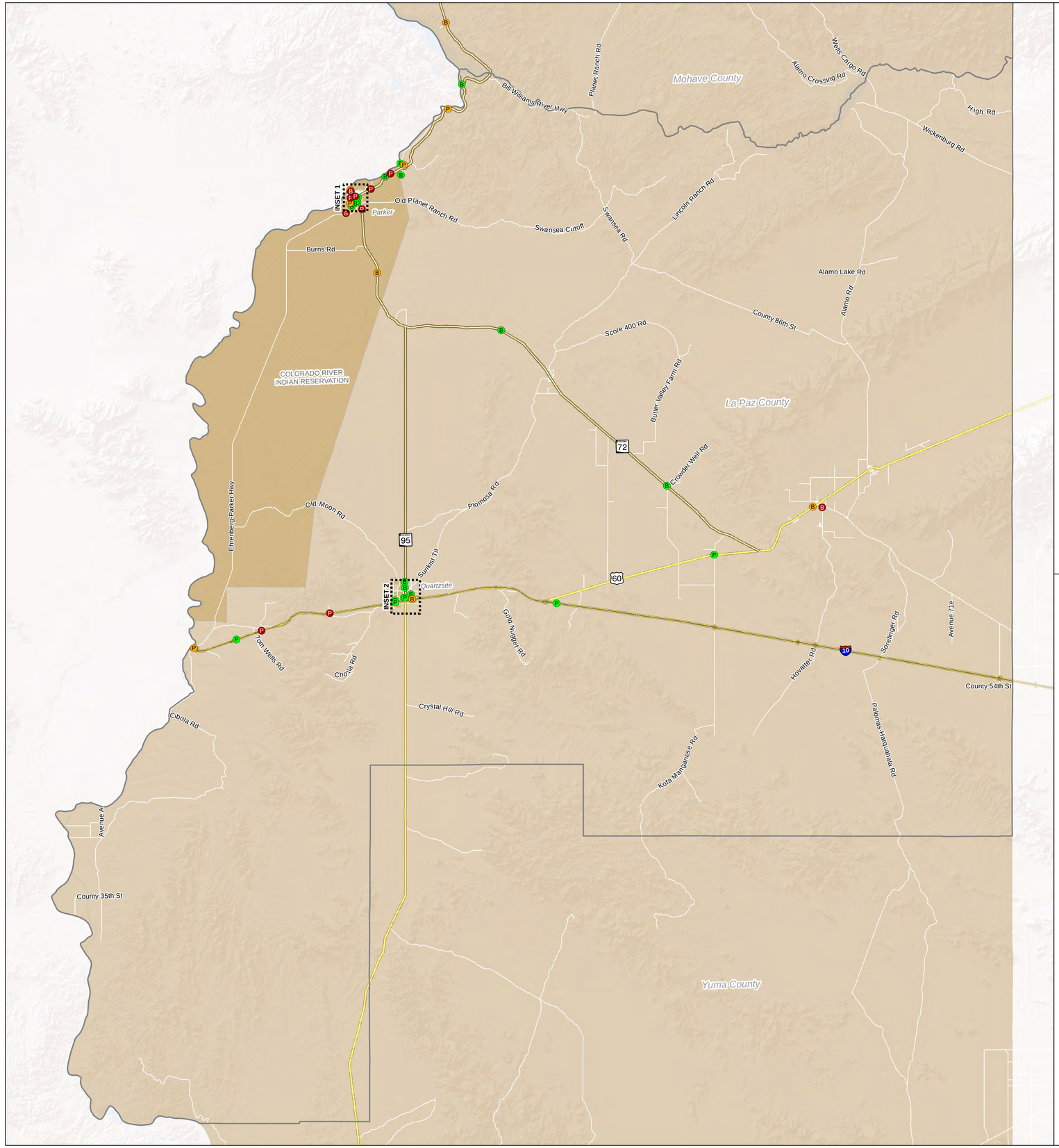

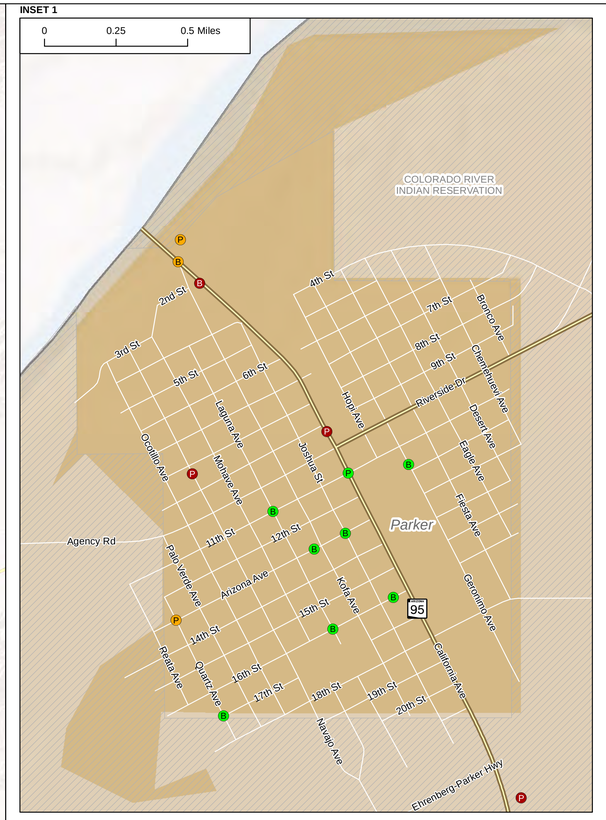

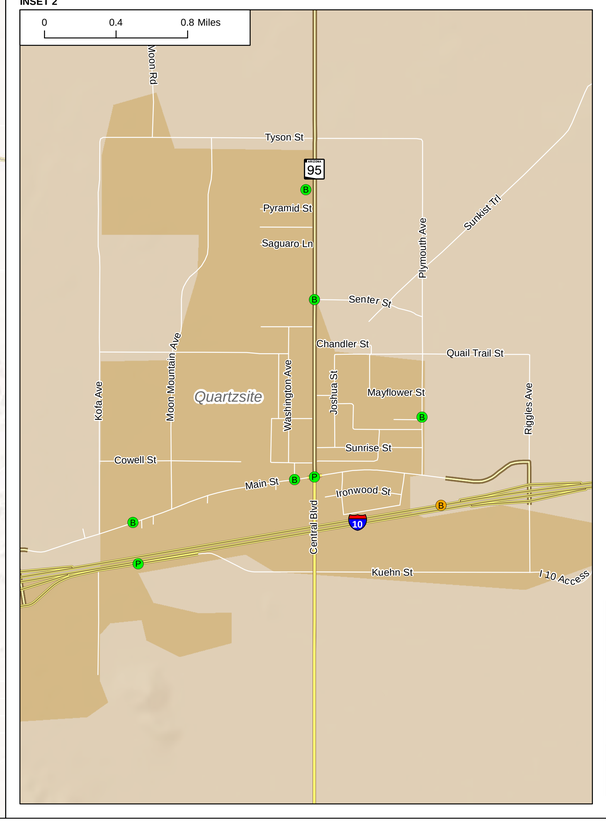

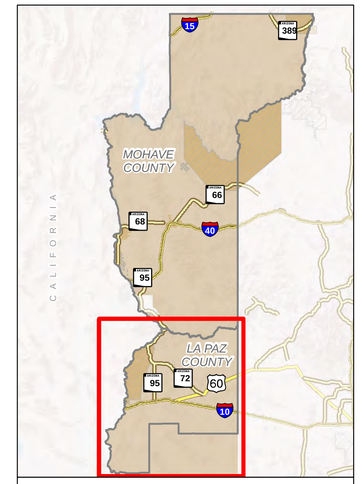

Overview Map

Legend

- Bicycle / Pedestrian Minor / No Injury Crash
- Bicycle / Pedestrian Serious Injury Crash
- Bicycle / Pedestrian Fatal Crash

2006 - 2015 La Paz County
Pedestrian Crash Total

No Injury Crashes	1
Possible Injury Crashes	1
Non-Incapacitating Injury Crashes	5
Serious Injury Crashes	5
Fatal Crashes	7
Total Crashes	**19**

2006 - 2015 La Paz County
Bicycle Crash Total

No Injury Crashes	5
Possible Injury Crashes	6
Non-Incapacitating Injury Crashes	6
Serious Injury Crashes	4
Fatal Crashes	3
Total Crashes	**24**

WACOG
Western Arizona Council of Governments

Western Arizona Council of Governments
Strategic Transportation Safety Plan

La Paz County
Pedestrian and Bicycle Injury Crash Data 2006 to 2015

0 5 10 15 Miles

N

FIGURE 5

The map shown here has been created with all due and reasonable care and is strictly for use with Amec Foster Wheeler Proposal Number 3720165005. This map has not been certified by a licensed land surveyor, and any third party use of this map comes without warranties of any kind. Amec Foster Wheeler assumes no liability, direct or indirect, whatsoever for any such third party or unintended use.

Job No. 3720165005
PM: MB
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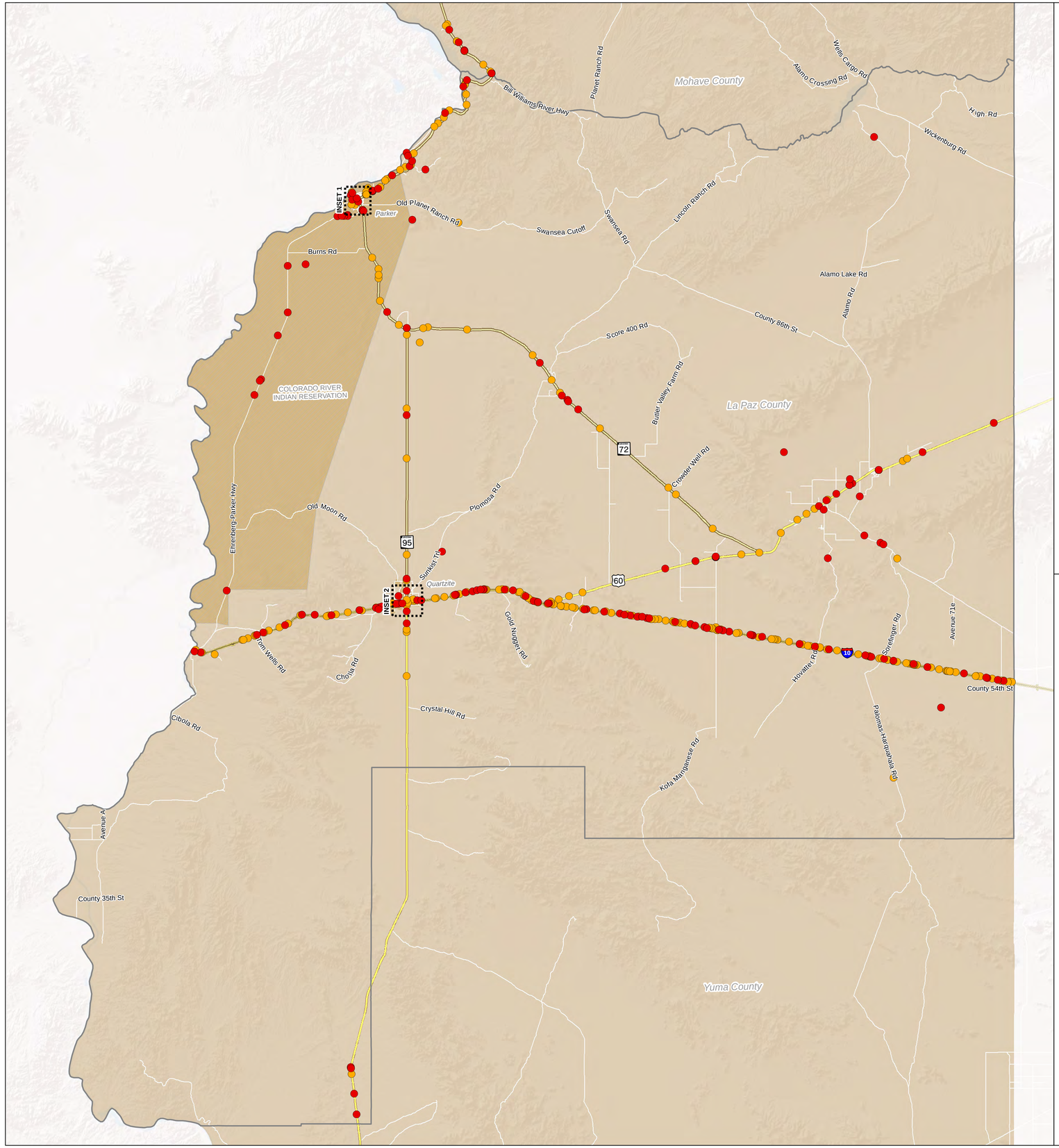

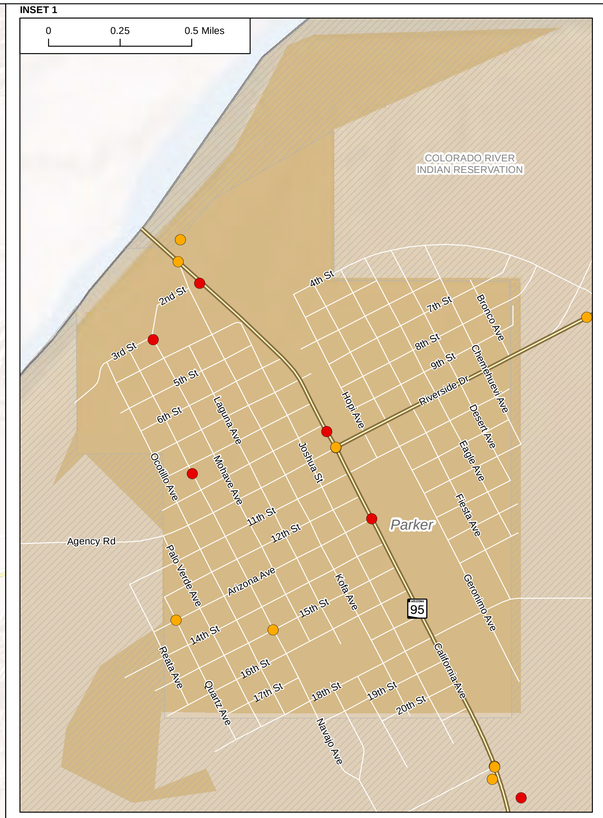

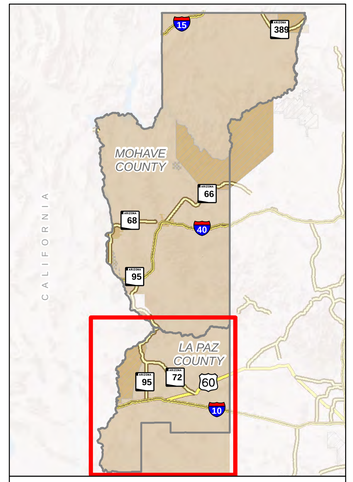

Overview Map

Legend

- Fatal Injury Crash
- Serious Injury Crash

2006 - 2015 Quartzite Crash Totals	
No Injury Crashes	115
Possible Injury Crashes	19
Non-Incapacitating Injury Crashes	19
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WACOG
Western Arizona Council of Governments

Western Arizona Council of Governments
Strategic Transportation Safety Plan

La Paz County
Serious and Fatal Injury Crash Data 2006 to 2015

0 5 10 15 Miles

N

FIGURE 6

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Job No. 3720165005
PM: MB
Date: 8/12/2016
Scale: 1 inch = 5 miles

amec foster wheeler

ENGINEERING AND TRAFFIC SURVEY

FOR THE

CITY OF NEEDLES

PREPARED BY:

CHARLES ABBOTT ASSOCIATES, INC.
27401 LOS ALTOS #220
MISSION VIEJO, CA 92691

JUNE 2012

SUMMARY OF RECOMMENDATIONS

Street	Limits	Existing Speed Limit	Proposed Speed Limit
Bailey Ave	Washington St – "J" St	unposted	25 mph
Bailey Ave	"J" St – Lillyhill Dr	35 mph	35 mph
East Broadway St	Cibola St – I-40 Overpass	40 mph	45 mph
West Broadway St	Cibola St – "C" St	30 mph	30 mph
West Broadway St	"C" St – "J" St	30 mph	30 mph
West Broadway St	"J" St – Needles Hwy	35 mph	35 mph
Cibola St	"D" St – West Broadway St	unposted	25 mph
Coronado St	Erin Dr – Lillyhill Dr	25mph/unposted	25 mph
"J" St	Coronado St – Morris St	35 mph 25 mph at Park(1)	30 mph 25 mph at Park(1)
"J" St	Morris St – West Broadway St	35 mph	35 mph
North "K" St	Front St – Needles Bridge	25 mph	30 mph
Lillyhill Dr	Parkway Dr – "D" St	25 mph/unposted	30 mph
National Trails Hwy	West Park Rd – Needles Hwy	45 mph	45 mph
Needles Hwy	North "K" St – West Broadway St	25 mph	30 mph
Needles Hwy	West Broadway St – I-40 WB Ramps	25 mph/35 mph	30 mph
Needles Hwy	I-40 WB Ramps – Terrace Dr	50 mph	50 mph
Needles Hwy	Terrace Dr – NCL (Budweiser Rd)	50 mph/55 mph	55 mph
West Park Rd	National Trails Hwy – Needles Hwy	35 mph/45 mph	55 mph
River Rd	North "K" St – Jack Smith Park	25 mph	30 mph
San Clemente St	Clary Dr – Paseo Del Rey St	unposted	30 mph
San Clemente St	Paseo Del Rey St – US 95	25 mph	40 mph

Legend
(1) – When Children are Present

DEPARTMENT OF TRANSPORTATION
DISTRICT 8
DIVISION OF TRAFFIC OPERATIONS (MS-716)
464 W. FOURTH STREET, 6TH FLOOR
SAN BERNARDINO, CA 92401
PHONE (909) 383-4226
FAX (909) 383-6445
TTY 711
www.dot.ca.gov/dist8

Flex your power!
Be energy efficient!

June 19, 2012

File: SBD-95- 56.62/57.275

Ms. Jeana Darlington
Department of Public Works, City Engineer
City of Needles
817 3rd Street
Needles, CA 92363

Dear Ms. Darlington:

Enclosed is a certified copy of the speed zone survey for State Route 95 through the City of Needles in the County of San Bernardino, for your files.

The study indicates that the posted speed limit of 40 mph from P.M. 56.62, 500 feet south of Morgan Street, to P.M. 57.275, east junction Route 40 remains in place.

Should you have any questions, please call me at (909) 383-4226 or Shokouh Malakouti of my staff at 909-383-4084.

Sincerely,

MANUEL C. JABSON III
Office Chief
Traffic Operations Region A

City of Needles
School Area Traffic Controls
Sheet 1 of 16

SW24-1(CA)

School Warning Assembly A (CA)

SW24-2(CA)

School Crosswalk Warning Assembly B (CA)

SR4-1(CA)

School Speed Limit Assembly C (CA)

SW24-3(CA)

School Advance Warning Assembly D (CA)

W16-2aP

S4-2P

W13-1P

S5-2

S1-1

W16-9P

R2-1

S5-3

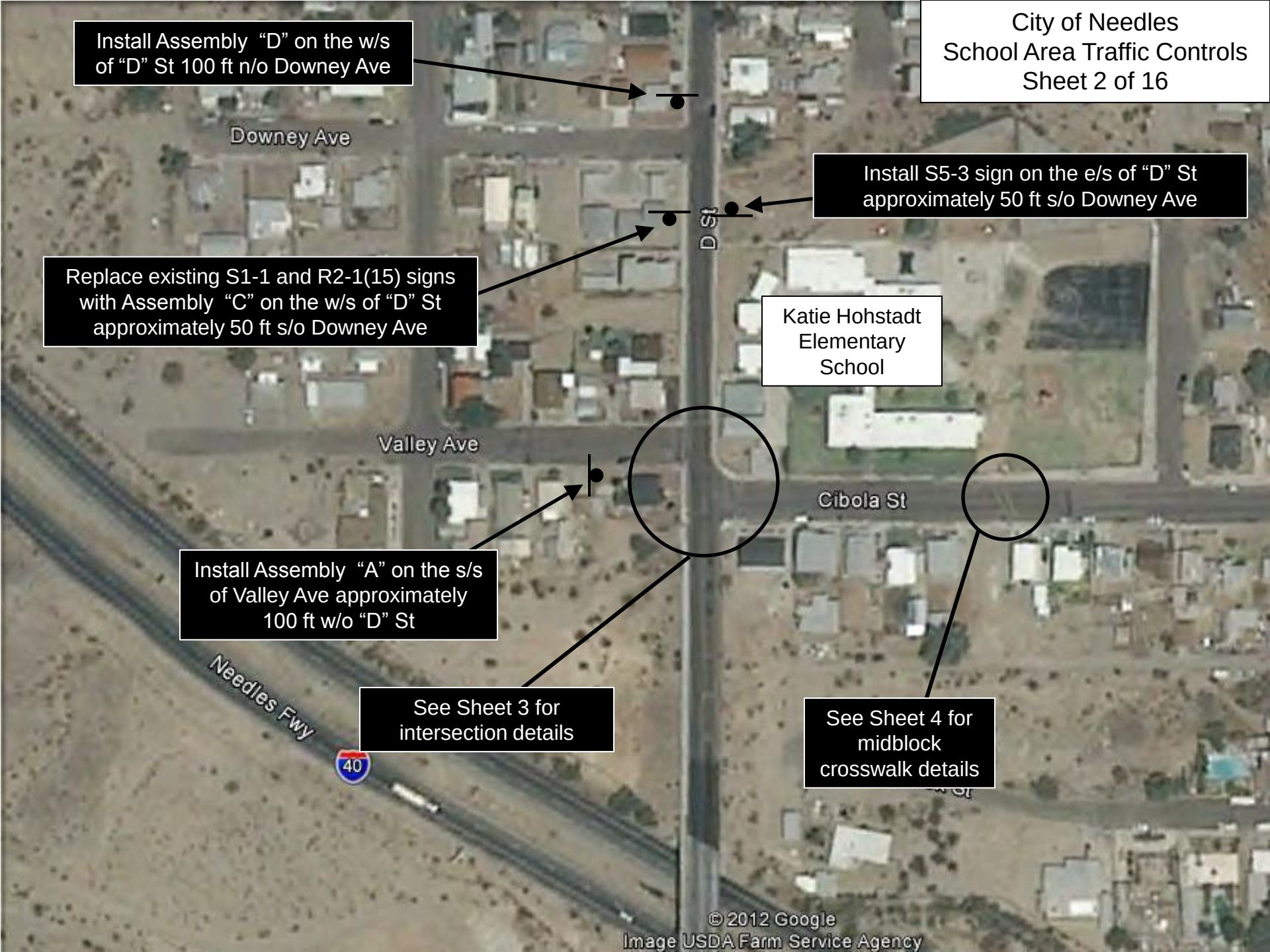
W66

W66A

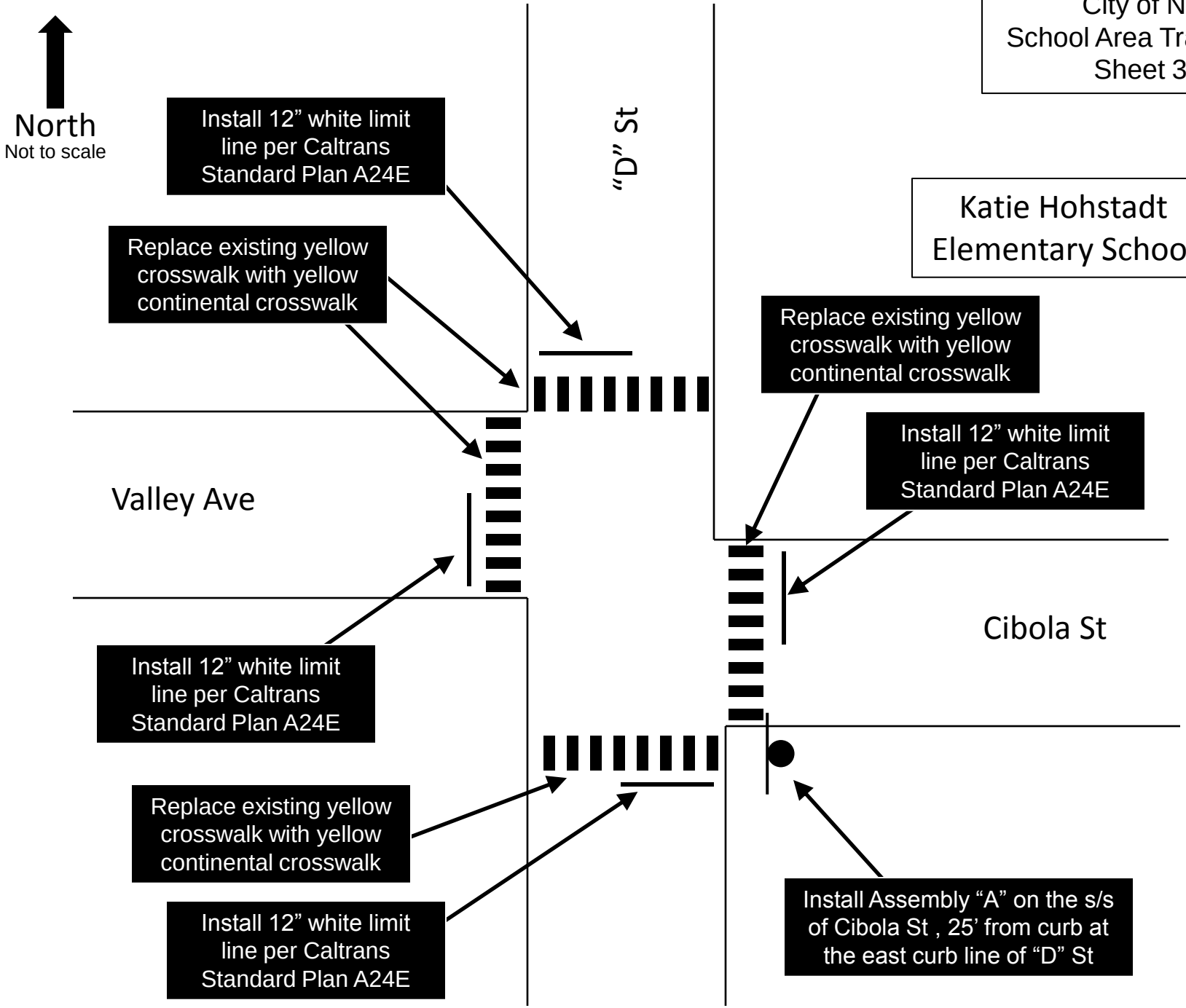
Prepared by: Jack Rydell 4/20/12
Jack Rydell Date

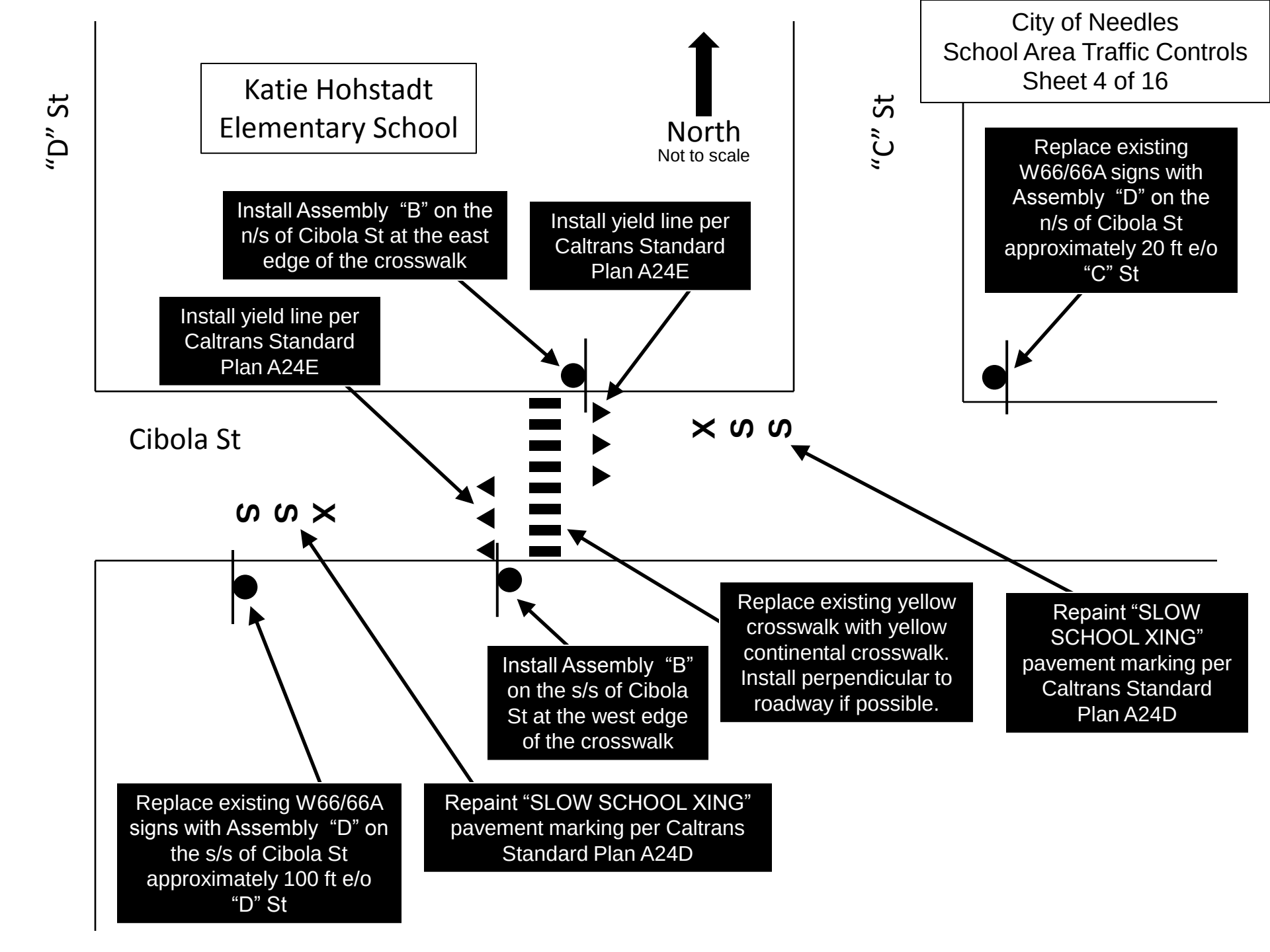
Construction Notes

1. All signs and markings shall be consistent with the requirements of the 2012 or current edition of the CA MUTCD.
2. Continental crosswalks shall consist of longitudinal bars placed parallel to the direction of travel. Bars shall be 2'-0" wide, 10'-0" long , and spaced at 5'-0" on center.
3. Limit lines and yield lines shall be placed 4'-0" in advance of leading edge of crosswalk.
4. Remove and replace all existing striping and markings as necessary to accommodate new striping and markings.
5. "SLOW SCHOOL XING" pavement markings shall be yellow, placed in accordance with the CA MUTCD, and with the word "XING" at least 100 feet in advance of the school crosswalk.
6. All school traffic control signs shall be fluorescent yellow-green.
7. Assembly C speed limits shall be 25 mph.
8. Remove any additional existing school traffic controls not shown on these sketches.

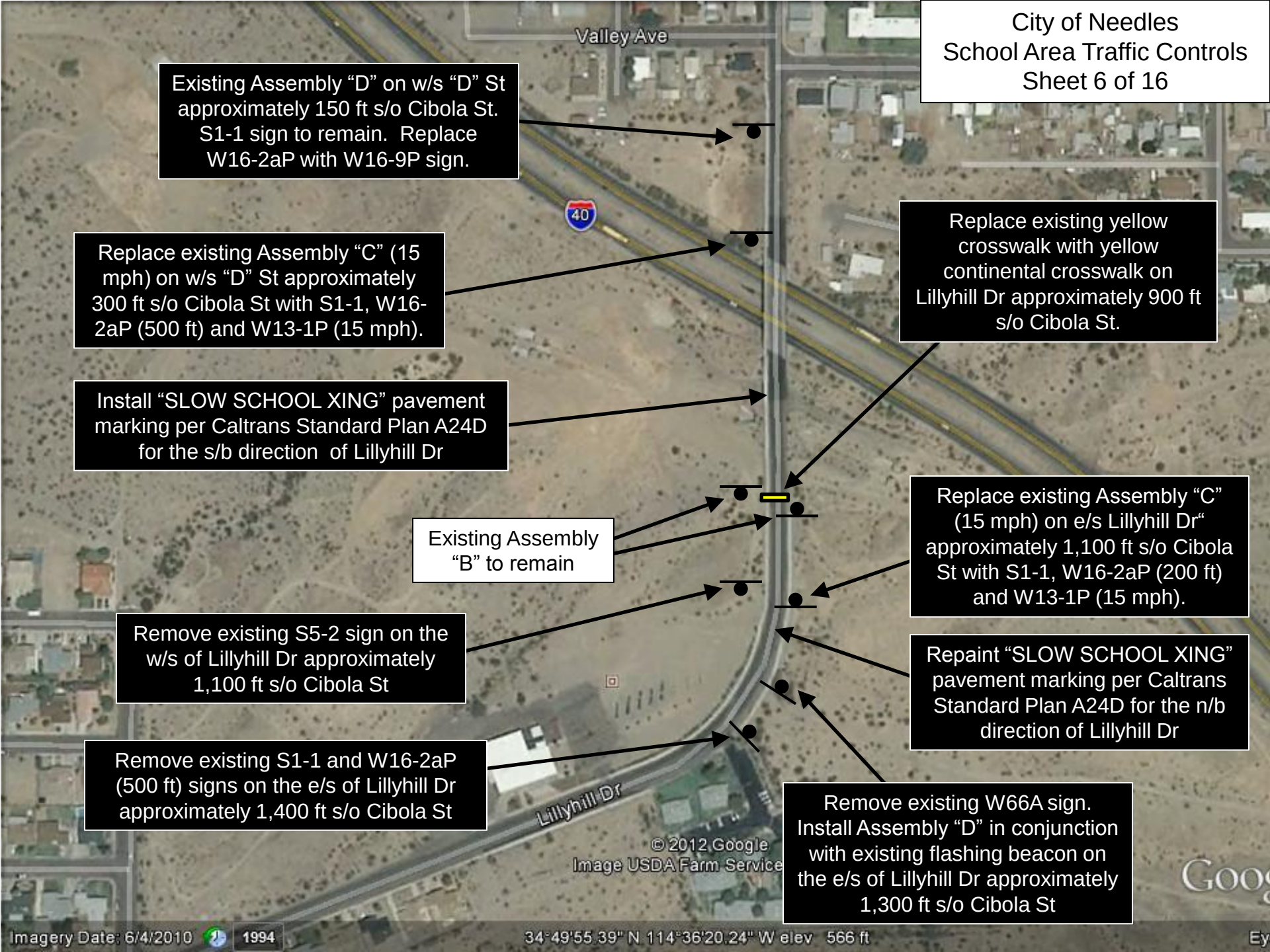

City of Needles
School Area Traffic Controls
Sheet 2 of 16
Install Assembly "D" on the w/s of "D" St 100 ft n/o Downey Ave
Downey Ave
Install S5-3 sign on the e/s of "D" St approximately 50 ft s/o Downey Ave
D St
Replace existing S1-1 and R2-1(15) signs with Assembly "C" on the w/s of "D" St approximately 50 ft s/o Downey Ave
Katie Hohstadt Elementary School
Valley Ave
Cibola St
Install Assembly "A" on the s/s of Valley Ave approximately 100 ft w/o "D" St
Needles Fwy
40
See Sheet 3 for intersection details
See Sheet 4 for midblock crosswalk details
© 2012 Google
Image USDA Farm Service Agency

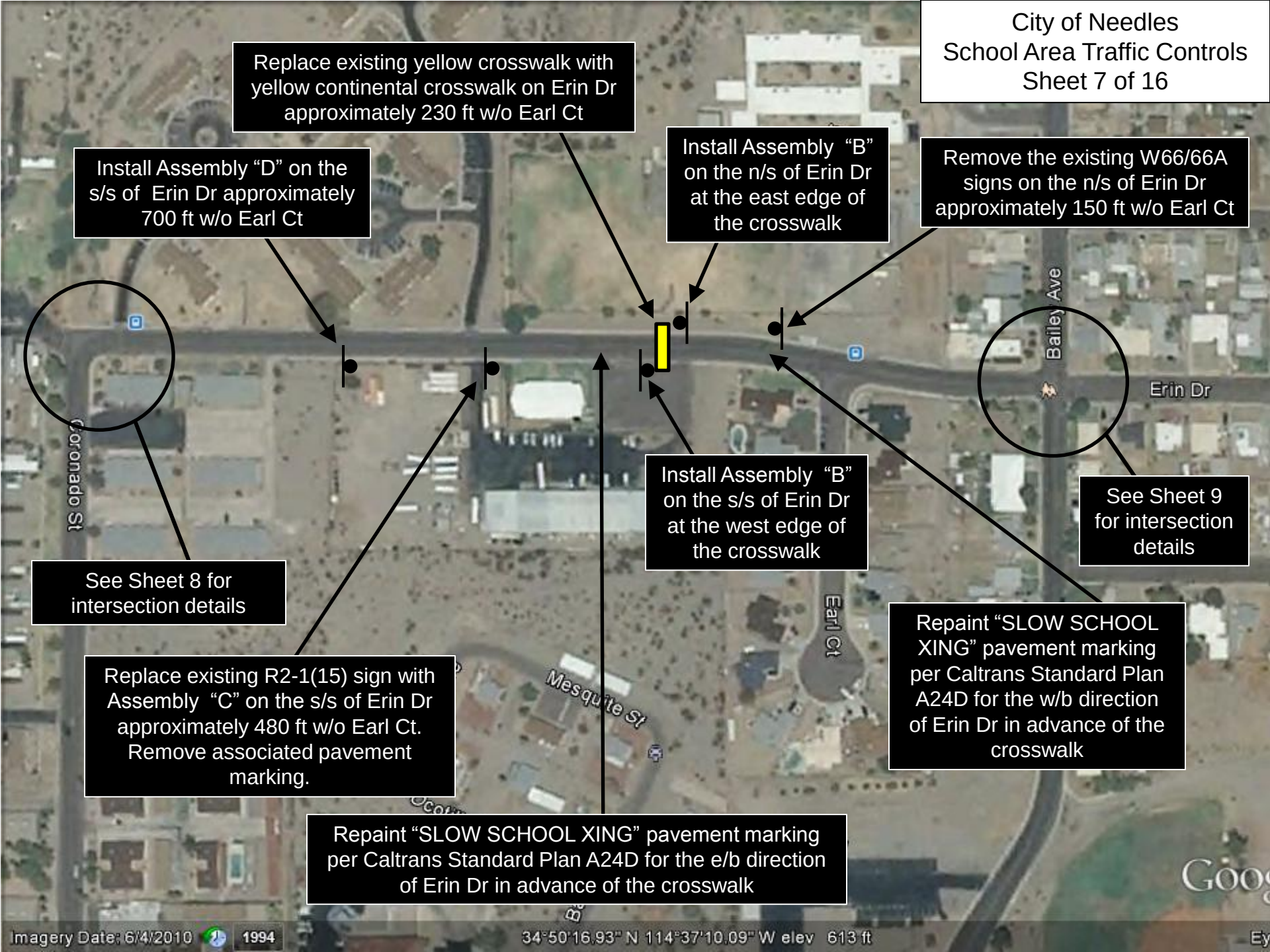
City of Needles
School Area Traffic Controls
Sheet 3 of 16



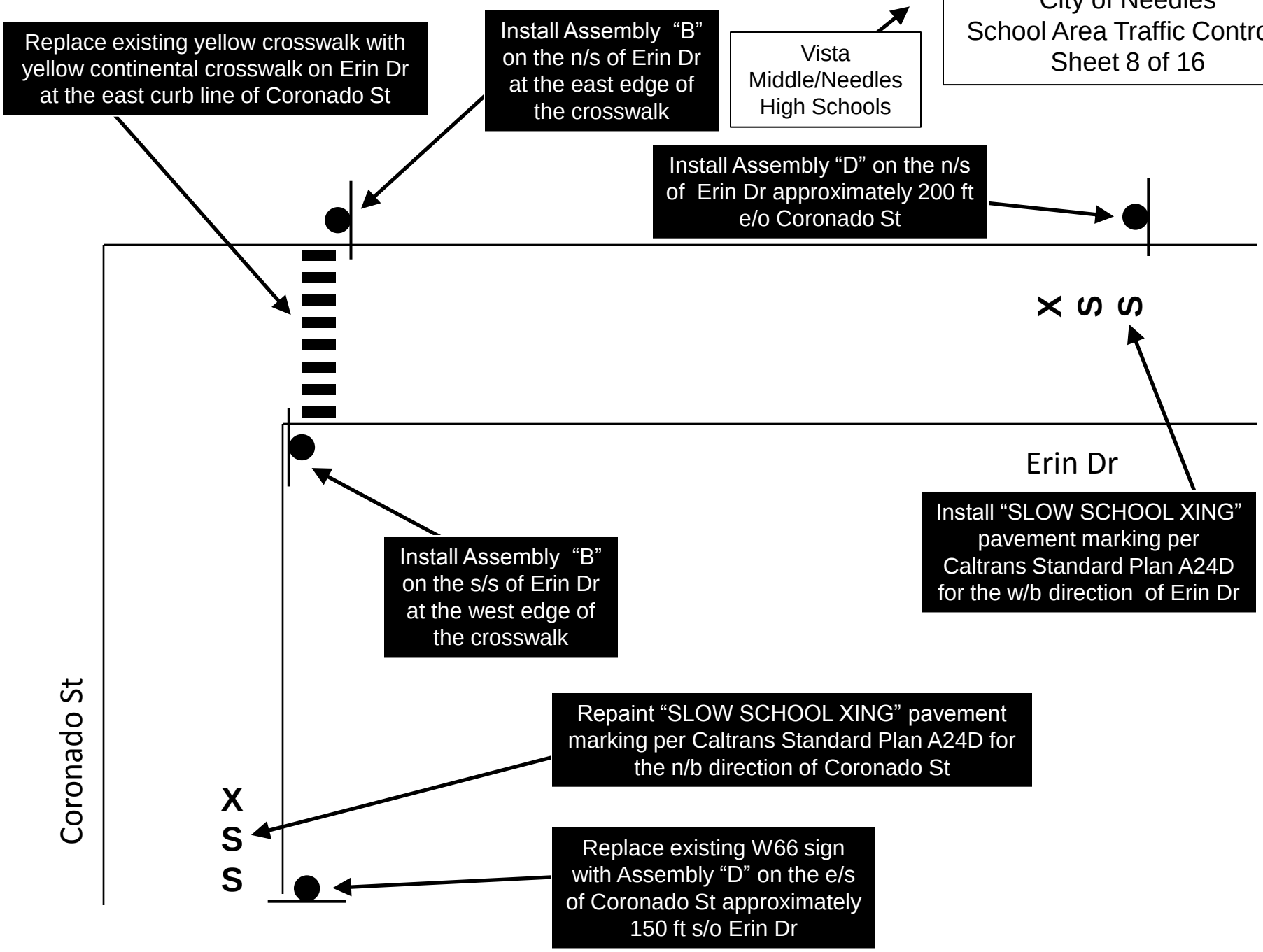

City of Needles
School Area Traffic Controls
Sheet 4 of 16
Katie Hohstadt
Elementary School
North
Not to scale
"D" St
"C" St
Cibola St
Install Assembly "B" on the n/s of Cibola St at the east edge of the crosswalk
Install yield line per Caltrans Standard Plan A24E
Install yield line per Caltrans Standard Plan A24E
Replace existing W66/66A signs with Assembly "D" on the n/s of Cibola St approximately 20 ft e/o "C" St
S S X
X S S
Replace existing yellow crosswalk with yellow continental crosswalk. Install perpendicular to roadway if possible.
Repaint "SLOW SCHOOL XING" pavement marking per Caltrans Standard Plan A24D
Install Assembly "B" on the s/s of Cibola St at the west edge of the crosswalk
Replace existing W66/66A signs with Assembly "D" on the s/s of Cibola St approximately 100 ft e/o "D" St
Repaint "SLOW SCHOOL XING" pavement marking per Caltrans Standard Plan A24D

City of Needles
School Area Traffic Controls
Sheet 5 of 16
Downey Ave
F St
D St
Valley Ave
Cibola St
Desnok St
Remove the existing R2-1 (15) and S4-2P signs on the n/s of Cibola St approximately 100 ft w/o "C" St
Remove the existing S3-1 sign on the n/s of Cibola St approximately 130 ft e/o "C" St
Katie Hohstadt Elementary School
Install S5-3 sign on the w/s of "D" St approximately 100 ft s/o Cibola St
Install Assembly "A" on the n/s of Cibola St at the west curb line of "C" St
Replace existing Assembly "A" with Assembly "C" on the e/s of "D" St approximately 100 ft s/o Cibola St
Remove the existing "SLOW SCHOOL XING" pavement markings for n/b "D" St approximately 250 ft s/o Cibola St
© 2012
Image USDA Farm Service Agency

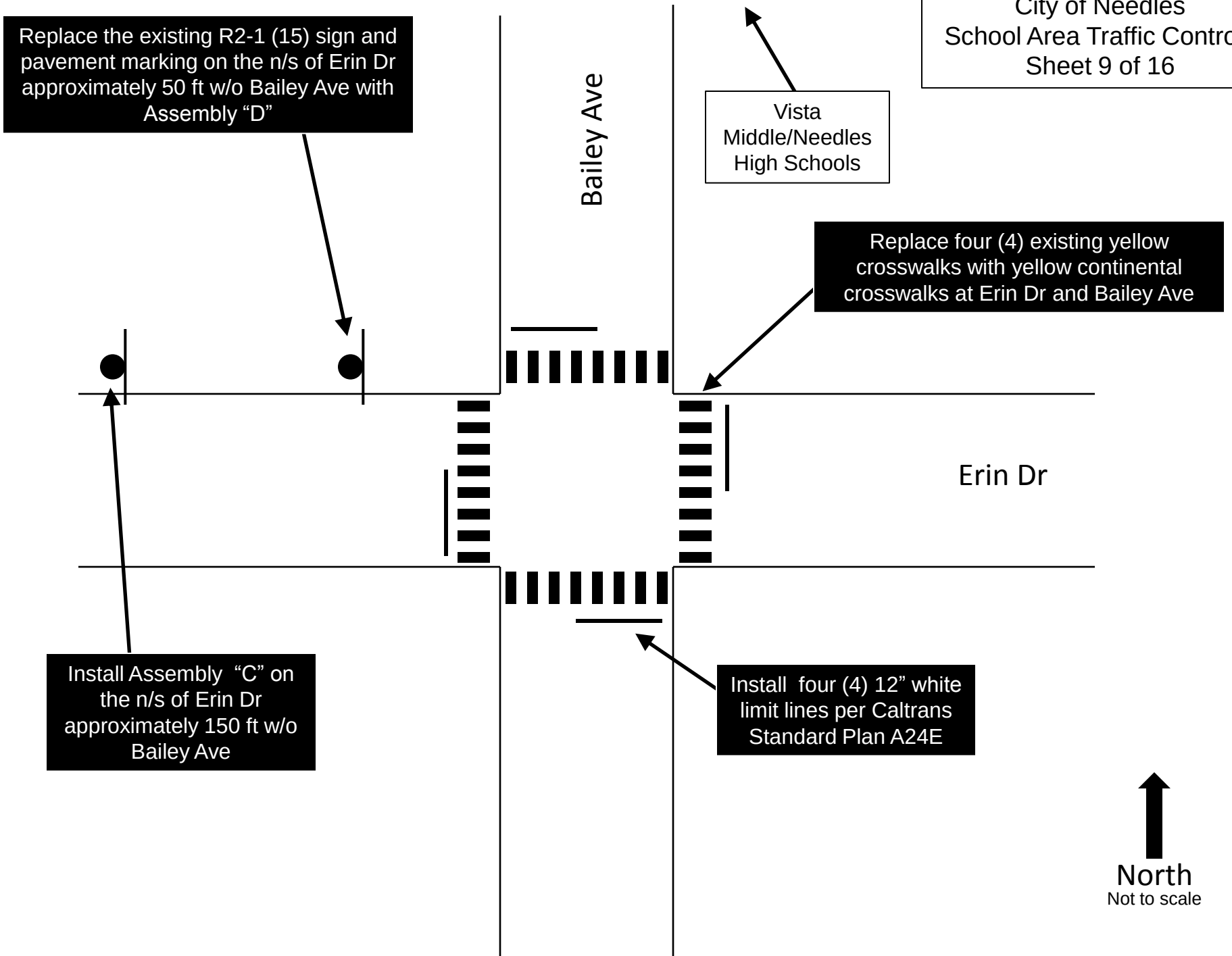

City of Needles
School Area Traffic Controls
Sheet 6 of 16
Valley Ave
40
Existing Assembly “D” on w/s “D” St approximately 150 ft s/o Cibola St. S1-1 sign to remain. Replace W16-2aP with W16-9P sign.
Replace existing Assembly “C” (15 mph) on w/s “D” St approximately 300 ft s/o Cibola St with S1-1, W16-2aP (500 ft) and W13-1P (15 mph).
Replace existing yellow crosswalk with yellow continental crosswalk on Lillyhill Dr approximately 900 ft s/o Cibola St.
Install “SLOW SCHOOL XING” pavement marking per Caltrans Standard Plan A24D for the s/b direction of Lillyhill Dr
Existing Assembly “B” to remain
Replace existing Assembly “C” (15 mph) on e/s Lillyhill Dr“ approximately 1,100 ft s/o Cibola St with S1-1, W16-2aP (200 ft) and W13-1P (15 mph).
Remove existing S5-2 sign on the w/s of Lillyhill Dr approximately 1,100 ft s/o Cibola St
Repaint “SLOW SCHOOL XING” pavement marking per Caltrans Standard Plan A24D for the n/b direction of Lillyhill Dr
Remove existing S1-1 and W16-2aP (500 ft) signs on the e/s of Lillyhill Dr approximately 1,400 ft s/o Cibola St
Lillyhill Dr
Remove existing W66A sign. Install Assembly “D” in conjunction with existing flashing beacon on the e/s of Lillyhill Dr approximately 1,300 ft s/o Cibola St
© 2012 Google
Image USDA Farm Service
Imagery Date: 6/4/2010
1994
34°49'55.39" N 114°36'20.24" W elev 566 ft


City of Needles
School Area Traffic Controls
Sheet 7 of 16
Replace existing yellow crosswalk with yellow continental crosswalk on Erin Dr approximately 230 ft w/o Earl Ct
Install Assembly "D" on the s/s of Erin Dr approximately 700 ft w/o Earl Ct
Install Assembly "B" on the n/s of Erin Dr at the east edge of the crosswalk
Remove the existing W66/66A signs on the n/s of Erin Dr approximately 150 ft w/o Earl Ct
Bailey Ave
Erin Dr
Coronado St
See Sheet 8 for intersection details
Install Assembly "B" on the s/s of Erin Dr at the west edge of the crosswalk
See Sheet 9 for intersection details
Earl Ct
Repaint "SLOW SCHOOL XING" pavement marking per Caltrans Standard Plan A24D for the w/b direction of Erin Dr in advance of the crosswalk
Replace existing R2-1(15) sign with Assembly "C" on the s/s of Erin Dr approximately 480 ft w/o Earl Ct. Remove associated pavement marking.
Mesquite St
Repaint "SLOW SCHOOL XING" pavement marking per Caltrans Standard Plan A24D for the e/b direction of Erin Dr in advance of the crosswalk
Imagery Date: 6/4/2010
1994
34°50'16.93" N 114°37'10.09" W elev 613 ft

City of Needles
School Area Traffic Controls
Sheet 8 of 16

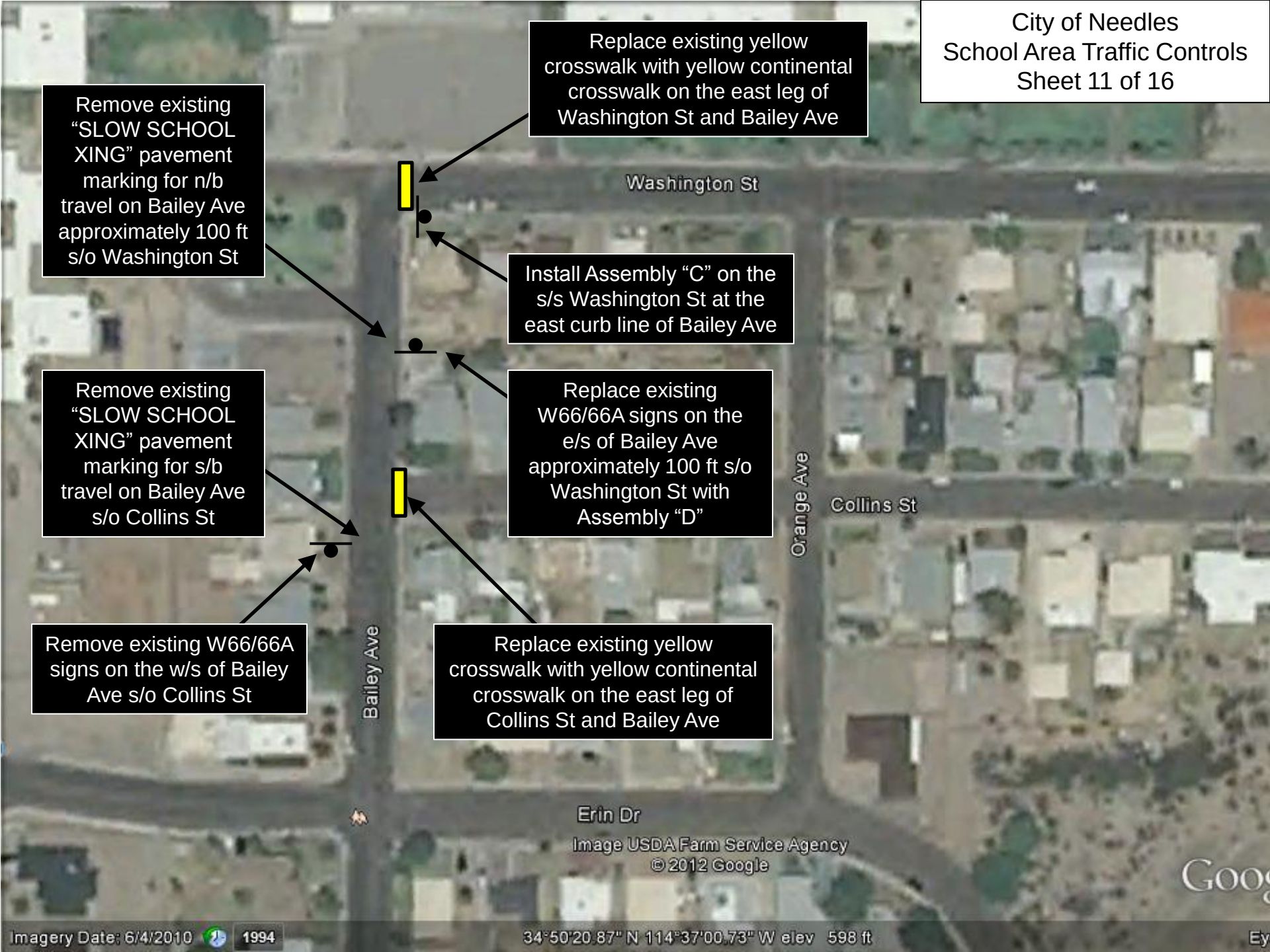


City of Needles
School Area Traffic Controls
Sheet 9 of 16

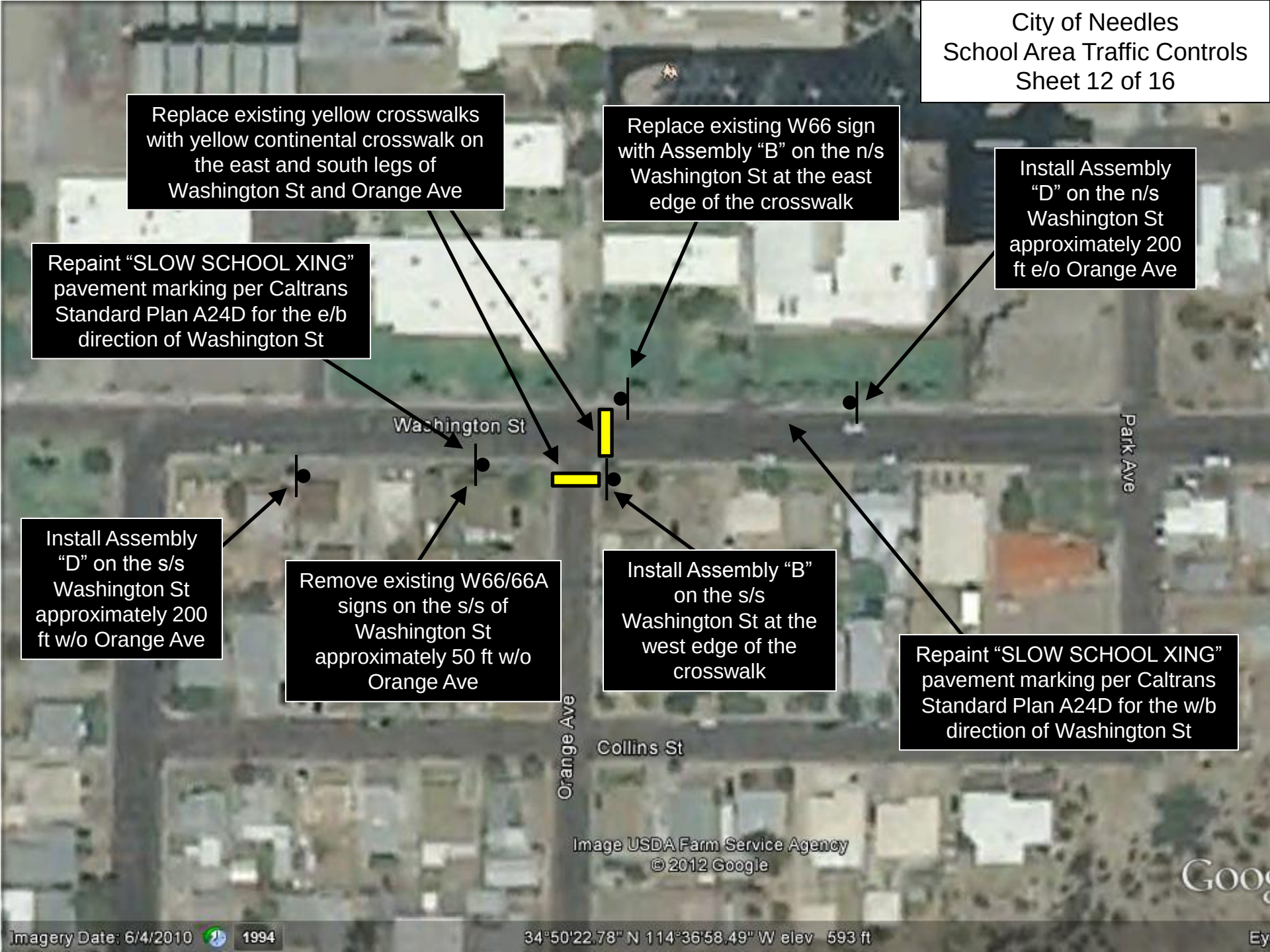


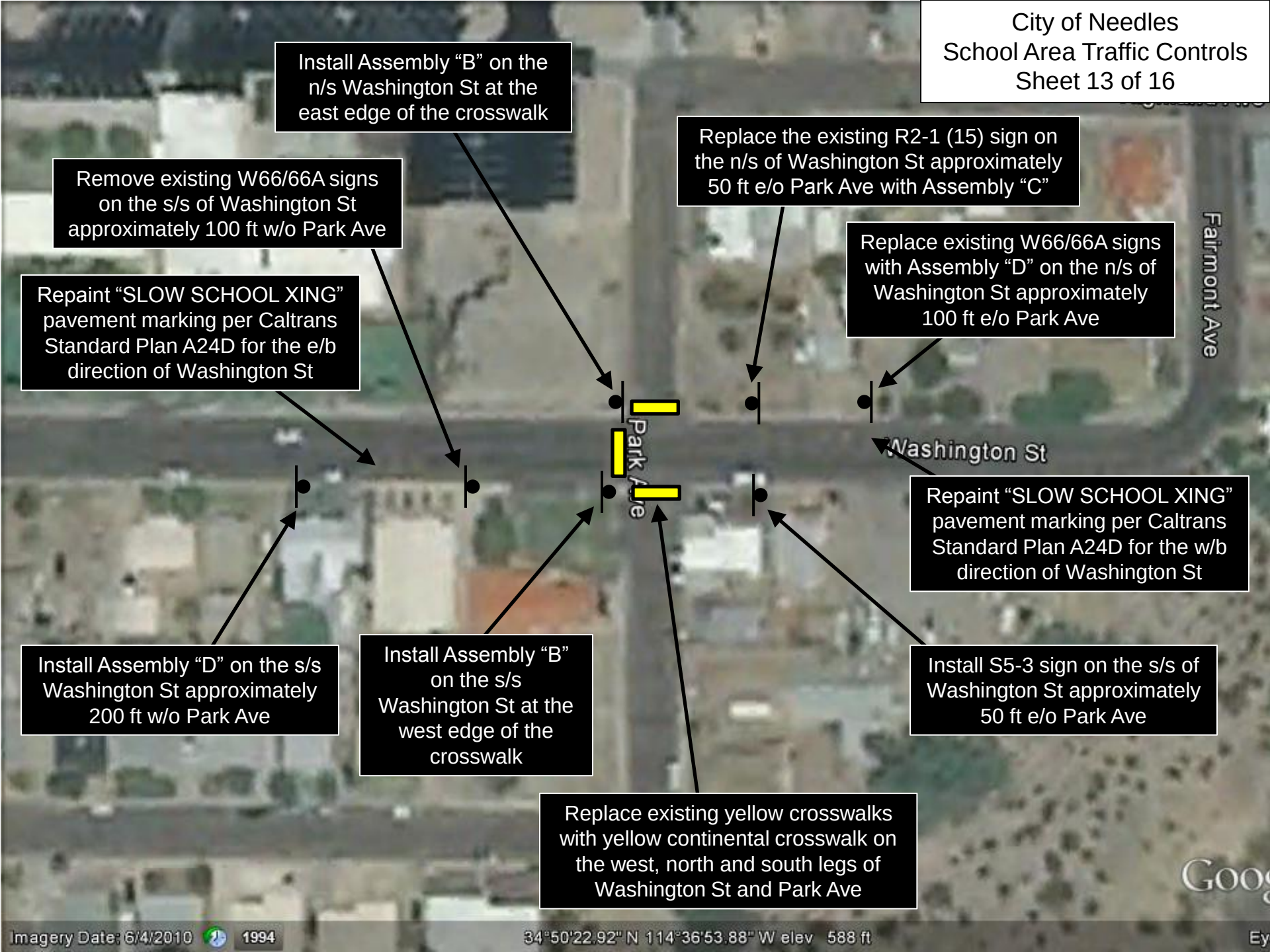
City of Needles
School Area Traffic Controls
Sheet 10 of 16

City of Needles
School Area Traffic Controls
Sheet 11 of 16

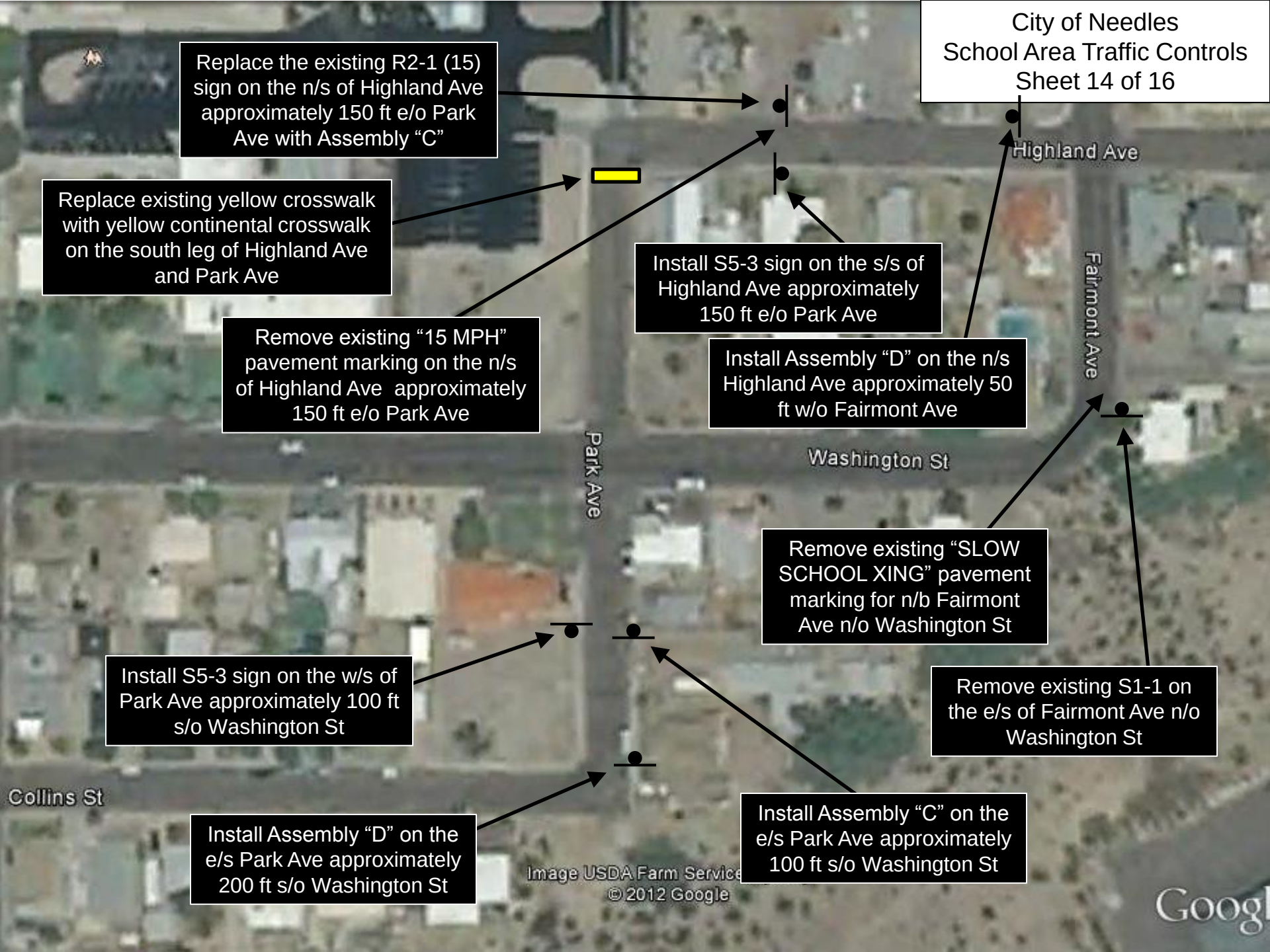


City of Needles
School Area Traffic Controls
Sheet 12 of 16




City of Needles
School Area Traffic Controls
Sheet 13 of 16
Install Assembly “B” on the n/s Washington St at the east edge of the crosswalk
Remove existing W66/66A signs on the s/s of Washington St approximately 100 ft w/o Park Ave
Repaint “SLOW SCHOOL XING” pavement marking per Caltrans Standard Plan A24D for the e/b direction of Washington St
Replace the existing R2-1 (15) sign on the n/s of Washington St approximately 50 ft e/o Park Ave with Assembly “C”
Replace existing W66/66A signs with Assembly “D” on the n/s of Washington St approximately 100 ft e/o Park Ave
Fairmont Ave
Park Ave
Washington St
Repaint “SLOW SCHOOL XING” pavement marking per Caltrans Standard Plan A24D for the w/b direction of Washington St
Install Assembly “D” on the s/s Washington St approximately 200 ft w/o Park Ave
Install Assembly “B” on the s/s Washington St at the west edge of the crosswalk
Install S5-3 sign on the s/s of Washington St approximately 50 ft e/o Park Ave
Replace existing yellow crosswalks with yellow continental crosswalk on the west, north and south legs of Washington St and Park Ave
Imagery Date: 6/4/2010
1994
34°50'22.92" N 114°36'53.88" W elev 588 ft

City of Needles
School Area Traffic Controls
Sheet 14 of 16



City of Needles
School Area Traffic Controls
Sheet 15 of 16

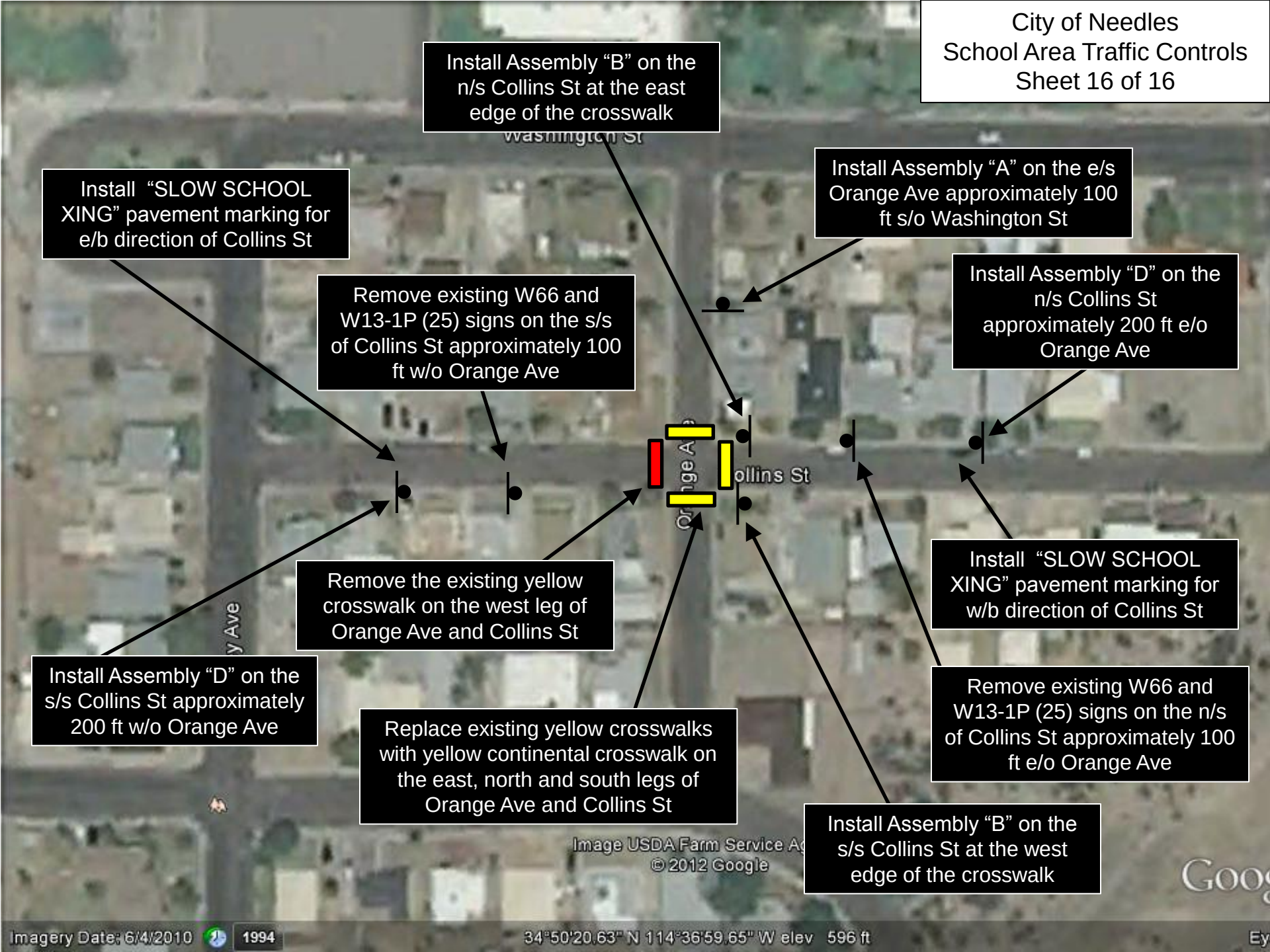
Replace existing W66/66A signs with Assembly "D" on the w/s of Fairmont Ave approximately 180 ft n/o Highland Ave

Repaint "SLOW SCHOOL XING" pavement marking per Caltrans Standard Plan A24D for the s/b direction of Fairmont Ave

Install Assembly "B" on the w/s Fairmont Ave at the north edge of the crosswalk

Replace existing yellow crosswalks with yellow continental crosswalk on the west, north and south legs of Highland Ave and Fairmont Ave

Note: There is currently no R1-1 ("STOP") sign for southbound Fairmont Ave at Highland Ave, which is the rationale for installing the Assemblies "B" and "D", as well as repainting the "SLOW SCHOOL XING" pavement marking. If a stop sign is installed at a future date, these two signs and the pavement marking should be removed.


City of Needles
School Area Traffic Controls
Sheet 16 of 16
Install Assembly “B” on the n/s Collins St at the east edge of the crosswalk
Install “SLOW SCHOOL XING” pavement marking for e/b direction of Collins St
Install Assembly “A” on the e/s Orange Ave approximately 100 ft s/o Washington St
Remove existing W66 and W13-1P (25) signs on the s/s of Collins St approximately 100 ft w/o Orange Ave
Install Assembly “D” on the n/s Collins St approximately 200 ft e/o Orange Ave
Remove the existing yellow crosswalk on the west leg of Orange Ave and Collins St
Install “SLOW SCHOOL XING” pavement marking for w/b direction of Collins St
Install Assembly “D” on the s/s Collins St approximately 200 ft w/o Orange Ave
Remove existing W66 and W13-1P (25) signs on the n/s of Collins St approximately 100 ft e/o Orange Ave
Replace existing yellow crosswalks with yellow continental crosswalk on the east, north and south legs of Orange Ave and Collins St
Install Assembly “B” on the s/s Collins St at the west edge of the crosswalk
Image USDA Farm Service Ag
© 2012 Google
Imagery Date: 6/4/2010
1994
34°50'20.63" N 114°36'59.65" W elev 596 ft

FMIT Tribal Transportation Safety Planning
Tuesday, February 7, 2017 at 10:00 am
Tribal Offices, 500 Merriman Street, Needles, CA

Meeting Notes

1. Greeting / Introductions – Sign In Sheet attached
2. Review Meeting Notes from December 7, 2016
    a. SR95 improvements will have roundabouts constructed at Aztec Road and Camp Mohave Road. Concrete medians will be constructed from the Hospital past Hammer Lane (new Walmart) north through Camp Mohave Road.
    b. All Tribal Police, County Sheriff, State Police, US Dept. of Wildlife, and the AZ Game & Fish agencies patrol the Colorado River for safety and accident response.
    c. A street lighting study was done along SR95.
3. Review crash data analysis
    a. Tribal Police Department is currently working on installing a new reporting system called CAPERS. They use CrimeStar now. The new system will be able to capture crash location data.
    b. SR95 at Hulet Avenue has consistent accidents – look for detailed intersection data to determine possible causes.
    c. For California crash data, look at Primary Collision Factor (look up codes) to better determine cause of crash.
    d. Dike Road (Bureau of Reclamation) has speeding and poor road conditions that contribute to high accidents on that road.
    e. Aha Macav Parkway has poor drainage conditions and soft or no shoulders which make this road less safe.
    f. Aztec Road has soft or no shoulders, no left turn lanes at cross streets or entrance into Avi Resort and Casino; Road needs to be divided with median.
    g. Veteran's Parkway has higher accident rates. This road was the original road to the Avi Resort and Casino, used to bypass SR95 traffic, and goes to bridge crossing the Colorado River.

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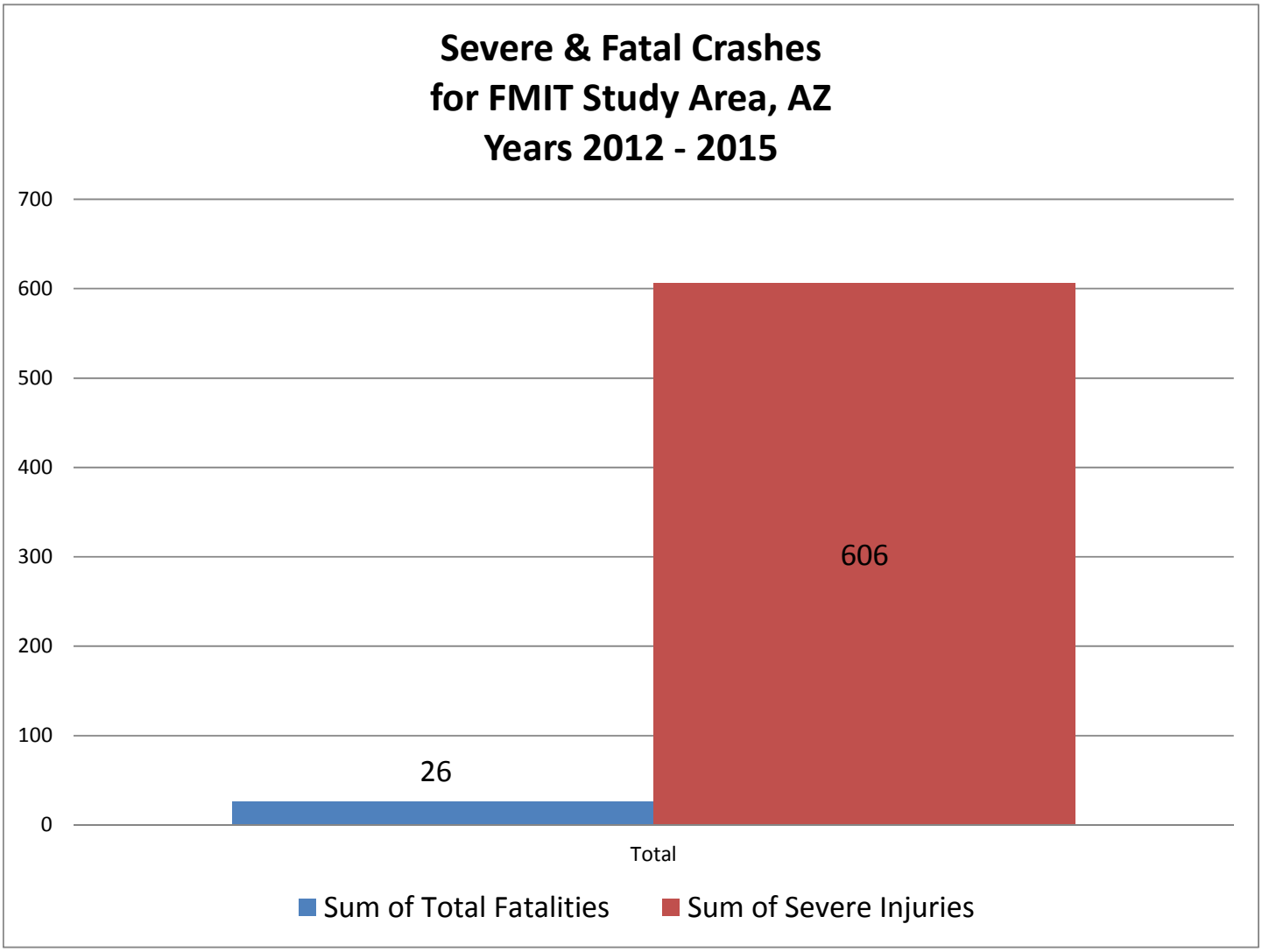
h. Reduce study area to Bullhead City at the north limit, Oatman to the east, and Reservation boundary to the west (no US 95 or SR 163). Area Map revised.

i. Added Tribal Police crash data.

2012-2015 State Data	Mohave Co.	San Bern Co.	Clark Co.	Tribal	FMIT Area
Total Fatalities	26	7	1	2	36
Total Serious Injuries	606	15	2	-	623
Total Injuries	1,221	80	2	51	1,354

Note: All data is within study area only, see Area Map, and Tribal data from 2010-2015.



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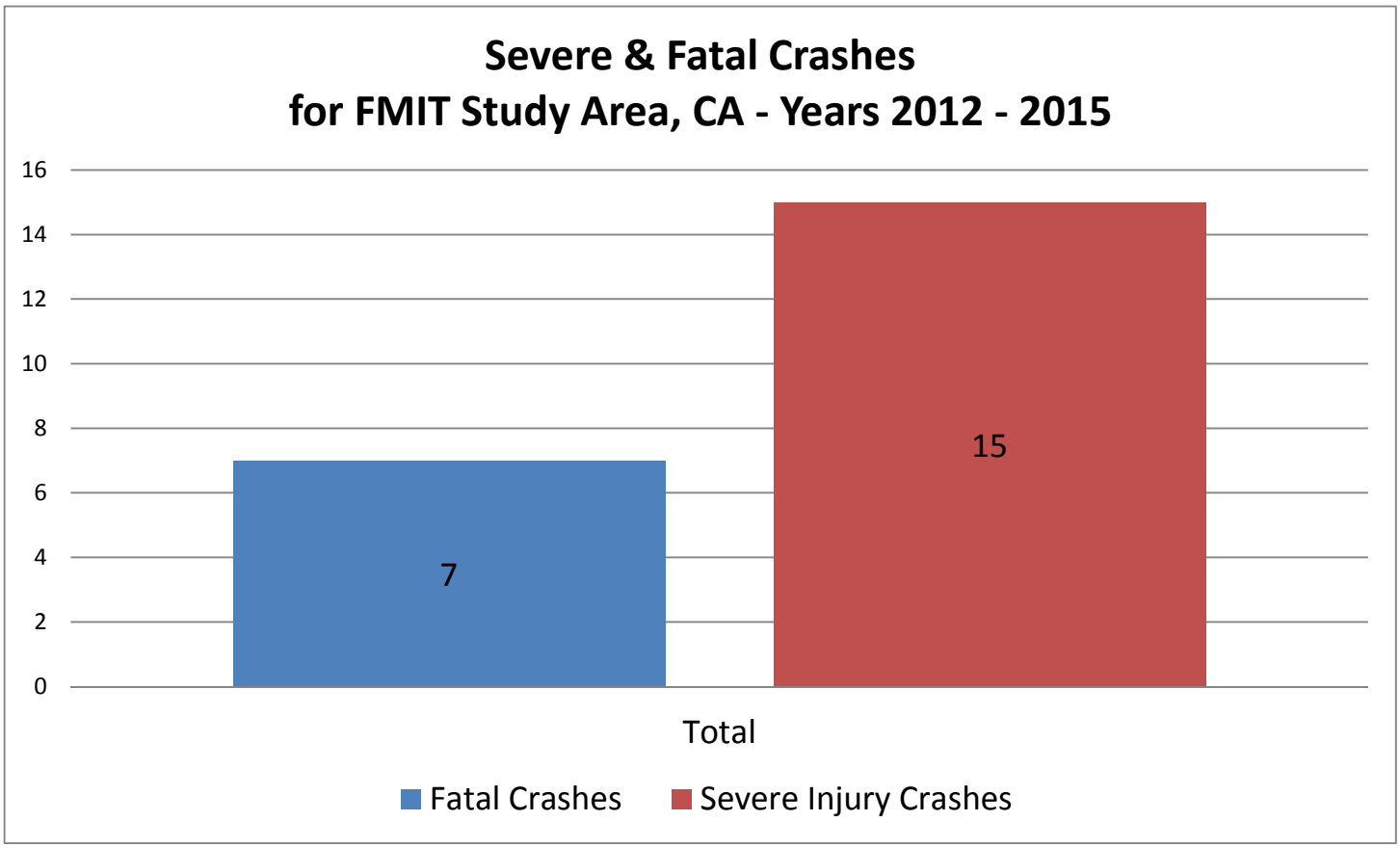

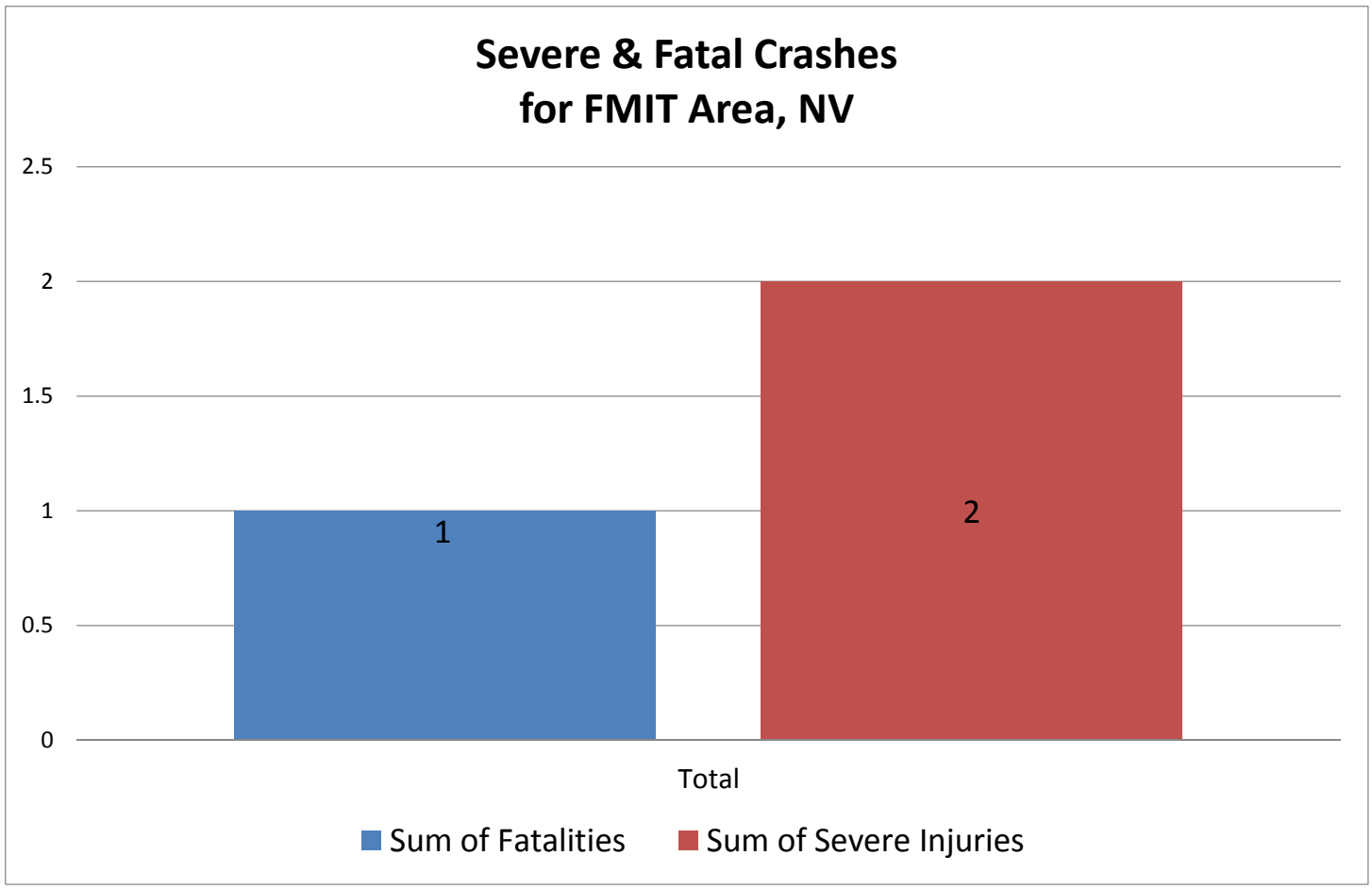

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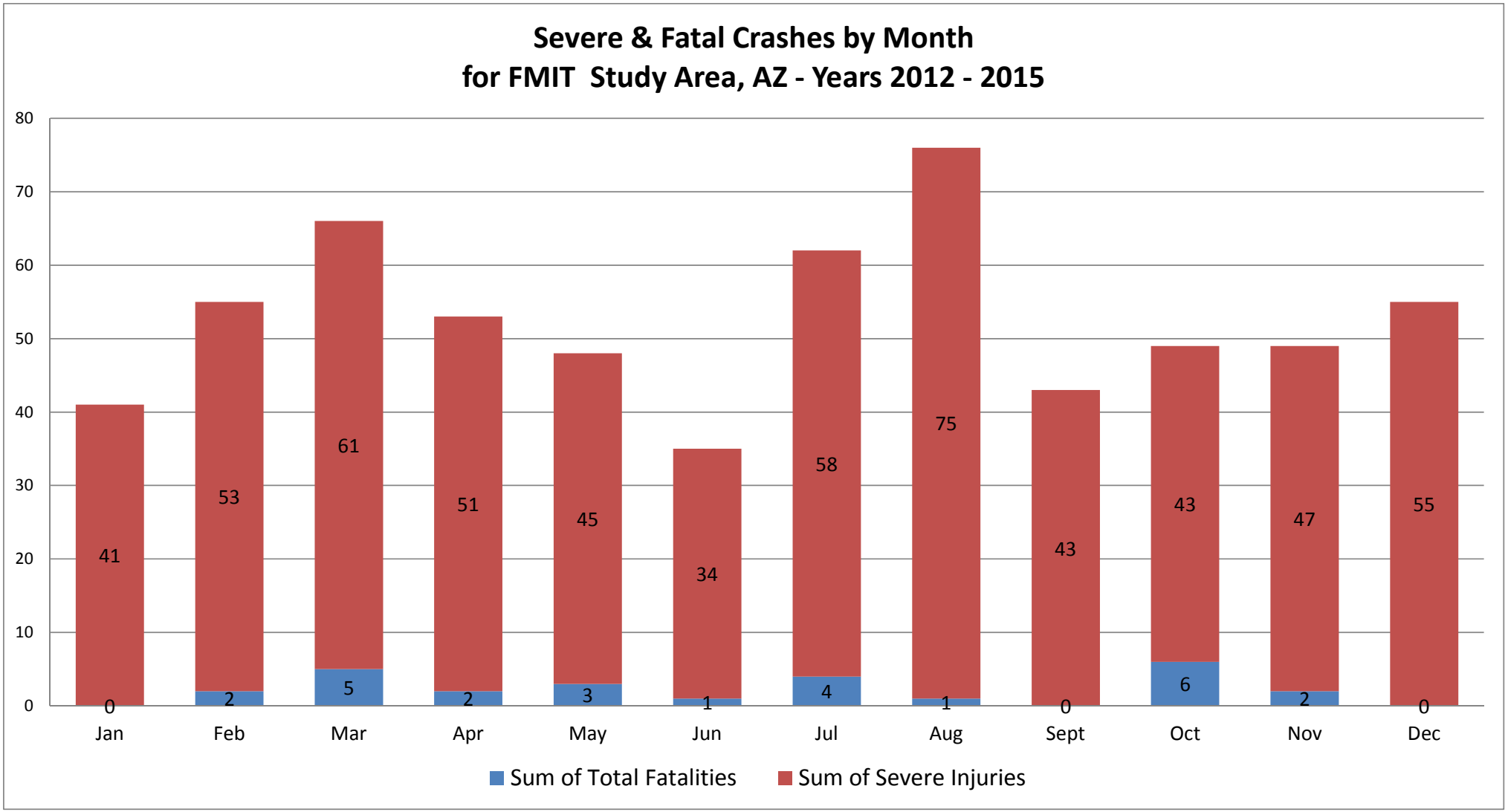
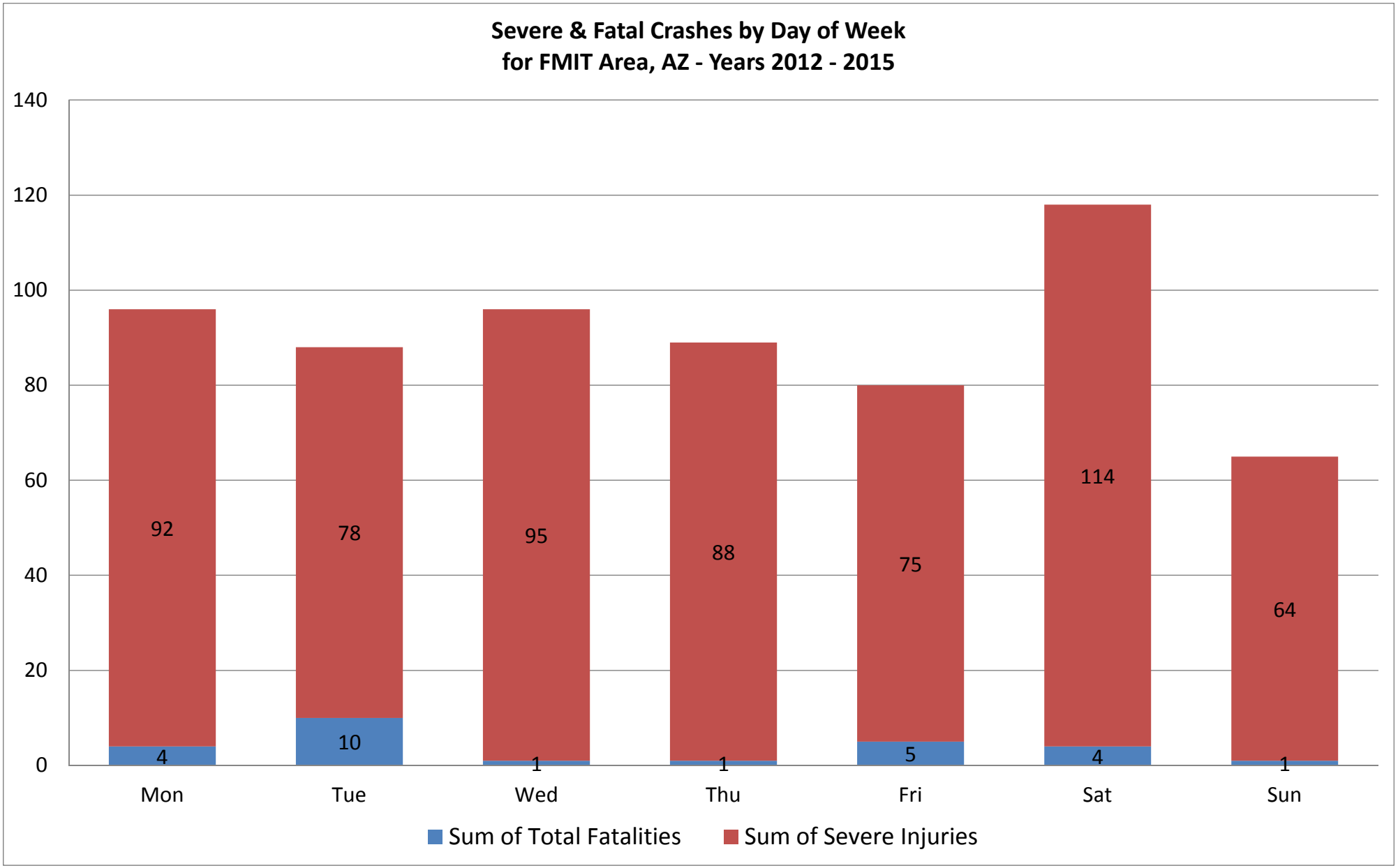
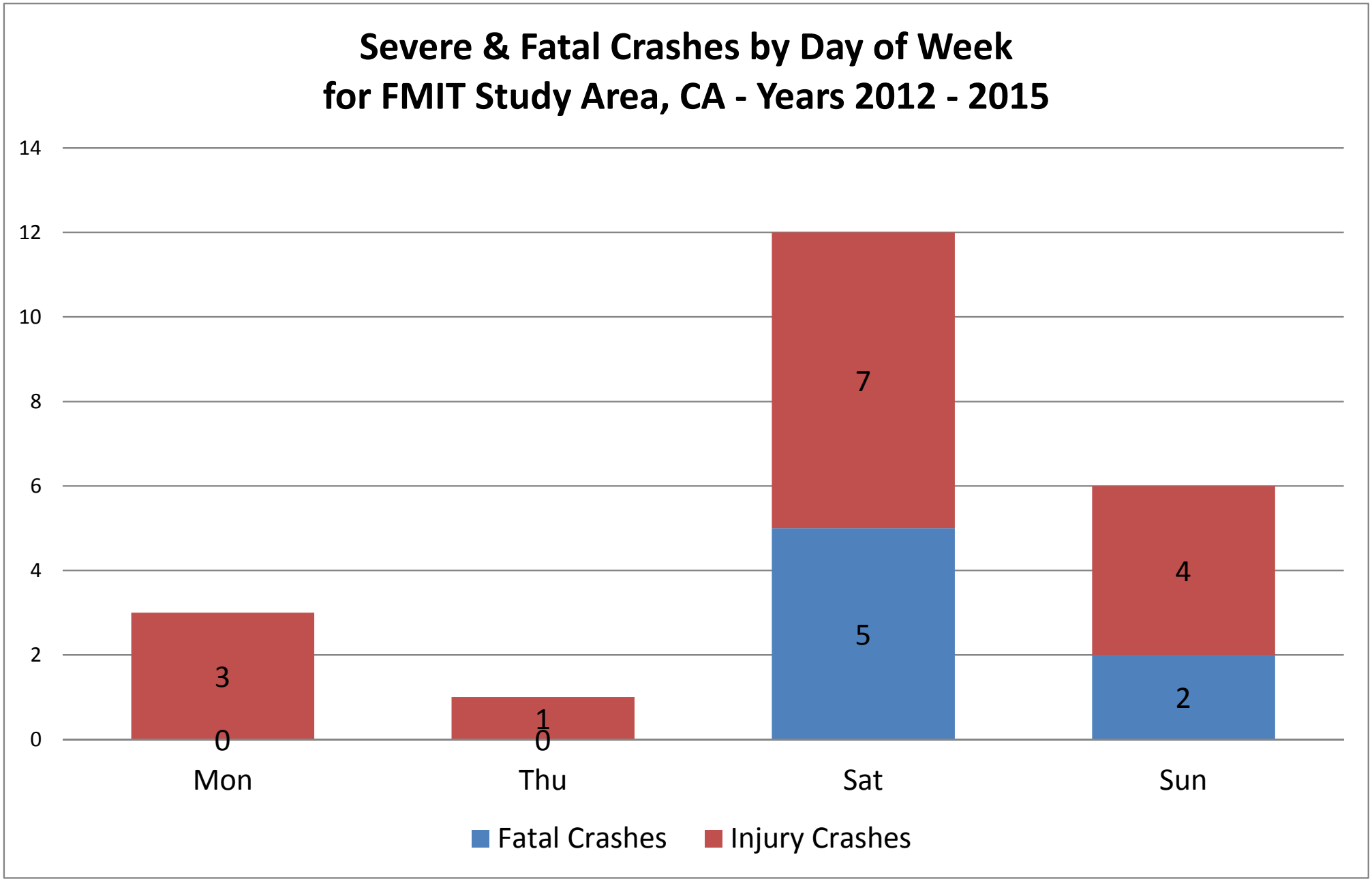
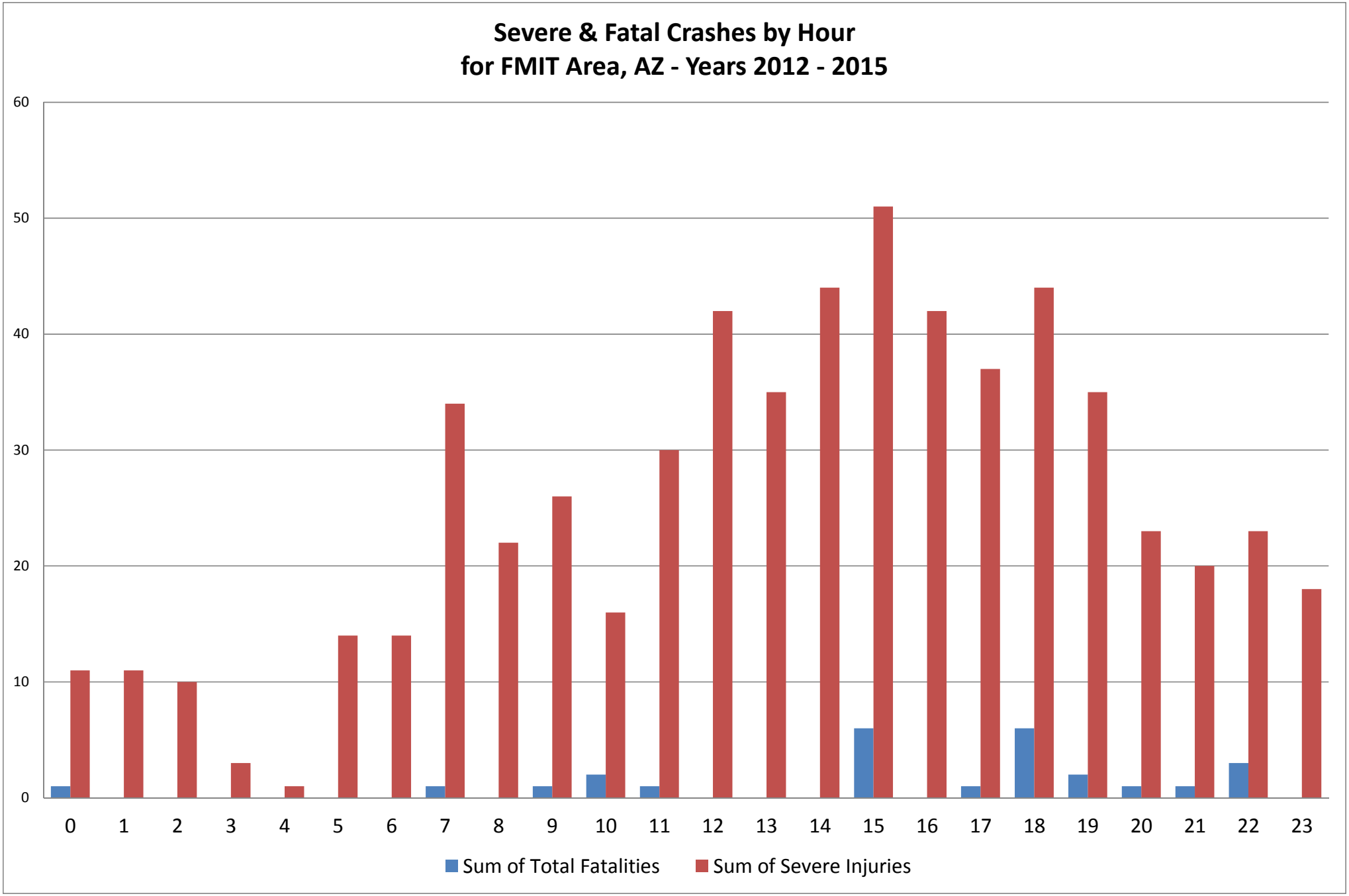
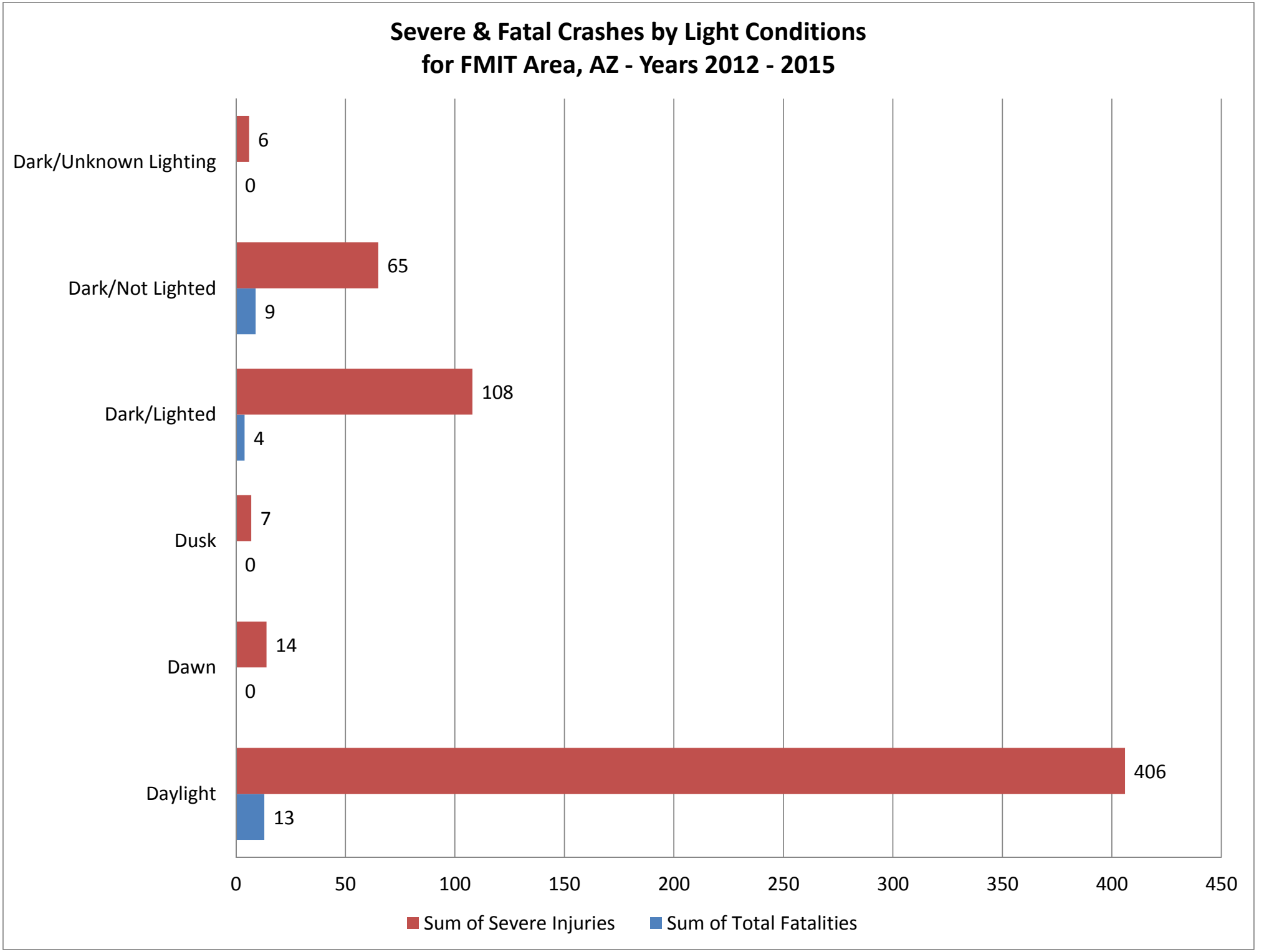
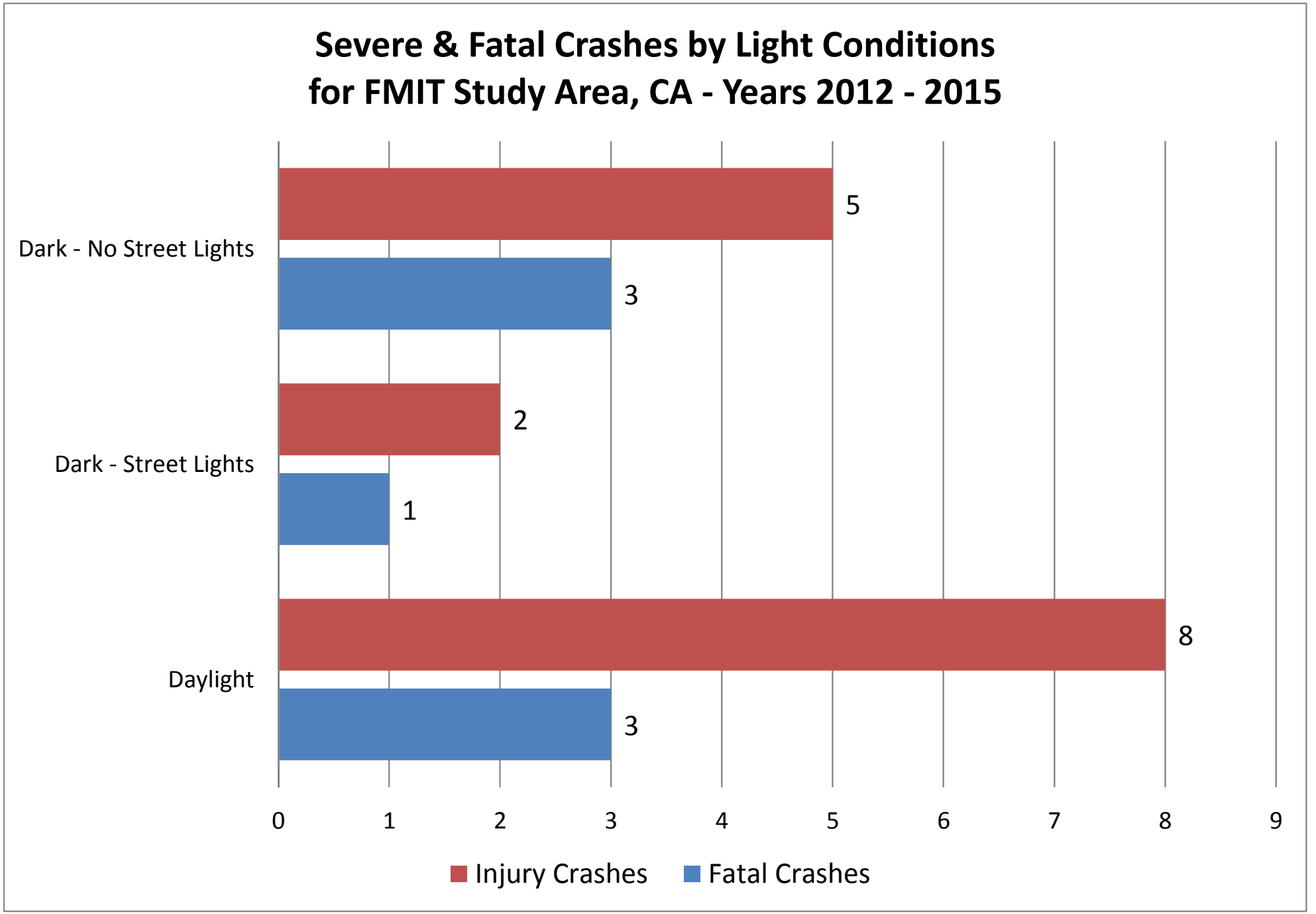

Severe & Fatal Crashes by Month
for FMIT Study Area, AZ - Years 2012 - 2015
80
70
60
50
40
30
20
10
0
41
53
61
51
45
34
58
75
43
43
47
55
0
2
5
2
3
1
4
1
0
6
2
0
Jan
Feb
Mar
Apr
May
Jun
Jul
Aug
Sept
Oct
Nov
Dec
Sum of Total Fatalities
Sum of Severe Injuries

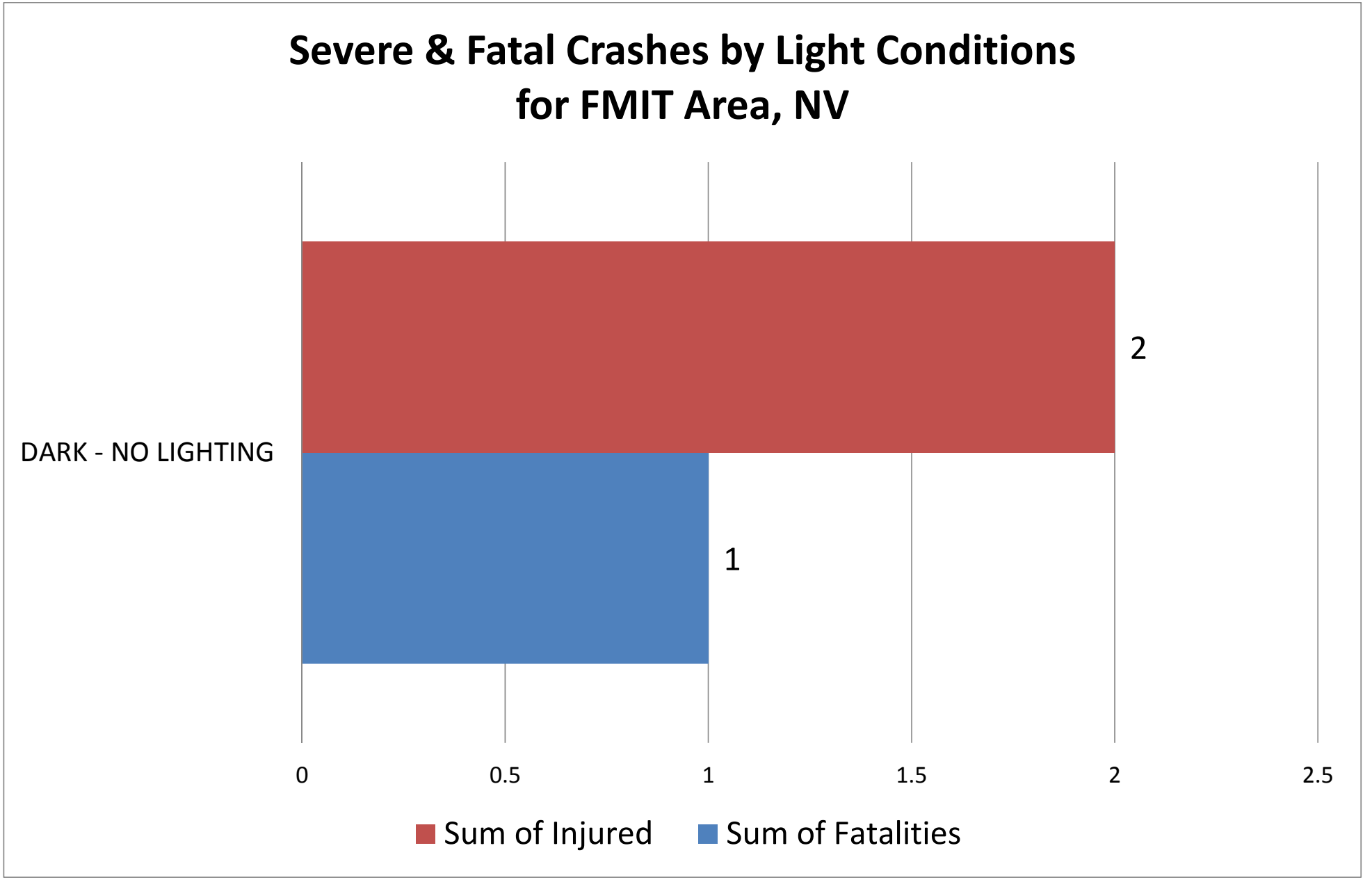

Severe & Fatal Crashes by Day of Week
for FMIT Area, AZ - Years 2012 - 2015
140
120
100
80
60
40
20
0
92
4
78
10
95
1
88
1
75
5
114
4
64
1
Mon
Tue
Wed
Thu
Fri
Sat
Sun
Sum of Total Fatalities
Sum of Severe Injuries

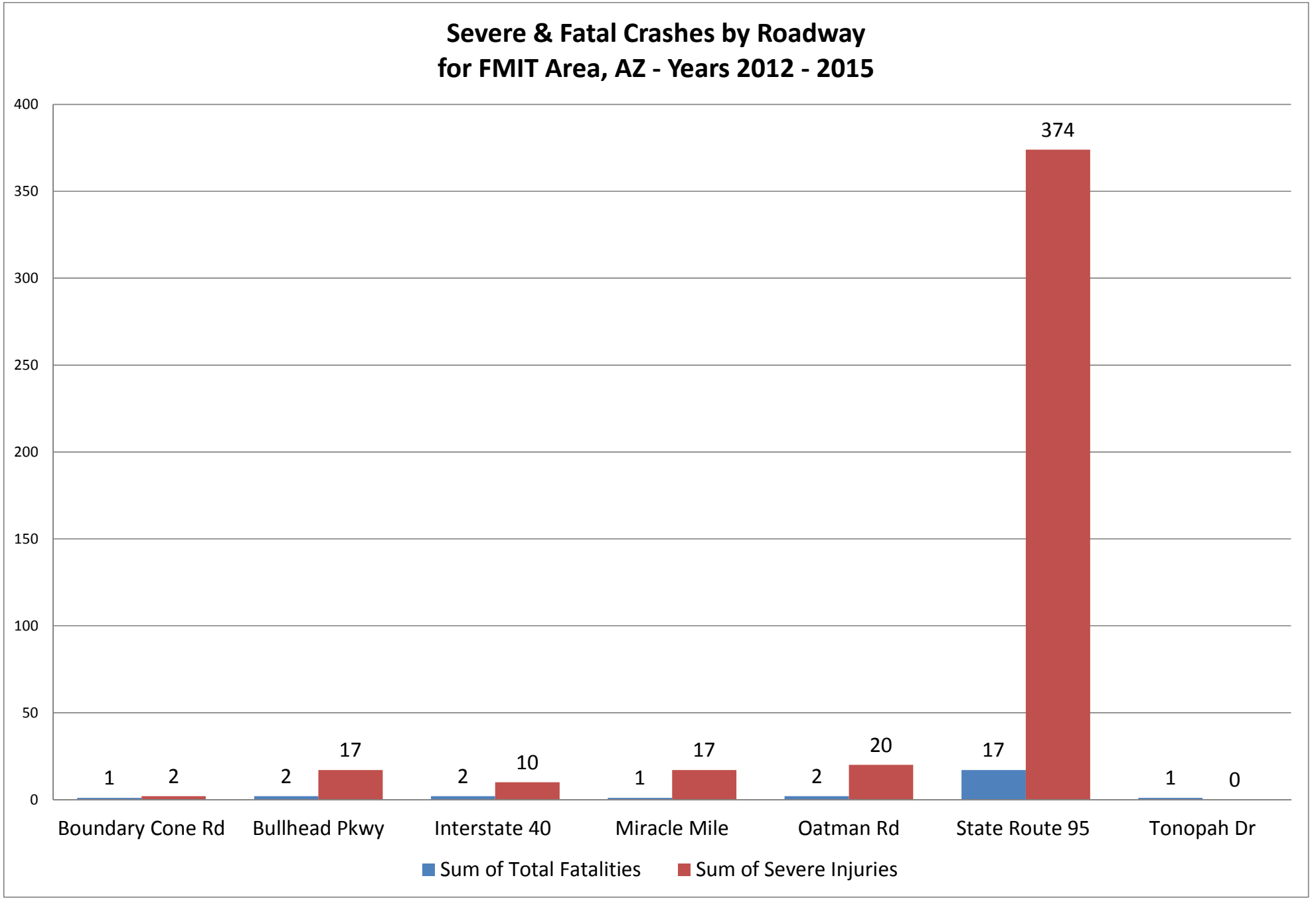

Severe & Fatal Crashes by Day of Week
for FMIT Study Area, CA - Years 2012 - 2015
14
12
10
8
6
4
2
0
3
0
1
0
7
5
4
2
Mon
Thu
Sat
Sun
Fatal Crashes
Injury Crashes

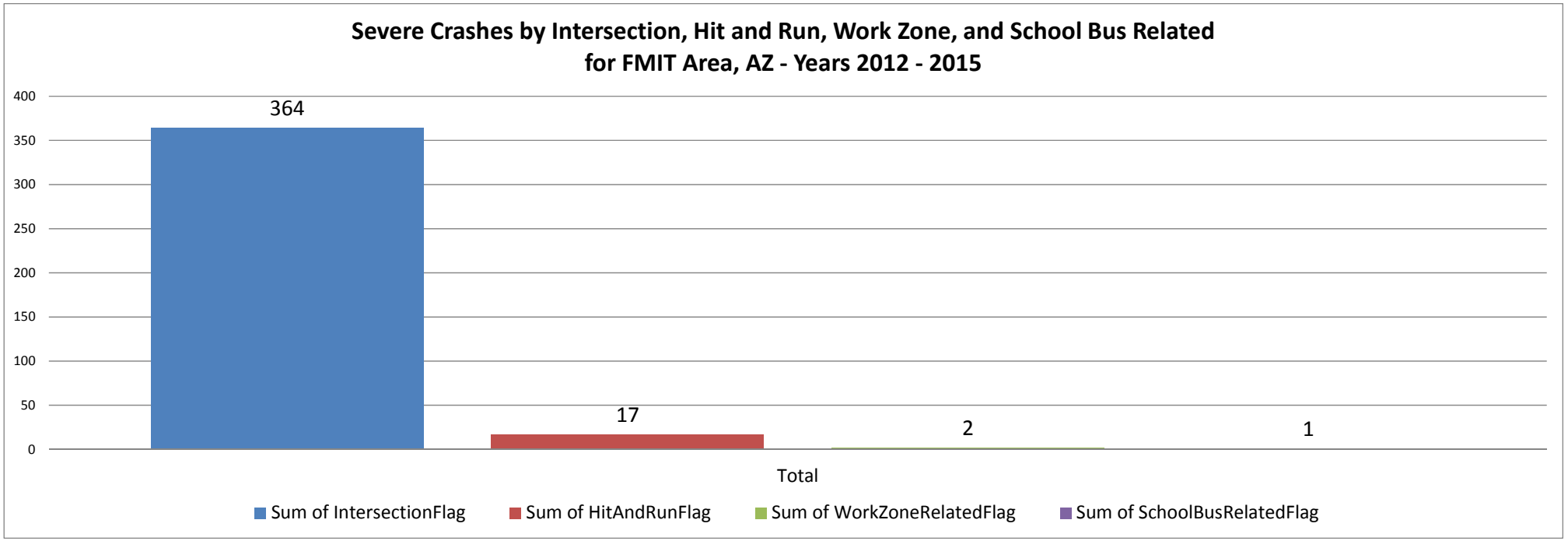

Severe & Fatal Crashes by Hour
for FMIT Area, AZ - Years 2012 - 2015
60
50
40
30
20
10
0
0 1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20 21 22 23
Sum of Total Fatalities
Sum of Severe Injuries


Severe & Fatal Crashes by Light Conditions
for FMIT Area, AZ - Years 2012 - 2015
Dark/Unknown Lighting
6
0
Dark/Not Lighted
65
9
Dark/Lighted
108
4
Dusk
7
0
Dawn
14
0
Daylight
406
13
0
50
100
150
200
250
300
350
400
450
Sum of Severe Injuries
Sum of Total Fatalities


Severe & Fatal Crashes by Light Conditions for FMIT Study Area, CA - Years 2012 - 2015
Dark - No Street Lights
Dark - Street Lights
Daylight
5
3
2
1
8
3
0
1
2
3
4
5
6
7
8
9
Injury Crashes
Fatal Crashes

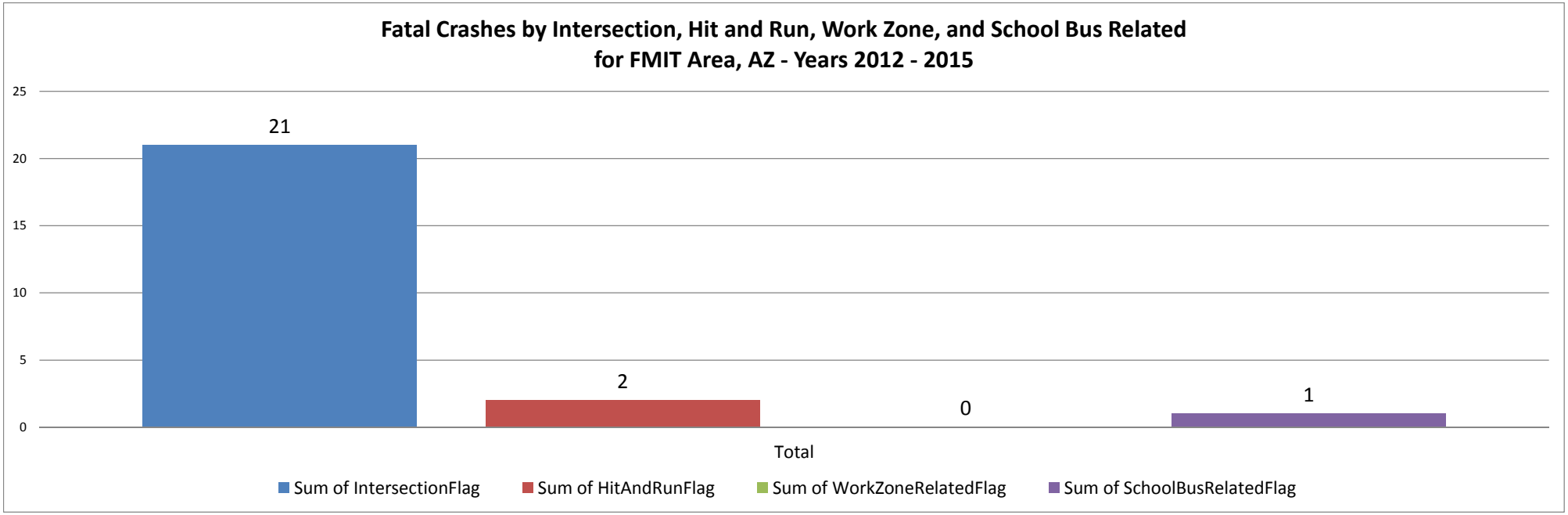

Severe & Fatal Crashes by Light Conditions for FMIT Area, NV
DARK - NO LIGHTING
2
1
0
0.5
1
1.5
2
2.5
Sum of Injured
Sum of Fatalities

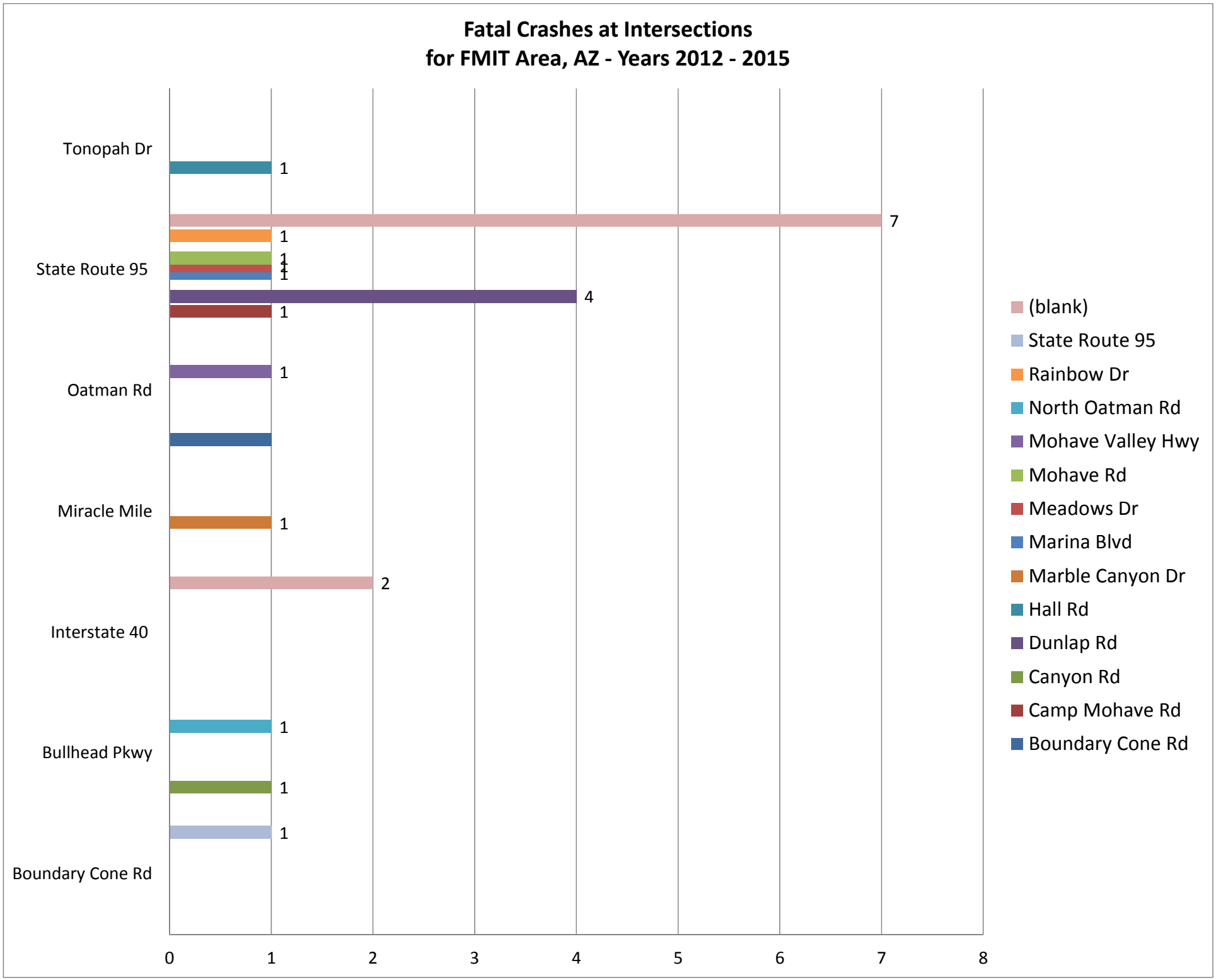

Severe & Fatal Crashes by Roadway
for FMIT Area, AZ - Years 2012 - 2015
400
350
300
250
200
150
100
50
0
1
2
2
17
2
10
1
17
2
20
17
374
1
0
Boundary Cone Rd
Bullhead Pkwy
Interstate 40
Miracle Mile
Oatman Rd
State Route 95
Tonopah Dr
Sum of Total Fatalities
Sum of Severe Injuries

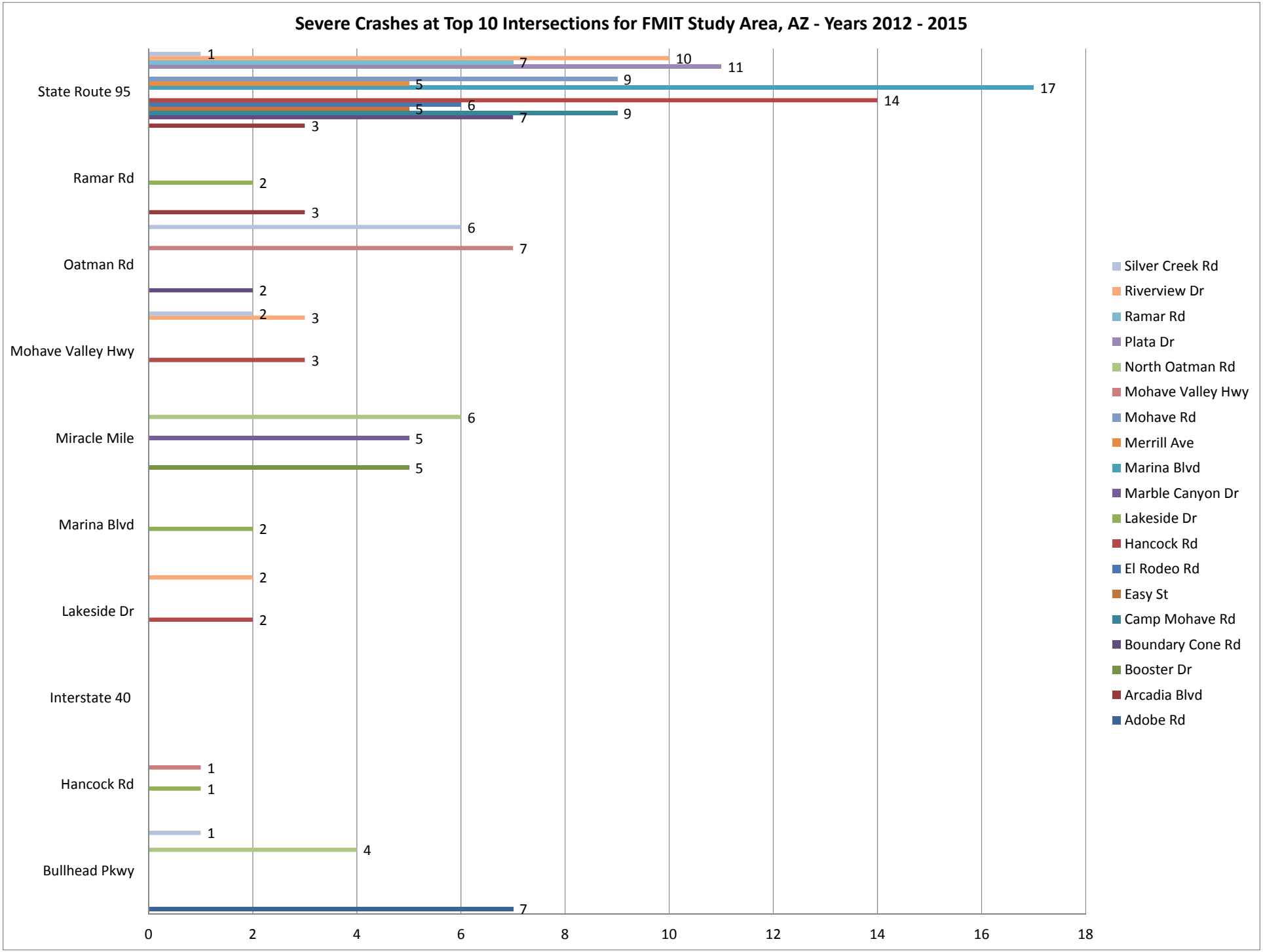


Total Severe Crashes = 606 Total Severe Crashes in Intersection Related = 364 60% Severe Crashes in Intersections

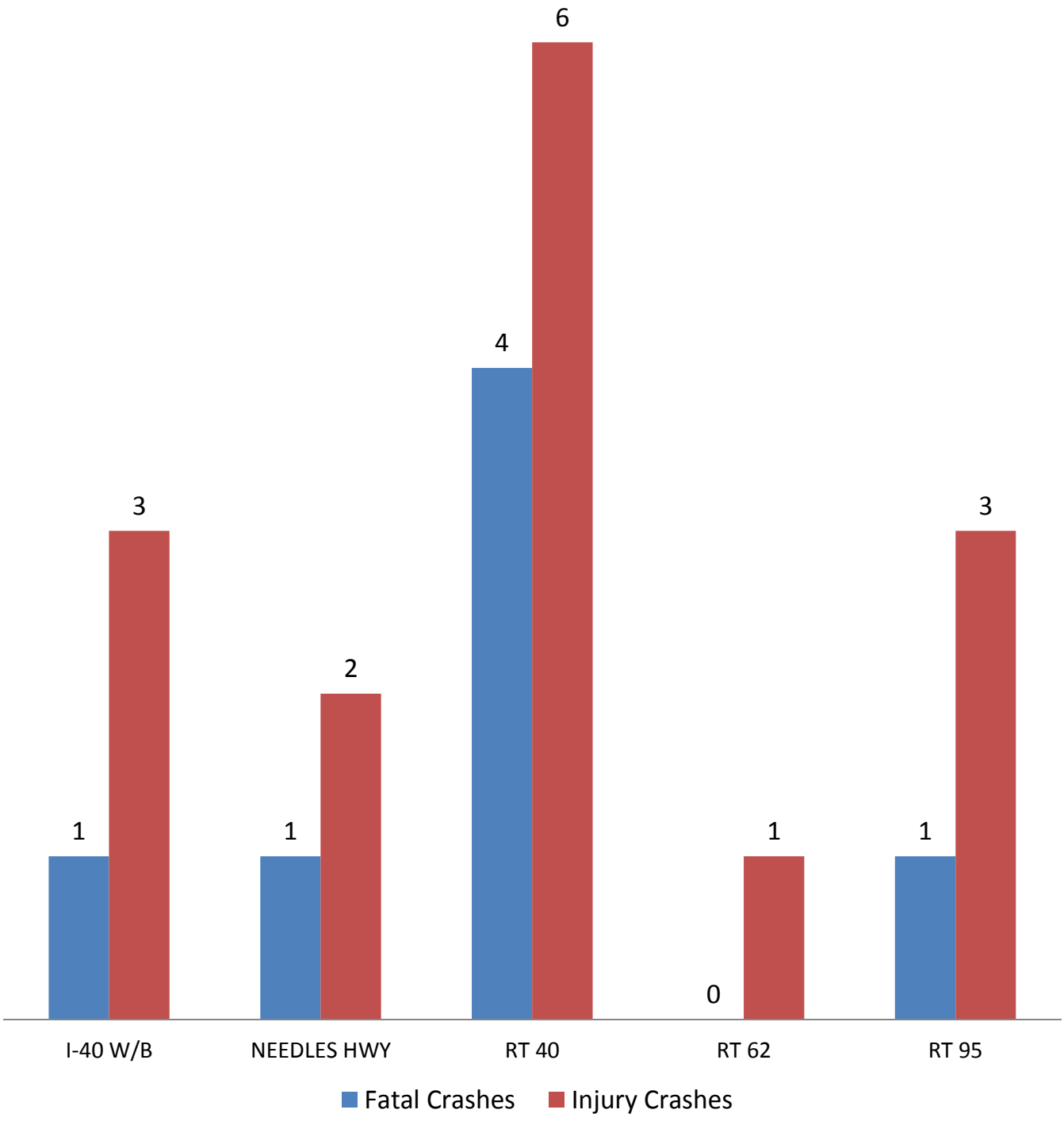
Total Fatal Crashes = 26 Total Fatal Crashes in Intersection Related = 21 81% Fatal Crashes in Intersections




Fatal Crashes at Intersections
for FMIT Area, AZ - Years 2012 - 2015
Tonopah Dr
State Route 95
Oatman Rd
Miracle Mile
Interstate 40
Bullhead Pkwy
Boundary Cone Rd
1
7
1
1
1
1
4
1
1
1
2
1
1
1
0
1
2
3
4
5
6
7
8
(blank)
State Route 95
Rainbow Dr
North Oatman Rd
Mohave Valley Hwy
Mohave Rd
Meadows Dr
Marina Blvd
Marble Canyon Dr
Hall Rd
Dunlap Rd
Canyon Rd
Camp Mohave Rd
Boundary Cone Rd


Severe Crashes at Top 10 Intersections for FMIT Study Area, AZ - Years 2012 - 2015
State Route 95
Ramar Rd
Oatman Rd
Mohave Valley Hwy
Miracle Mile
Marina Blvd
Lakeside Dr
Interstate 40
Hancock Rd
Bullhead Pkwy
0
2
4
6
8
10
12
14
16
18
Silver Creek Rd
Riverview Dr
Ramar Rd
Plata Dr
North Oatman Rd
Mohave Valley Hwy
Mohave Rd
Merrill Ave
Marina Blvd
Marble Canyon Dr
Lakeside Dr
Hancock Rd
El Rodeo Rd
Easy St
Camp Mohave Rd
Boundary Cone Rd
Booster Dr
Arcadia Blvd
Adobe Rd

Severe & Fatal Crashes by Roadway for FMIT Area, CA



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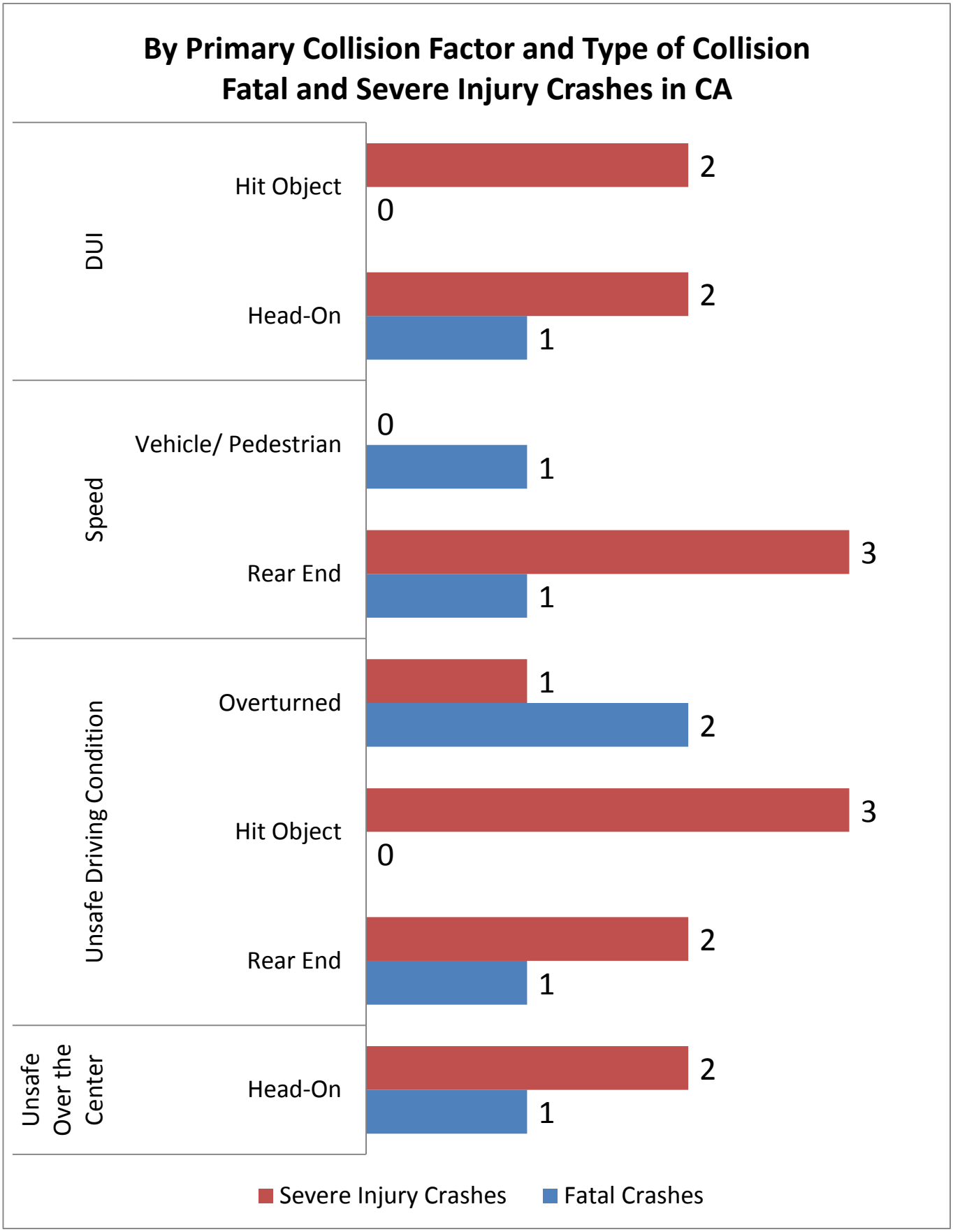

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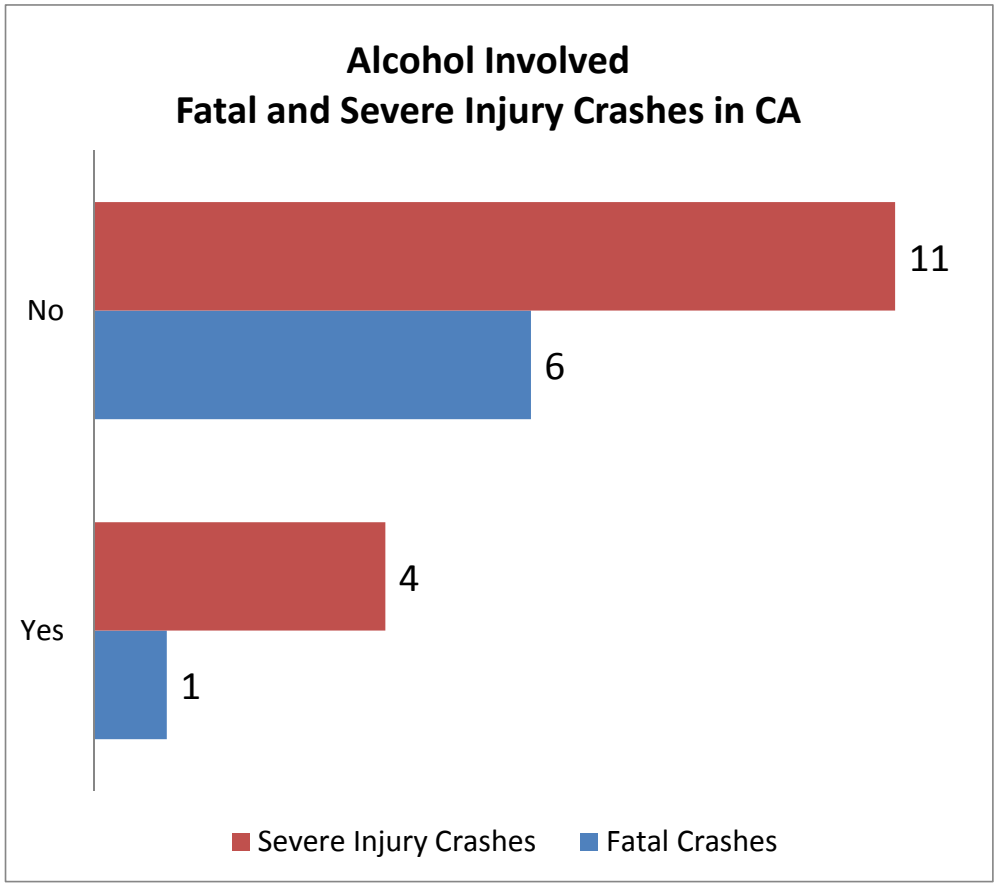
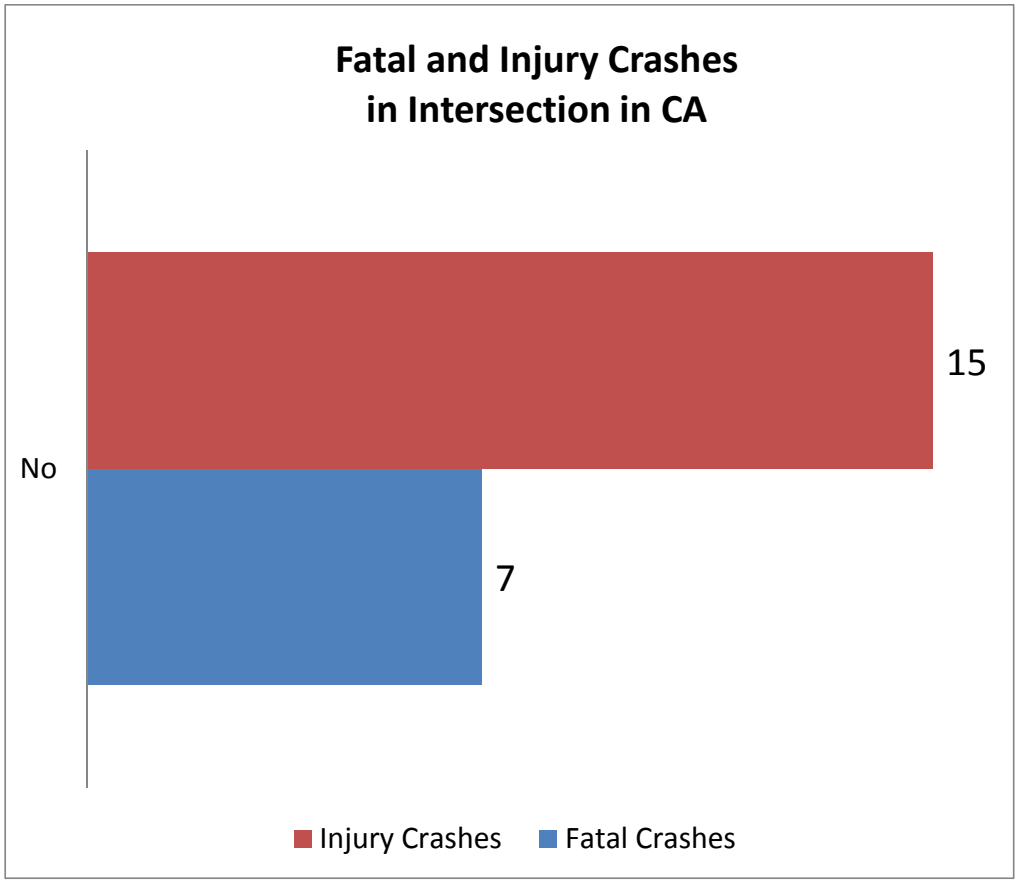
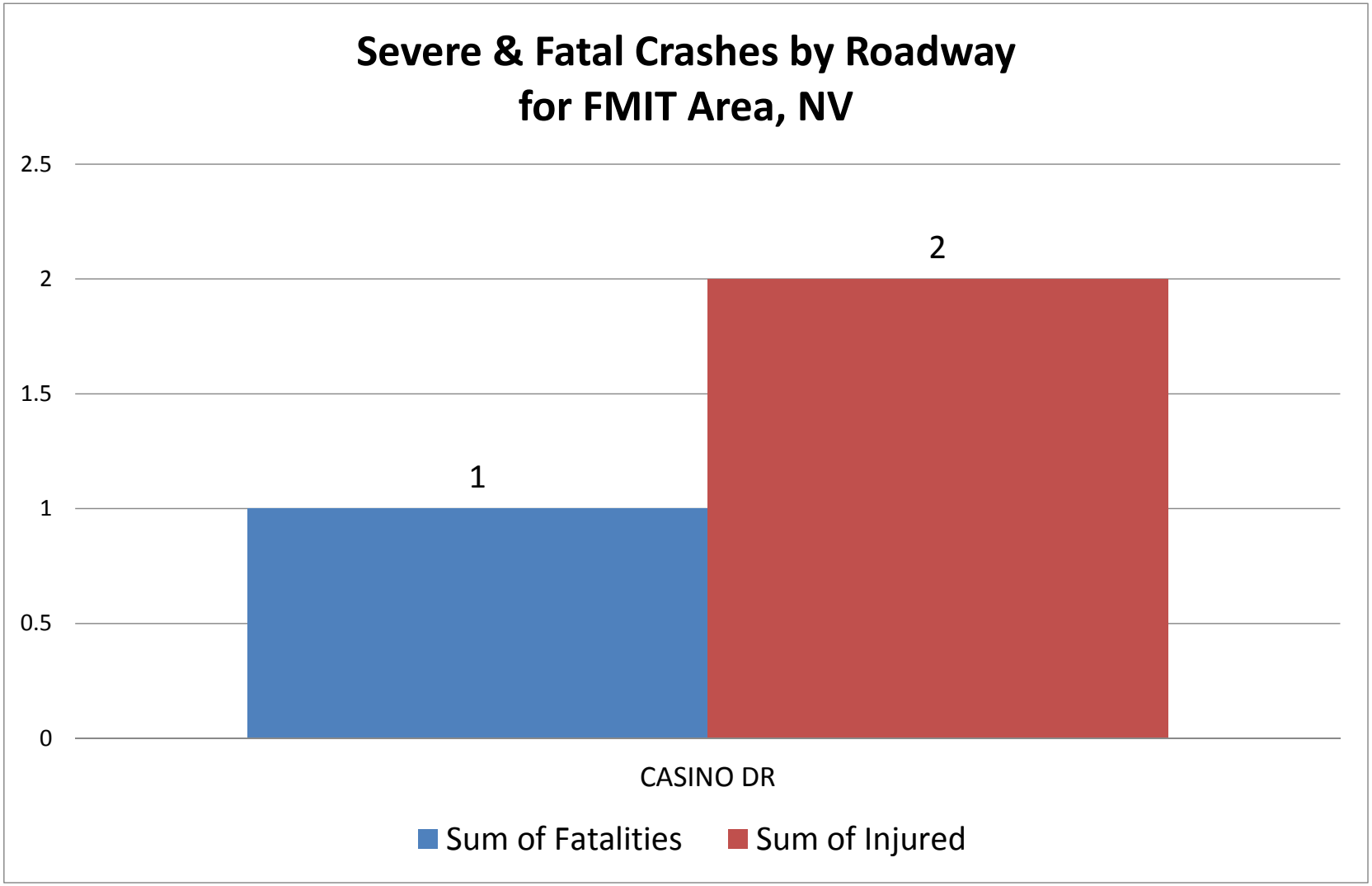
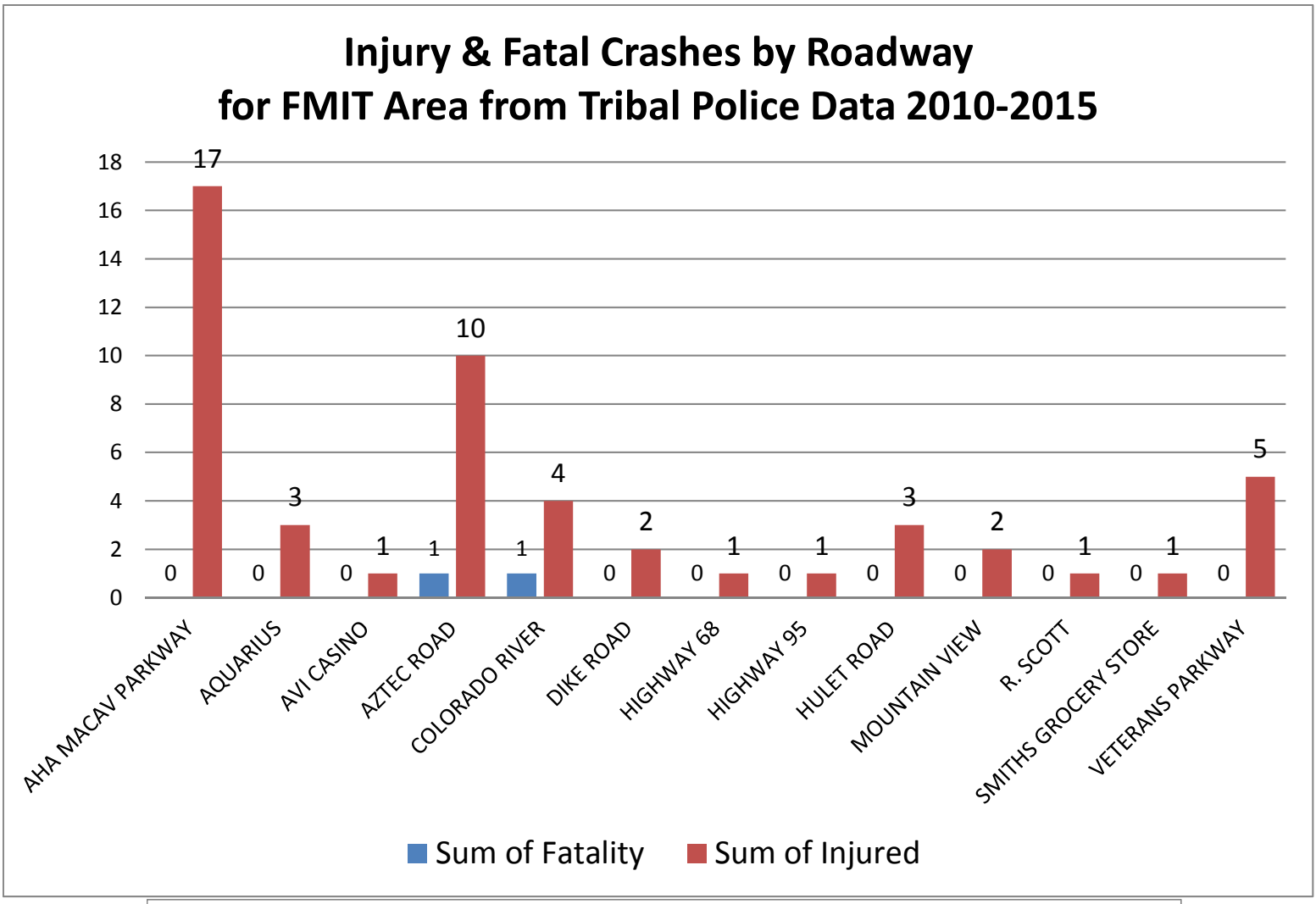


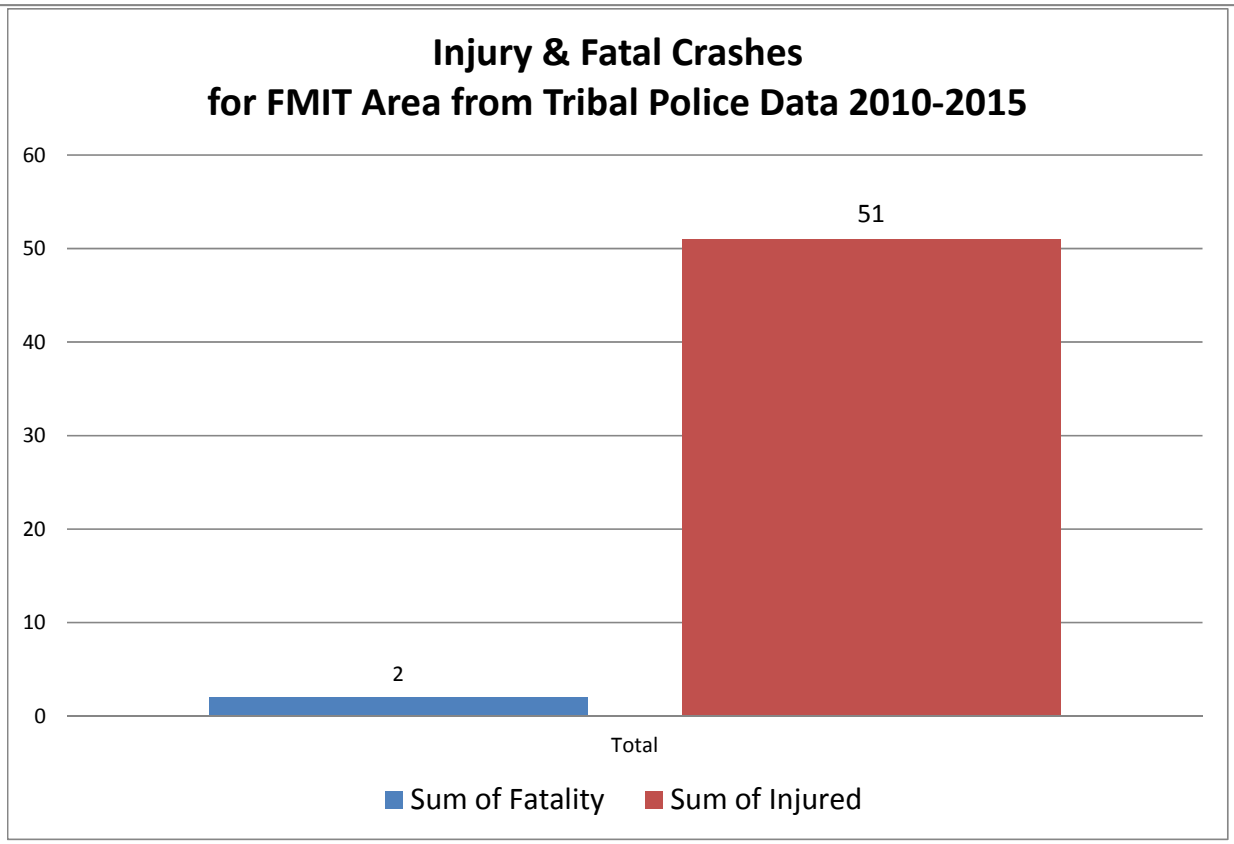


Of the 15 Severe Injury Crashes, 4 are Alcohol Related and 0 are in an Intersection.

Of the 7 Fatal Crashes, 1 is Alcohol Related and 0 are in an Intersection.


Severe & Fatal Crashes by Roadway for FMIT Area, NV
2.5
2
1.5
1
0.5
0
1
2
CASINO DR
Sum of Fatalities
Sum of Injured





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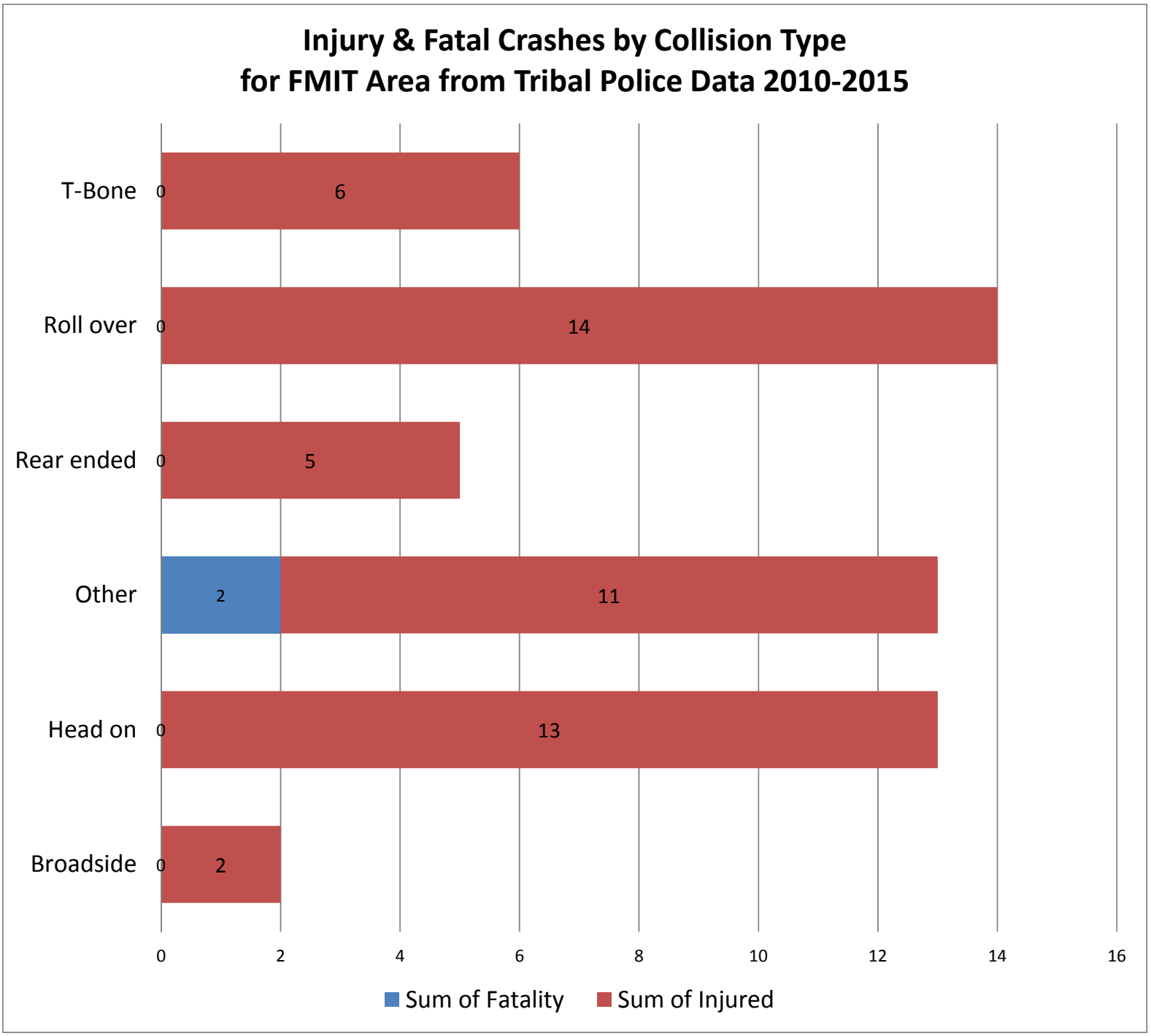

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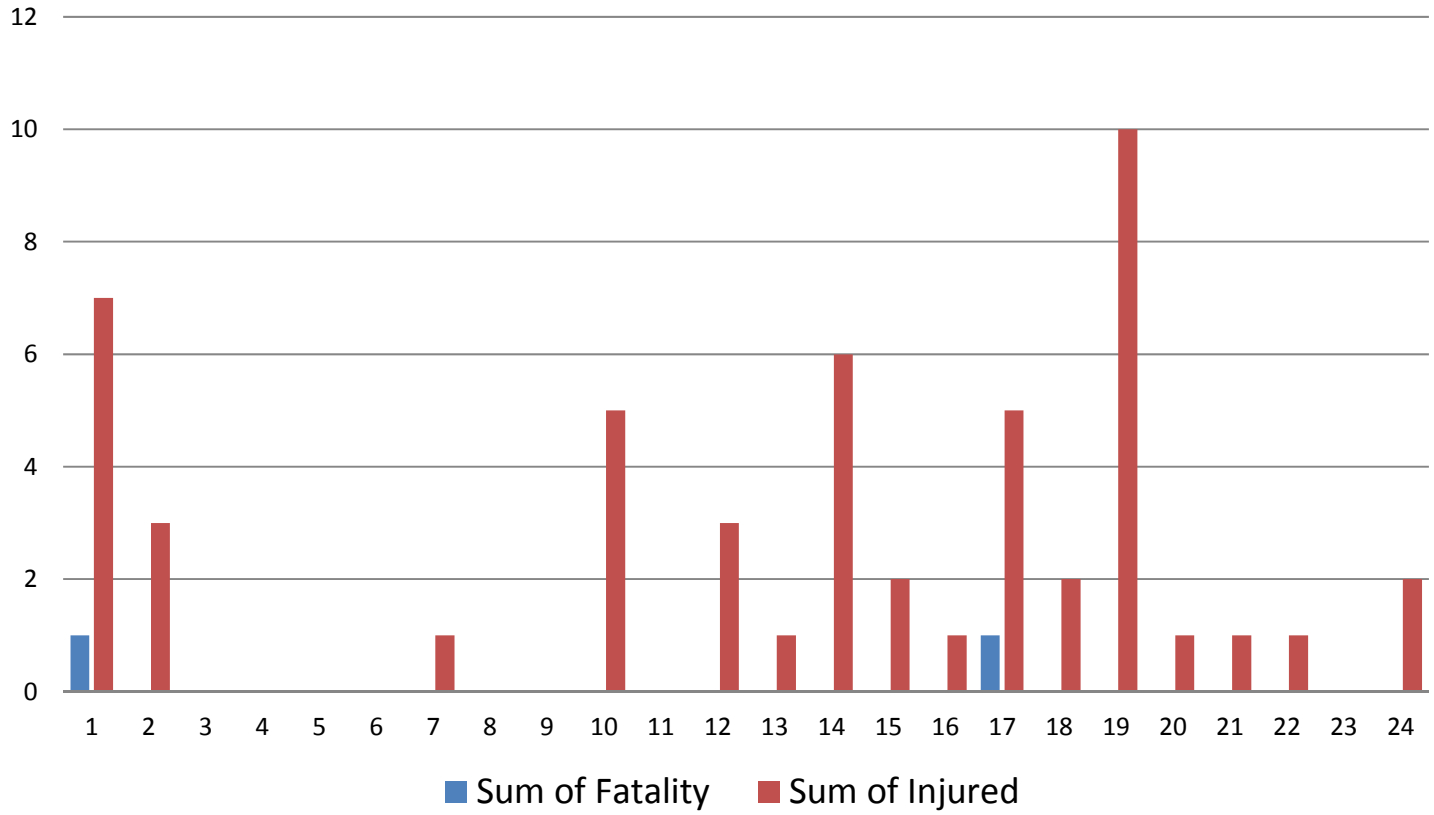
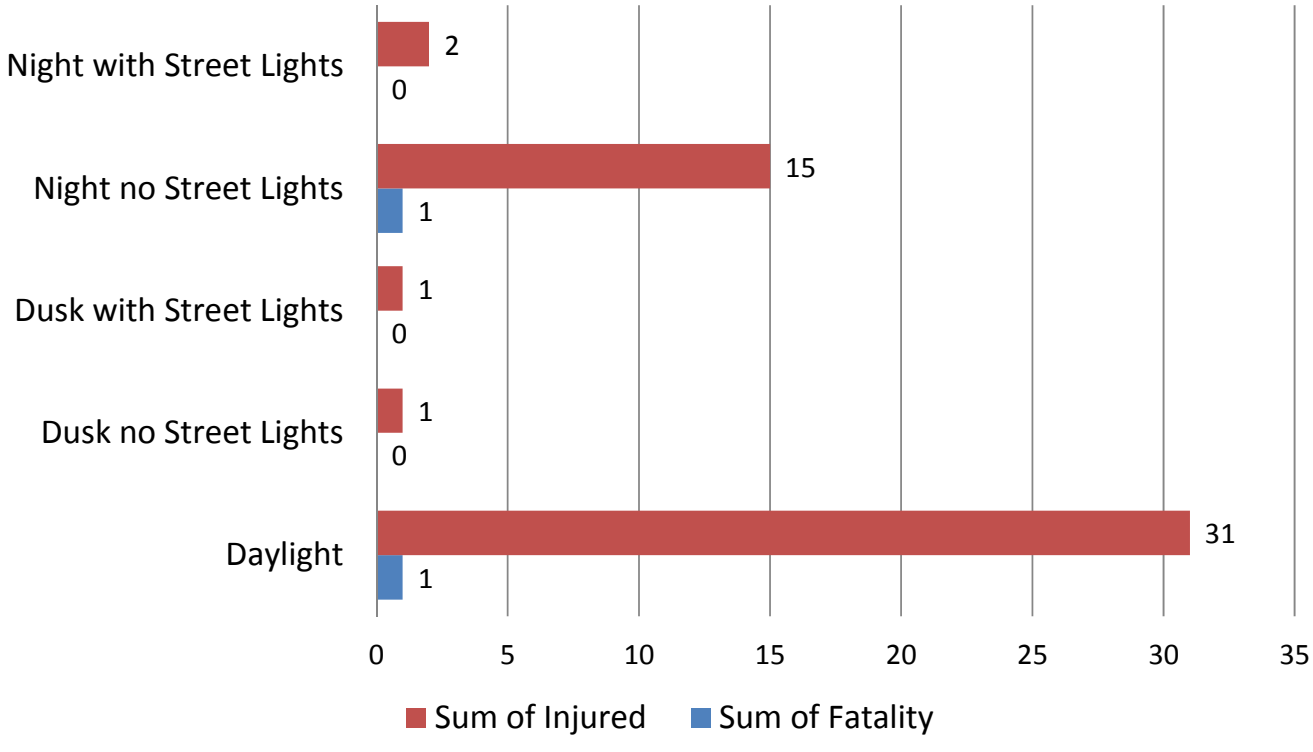
Injury & Fatal Crashes Time of Day (Hour) for FMIT Area from Tribal Police Data 2010-2015



Injury & Fatal Crashes Time by Light Conditions for FMIT Area from Tribal Police Data 2010-2015



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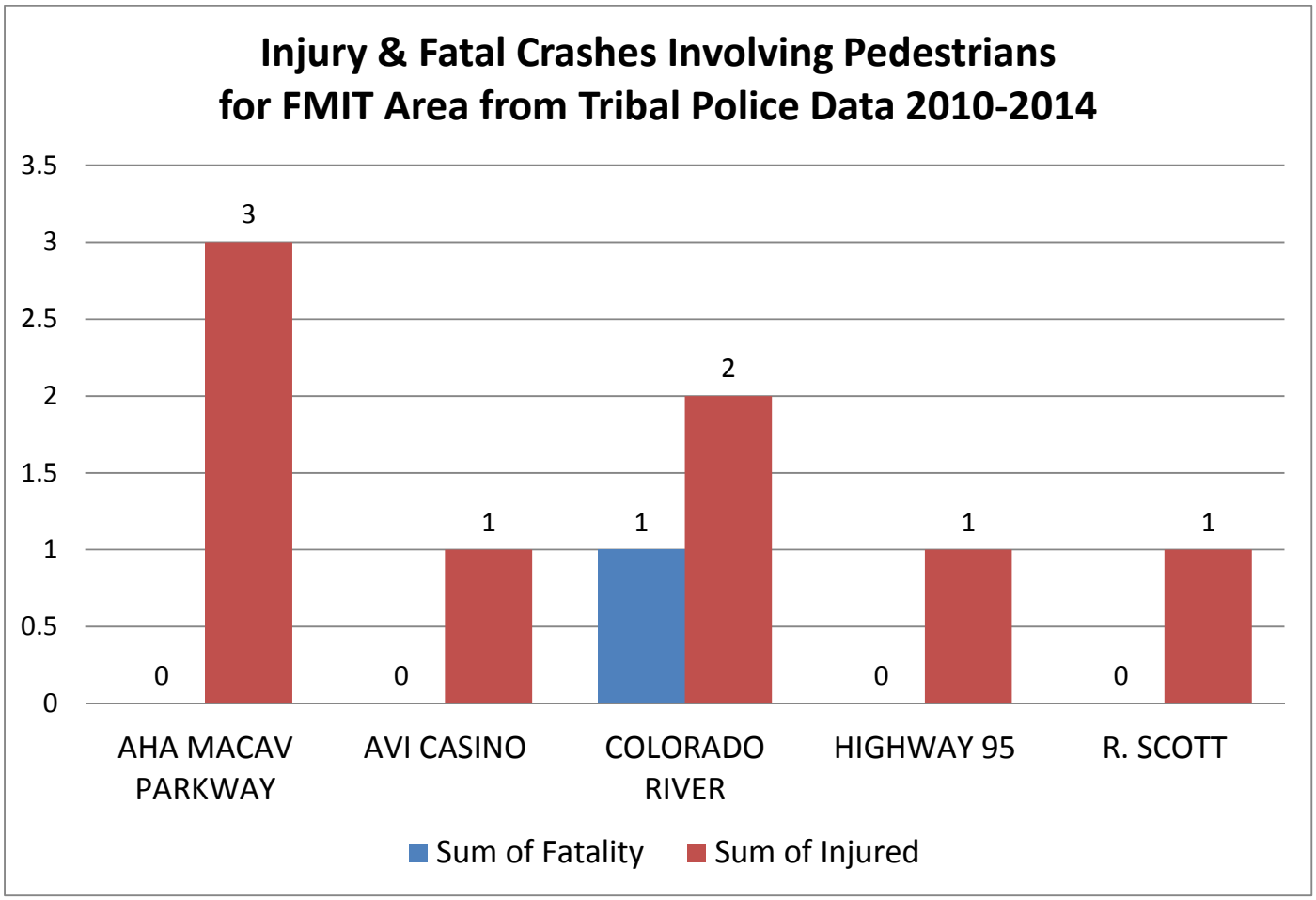

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2015 NHTSA Data	AZ Mohave Co.	CA San Bernardino Co.	NV Clark Co.	Ranking
Total Fatalities	49	242	243	
Alcohol Related Fatal Crashes	13	**76**	**70**	High
Speed Related Fatal Crashes	25	**76**	**77**	**2nd**
Rollover Involved Fatal Crashes	**20**	**74**	69	**3rd**
Roadway Departure Fatal Crashes	**23**	116	114	1st
Unrestrained Occupant Fatalities	15	53	56	

Note: Data is for the whole county

2012-2015 State Crash Data	Fatal Crashes	Severe Injury Crashes	Ranking
Total Crashes	34	623	
Intersection Related Crashes	21	364	1st
Single Vehicle Related Crashes	**7**	**115**	**3rd**
Rollover / Overturn Crashes	6	47	
Rear End Crashes	2	**133**	
Head On Crashes	**9**	32	**2nd**
SR 95 (AZ)	17	374	Worst
I-40 (AZ & CA)	7	19	

Note: Data is for FMIT Area only, see Area Map.

2010-2015 Tribal Crash Data	Fatal Crashes	Injury Crashes	Ranking
Total Crashes	2	51	
Intersection Related Crashes	0	6	
Rollover Crashes	0	14	1st
Rear End Crashes	0	5	
Head On Crashes	0	**13**	**2nd**
Pedestrian Involved Crashes	1	**8**	**3rd**
Aha Macav Pkwy	0	17	Bad
Aztec Road	1	10	Worst
Colorado River	1	4	

Crash Map and Area Crash Map Revised.

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Data Analysis Outcome – County Level Data

- Most fatal crashes involved:
  - 1st Road Departures
  - 2nd Speeding
  - 3rd Rollovers
- Most fatalities occurred on State Route 95 in AZ

Data Analysis Outcome – FMIT Area State Data

- Most fatal or severe injury crashes involved:
  - 1st Intersections
  - 2nd Head On crashes or Rear End collisions
  - 3rd Single Vehicle crashes
- Most fatalities occurred on State Route 95 in AZ
- Alcohol involved in ~30% of fatal crashes countywide (statewide avg. 34%)

Data Analysis Outcome – Tribal Data

- Most fatal or severe injury crashes involved:
  - 1st Rollover crashes
  - 2nd Head On crashes
  - 3rd Pedestrians involved in crash
- Most fatalities occurred on Aztec or Colorado River
- Most injury accidents occurred on Aha Macav Pkwy
- DUI involved in ~45% of Tribally reported accidents

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4. Review all emphasis areas from analysis / include local projects of concern

County Wide Emphasis Areas

1) Roadway Departures
2) Speed Management
3) Rollovers

Tribal Emphasis Areas

1) Intersection Related
    a) SR 68 MP 12 turn to Davis Dam – trucks / rear ends
    b) SR 95 & Mohave Valley Hwy
    c) SR 95 & Hulet Avenue
2) Impaired Driving
3) Rollover / Overturn Crashes
4) Rear End Crashes
5) Head On Crashes
6) Hazardous locations
7) Pedestrian Involved Crashes
8) No shoulders / Narrow shoulders / Soft shoulders
    a) Aha Macav Pkwy
    b) Laguna Road
    c) Aztec Road
    d) Dike Road
    e) Courtwright Road / CR 1
9) SR95, Aha Macav Pkwy, and Aztec Road highest problems

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5. Identify strategies for each emphasis area and identify approach to implement

   (Think of the Four E's of Safety – Engineering, Enforcement, Education, and Emergency Services. Think of the Stakeholders and Partnerships in Transportation who play a role in safety efforts.)

   Potential Strategies

   1) Road Departures / Rollovers
      - Improve data collection and analysis for fatal run-off-the-road crashes
      - Increase fines for serious violations that result in run-off crashes
      - Evaluate pavement strategies (rumble strips, pavement markings)
      - Shoulder improvements / Recovery zone improvements
      - Increase seat belt use
   2) Speed Management
      - Develop public outreach
      - Add signage
      - Install driver feedback signs / radar ticketing
      - Increase enforcement (partner with County/ADOT/State)
      - Increase penalty for repeat offenders
      - Deliver educational packets for repeat offenders
   3) Rear End Collisions
      - Create media campaigns about distracted driving
      - Add messaging about following too close/leave room
      - Reduce speed limits in busy commercial areas
      - Add left turn lanes or medians
   4) Head On Collisions
      - Create media campaigns about distracted driving
      - Add messaging about drowsy driving
      - Evaluate pavement strategies (rumble strips, pavement markings)
   5) Intersection Collisions
      - Perform a Road Safety Audit at worst locations
      - Reduce the number of conflict points
      - Create intersection safety checklists for existing conditions and new design

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- Upgrade signing, pavement markings, and signals
- Add advanced street name signs on intersection warning signs
- Solar-powered, sign-mounted beacons
- Implement modern roundabouts
- Update signal timing / central control / adopt consistent signal timing
- Construct turn lanes where they do not exist

6) Impaired Driving
   - Reduce roadside distractions
   - Stress no texting and driving in driver's education classes
   - Add rumble strips
   - Increase sobriety checkpoints
   - Create media campaigns
7) Pedestrian Safety
   - Education outreach for pedestrians
   - Road Safety Assessment of key locations
   - Apply for TTP Safety Funds for trail / sidewalks
8) Roadway Shoulder Improvements
   - Flatten shoulder slopes
   - Increase shoulder width
   - Install gravel shoulder in soft areas
9) Identify Roadway Hazards at specific locations
   - Engineering analysis of known locations
   - Use traffic counters for intersection turning movement analysis
   - Collect speed data
10) Hazards at Recreational Areas / Colorado River (watercraft)
   - Add pull outs for parking off roadway at known recreational areas
   - Add seasonal signage at known recreational areas
   - Increase water patrols during peak times
   - Media campaigns for river / watercraft safety
   - Add hazard markings on bridge piers

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6. Prioritize Emphasis Areas – Group submitted rankings – Results are:

1	Impaired Driving
2	Speed Management
3	Road Departures / Rollovers
4	Intersections
5	Roadway Shoulder Improvements
6	Hazardous Locations
7	Head-On Collisions
8	Pedestrian Safety
9	Recreational / Colorado River (watercraft)
10	Rear End Collisions

7. Next meeting date March 21, 2017 (Tuesday) at 10:00 am. That will be the last meeting.

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E-mail ewhitlock@highroadengineering.com

FMIT Safety Plan Meeting
February 7, 2017 at 10:00 am
Headquarters, Needles, CA

Sign In Sheet

Name	Department	Telephone	Email
1. Gregg Whaley	Mohave County	928-757-0924	gregg.whaley@mohavecounty.us
2. Jon Norman	CHP Needles	760-326-2000	JNORMAN@CHP.CA.GOV
3. Ken Pagtz	ADOT Region Traffic	(928) 681-6022	KPaetz@AZDOT.GOV
4. Wayne Nelson	FMIT Planning	(760) 629-4591	Waynenelson@fortmojave.com
5. Jimmy TRAHIN	San Bernardino Sheriff	7603269204	JTRAHIN@SBCSD.ORG
6. Sierra Schaffer	Health Dept FMIT	928-444-6070	Sierra.Schaffer@ihs.gov
7. J. Udovich	CHP - Needles	(760) 326-2000	judovich@chp.ca.gov
8. George Brown	FMTPD	(928) 346-1521	GBROWN@FMTPD.ORG
9. Les Henley	Mohave Co.	928 757 0910	
10. Elisabeth Whitlock	High Road Engineering	435-767-8481	ewhitlock@highroadengineering.com
11. CRAIG GORDON	FMIT GIS	928-346-1801	CGORDON@FTMOJAVE.COM
12.			
13.			
14.			
18.			
19.			
20.			

Emphasis Area	Strategic Linkage
Impaired Driving	Identified in Arizona's SHSP as an emphasis area
Objectives	**Success Indicators**
Reduce alcohol related crashes	Reduction in impaired driving related crashes on the reservation and surrounding checkerboard lands.

	Actions	Target Output	Responsible Agency	Date of Completion	Performance Measures	Evaluation
Education	Develop brochure targeting DUI;	No DUIs on the reservation	DHS-IHS	Sept 2017	Citations & crashes	Annual statistics
	Stress no texting in driver's education class;	No texting related crashes	School Districts	August 2017	Citations & crashes	Annual statistics
	Create media campaigns	Increase awareness of impaired or distracted driving	Tribe	Dec 2017	Number of media spots issued	Member feedback
Enforcement	Increase check points;	Hold strategic checks four times a year;	Police Dept. , AZ DPS, CA CHP;	May 2017	No DUIs cited	Annual statistics
	Control repeat offenders;	Reduce repeat DUIs;	Court and Police;	Dec 2018	No DUIs cited	
	Pass a primary law for no texting while driving	Reduce texting while driving	Court and Police	June 2017	No observance of texting while driving	
Engineering	Rumble strips on SR163/SR68/ US95	Warning systems on rural roadways	NDOT/ADOT/ San Bernardino Co	Oct 2018	Rumble strips installed	Annual statistics for crashes / reduction in severity of crashes
EMS						

Emphasis Area	Strategic Linkage
Speed Management	Speeding is a high priority emphasis area in Arizona's SHSP.
Objectives	**Success Indicators**
Reduce incidents of speeding on interstates & highways.	Reduction in speeding related crashes on US95, SR95, SR163 & SR68 in the areas regularly traveled by tribal members.

	Actions	Target Output	Responsible Agency	Date of Completion	Performance Measures	Evaluation
Education	Tribal newsletters ;	Awareness of the dangers & consequences of excessive speed	Planning Dept.; Emergency Mgmt.; Tribal Police Dept.	June 2017 (continue);	Newsletter issued; public announcements issued	Feedback from tribal members
	Billboards;		State Highway Safety Offices;	2017;	Number of billboards;	
	Education packet to offenders		Planning / Court	Oct 2017	Education packet prepared	
Enforcement	Increase State & County Patrol in tribal areas;	Reduction in speeding violations;	Highway Patrol / Tribal Patrol / County Patrol;	2017	Reduce annual fatalities from 61 in the last 5 years to 55 in 2020 (10%);	Annual statistics
	Driver feedback signs / Radar ticketing;	Increased speed compliance;	Highway Patrol; Tribal Police	2017		
	Increase penalty for repeat offenders;	Reduction in speeding violations;	Tribe;	2017	Law passed;	Less violations
Engineering	Signage;	Increased speed compliance;	NDOT / ADOT / Counties	2018	Reduce speeding on state routes;	Annual statistics
	Driver feedback signs;		NDOT / ADOT / Counties / Tribal Police	2017	Reduce crashes related to speeding	
	Light intersections along SR95	Increase visibility at intersections	ADOT / Mohave Co	2020		
EMS						

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Emphasis Area	Strategic Linkage
Road Departures / Rollovers	Identified in Arizona's SHSP as an emphasis area.
Objectives	**Success Indicators**
Reduce severity of the crash; Minimize likelihood of crash if vehicle travels off the shoulder; Keep vehicles on the road	Reduction in off the road crashes; Reduction in crash severity if vehicles run off the road.

	Actions	Target Output	Responsible Agency	Date of Completion	Performance Measures	Evaluation
Ed	Tribal newsletters	Increase awareness	Planning Dept. ; Police Dept.	June 2017 (continue)	Newsletter issued	Feedback from tribal members
Enforce	Increase penalty for violations resulting in run-off crashes	Reduction in road departures	Tribal Court	Dec 2018	Law passed	Annual statistics
Engineering	Rumble strips;	Warning systems on rural highways;	NDOT / ADOT / San Bernardino Co	Oct 2018	Rumble strips installed	Annual statistics for crashes / reduction in severity of crashes
	Pavement markings;	Increase visibility;	NDOT / ADOT / Caltrans / BIA	Oct 2018	Visible striping	
	Shoulder widening or repair;	Min. 4' along SR95, Min. 2' local roads;	NDOT / ADOT / Caltrans /BIA local roads;	Dec 2025	Min. shoulders on roads	
	Improve design of roadside hardware;	All hardware has breakaway feature;	NDOT / ADOT / Caltrans /BIA local roads;	Oct 2018	Upgraded hardware	
	Improve design & application of barrier & attenuation systems;	All barrier systems meet current FHWA standards;	NDOT / ADOT / Caltrans /BIA local roads;	Dec 2018	Upgraded barrier systems	
	Remove/relocate objects in hazardous locations;	Eliminate obstacles where possible;	NDOT / ADOT / Caltrans /BIA local roads;	Dec 2018	Objects removed from clear zone	
	Delineate objects with reflective tape	Increase visibility of hazardous objects	NDOT / ADOT / Caltrans /BIA local roads	Dec 2018	Objects marked	
EMS						

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Emphasis Area	Strategic Linkage
Intersections	Coordination with Counties, State, and Bureau of Indian Affairs
Objectives	**Success Indicators**
Improve road geometry for turn lanes, safe stopping and line of sight	Vehicles have adequate queuing lanes and clear lines of sight

	Actions	Target Output	Responsible Agency	Date of Completion	Performance Measures	Evaluation
Ed						
Enforce						
Engineering	Perform a Road Safety Audit;	Identification of intersection deficiencies;	Tribe Planning /ITCA / ADOT;	July 2018	RSA Complete	Report Recom-mendations
	Construct turn lanes;	Safety turning movements;	ADOT / Mohave Co / BIA	Nov 2020	Construction complete	Reduced crashes
	Create safety checklists for intersections;	Reduce risk at intersections;	ADOT / Mohave Co / BIA	July 2018	Checklist complete	Traffic statistics
	Update signal timing on SR95;	Prevent vehicles from running red lights;	ADOT / Mohave Co.	March 2019	Signals coordinated	Reduced crashes
	Construct roundabouts;	Reduce T-bone accidents;	ADOT / Mohave Co / BIA	Sept 2017	Construction complete	Reduced crashes
	Add advance warning and street name signs	Reduce vehicle maneuvers;	ADOT / Mohave Co / BIA	Dec 2018	Signs installed	Reduced crashes
	Add beacons	Increase visibility	ADOT / Mohave Co / BIA	Dec 2018	Beacons installed	Reduced crashes
EMS						

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Emphasis Area	Strategic Linkage
Roadway Shoulder Improvements	Coordination with Counties, State, and Bureau of Indian Affairs
Objectives	**Success Indicators**
Identify and correct hazardous roadway conditions on high travel routes.	All necessary data collected and hazardous locations identified.

	Actions	Target Output	Responsible Agency	Date of Completion	Performance Measures	Evaluation
Education						
Enforcement						
Engineering	Flatten shoulder slopes; Add pavement width; Add gravel to sandy or soft areas	Increase recovery zone; Reduce hazard locations; Soft zones identified and corrected	Mohave Co / BIA Mohave Co / BIA Mohave Co / BIA	July 2020 July 2022 July 2020	Slopes flattened; Shoulders widened; Shoulders hardened;	Reduction in crashes caused by loss of control after lane departure
EMS						

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Emphasis Area	Strategic Linkage
Identify Roadway Hazards at Specific Locations	Coordination with Counties, State, and Bureau of Indian Affairs
Objectives	**Success Indicators**
Identify and correct hazardous roadway conditions on high travel routes.	All necessary data collected and hazardous locations identified.

	Actions	Target Output	Responsible Agency	Date of Completion	Performance Measures	Evaluation
Education						
Enforcement						
Engineering	Perform engineering analysis at known locations;	High hazard locations identified;	NDOT / ADOT / Caltrans / BIA	July 2019	Inventory Complete;	Report Recom-mendations;
	Perform traffic counts for intersection turning movement analysis;	Intersection warrants identified;	NDOT / ADOT / Caltrans / BIA	July 2019	Study Complete;	Report Recom-mendations;
	Collect speed data;	Speed zones identified ;	NDOT / ADOT / Caltrans / BIA	Sept 2018	Data collected;	Report summary;
EMS						

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Emphasis Area	Strategic Linkage
Head On Collisions	Identified in Arizona's SHSP as an emphasis area.
Objectives	**Success Indicators**
Reduce severity of the crash; Keep vehicles in their lane.	Reduction in head on crashes.

	Actions	Target Output	Responsible Agency	Date of Completion	Performance Measures	Evaluation
Education	Tribal newsletters; Billboards	Increase awareness; Increase awareness	Planning Dept. / Police Dept.; State Highway Safety Office	June 2017 (continue) Dec 2017	Newsletter issued Messaging placed	Feedback from tribal members Less distracted driving
Enforcement						
Engineering	Rumble strips; Pavement markings;	Warning systems on rural highways; Increase visibility;	NDOT / ADOT / San Bernardino Co NDOT / ADOT / Caltrans / BIA	Oct 2018 Oct 2018	Rumble strips installed Visible striping	Annual statistics for crashes / reduction in severity of crashes
EMS						

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Emphasis Area	Strategic Linkage
Pedestrian Safety	Tribal staff identified the need for pedestrian trails and safe bike routes.
Objectives	**Success Indicators**
Add trail along Plantation Road from Barrackman to Peck	Improved safety for pedestrians and bicycles.

	Actions	Target Output	Responsible Agency	Date of Completion	Performance Measures	Evaluation
Education	Tribal newsletter	Awareness of the dangers of walking on roadways	Planning Dept. newsletter	June 2017 (continue)	Newsletter issued	Feedback from tribal members
Enforcement						
Engineering	Install sidewalks around Boys & Girls Club, along Plantation Rd Install pedestrian crossings;	Add sidewalks at high traffic areas between center and housing; Add pedestrian crossings at various locations;	BIA / Planning ADOT / BIA / Planning	Dec 2018 Dec 2020	Reduce the number of people walking along roadway; Crossings installed	Observe pedestrian traffic; Number of pedestrians using crossings;
EMS						

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Emphasis Area	Strategic Linkage
Hazards at Recreational Areas and/or Colorado River-watercrafts	Coordination with Counties, State, and Bureau of Indian Affairs
Objectives	**Success Indicators**
Identify and correct hazardous roadway conditions at recreational areas and on the Colorado River.	All necessary data collected and hazardous locations identified.

	Actions	Target Output	Responsible Agency	Date of Completion	Performance Measures	Evaluation
Education	Develop brochure targeting DUI and boating; Create media campaigns	No DUIs on the water; Increase awareness of impaired or distracted driving	 Tribe/ Natl. Park Service (NPS)	Sept 2017 Dec 2018	Citations & crashes Number of media spots issued	Annual statistics Public feedback
Enforcement	Increase water patrols during peak times	Reduce incidents on the river	All Police Depts. /USFW/AZG&F	July 2017	Citations & crashes	Annual statistics
Engineering	Add pull outs or signage during recreational season Add hazard markings on bridge piers;	Vehicles safely off roadway; Locations identified;	ADOT / Mohave Co Tribe / NPS	2017 (seasonal) May 2018	Warning signs temporarily installed; Markings installed;	Vehicles not parked on shoulder; Annual statistics;
EMS						

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Emphasis Area	Strategic Linkage
Rear End Collisions	Coordination with ADOT, Caltrans, NDOT, Mohave County, San Bernardino County, and Clark County.
Objectives	**Success Indicators**
Reduce rear end accidents.	Reduction in rear end collisions and/or less severe injuries for rear end accidents.

	Actions	Target Output	Responsible Agency	Date of Completion	Performance Measures	Evaluation
Education	Media campaigns	Awareness of following too close and Distracted Driving	NDOT / ADOT / Caltrans / Counties / Tribal Planning / Tribal Police	Dec 2017 (continue)	Number of media spots issued	Feedback from tribal members
Enforcement						
Engineering	Sign messaging;	Improve intersection warning signs;	ADOT / Mohave Co / BIA ;	Mar 2018	Signs installed;	Reduced collisions;
	Reduce speed limits in commercial areas;	Severity of accidents reduced;	ADOT / Mohave County;	Dec 2017	Speed limit reduced;	Accident severity statistics;
	Left turn lanes or medians (SR95) (SR163) (SR68);	Rear end collisions reduced;	NDOT / ADOT	Dec 2025	Turn lanes installed;	Annual crash data;
	Add lighted STOP signs	Rear end collisions reduced	ADOT / Mohave Co / BIA	March 2018	Signed installed	Annual crash data
EMS						

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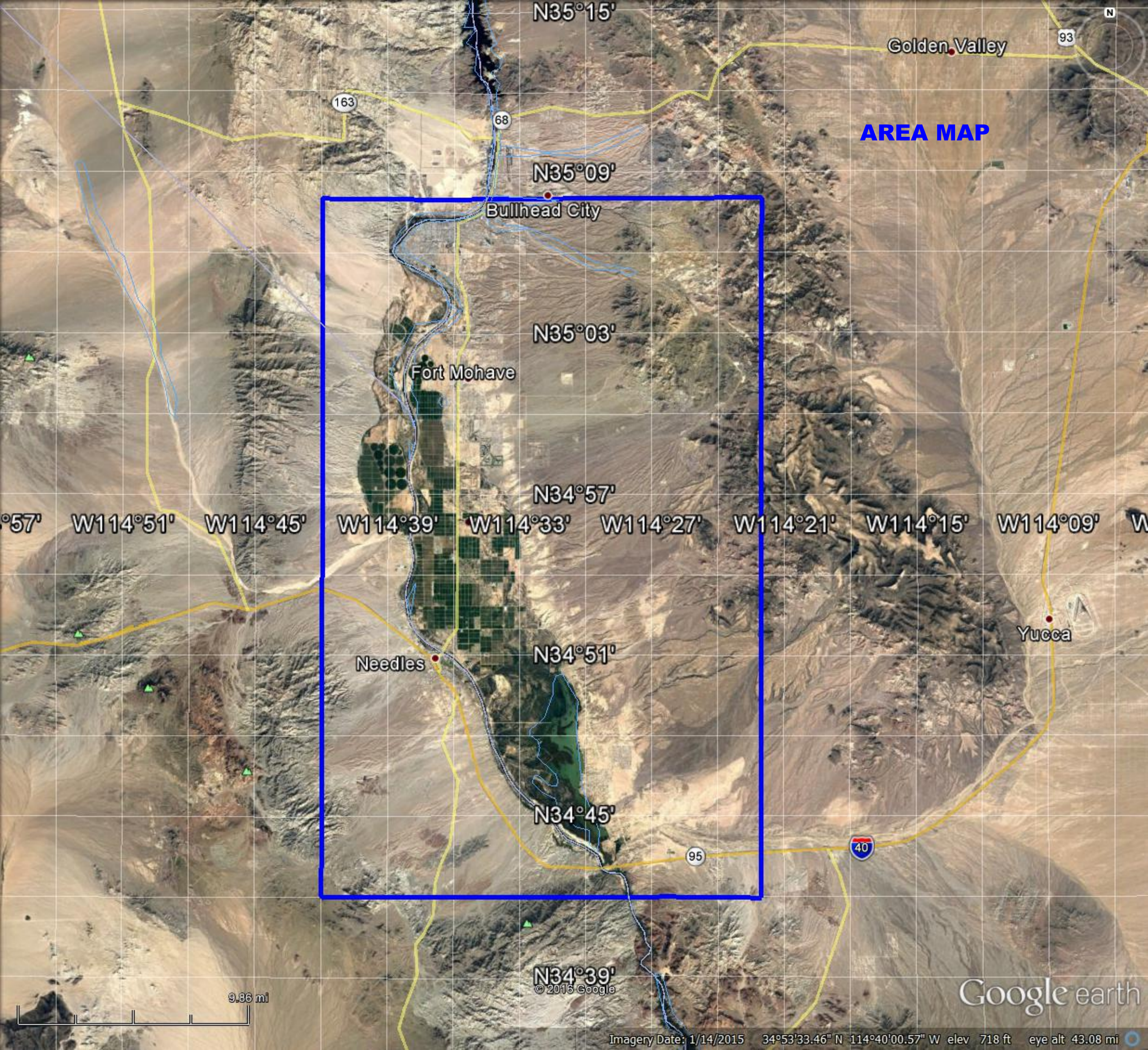
AREA MAP
N35°15'
N35°09'
N35°03'
N34°57'
N34°51'
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W114°57'
W114°51'
W114°45'
W114°39'
W114°33'
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Golden Valley
Bullhead City
Fort Mohave
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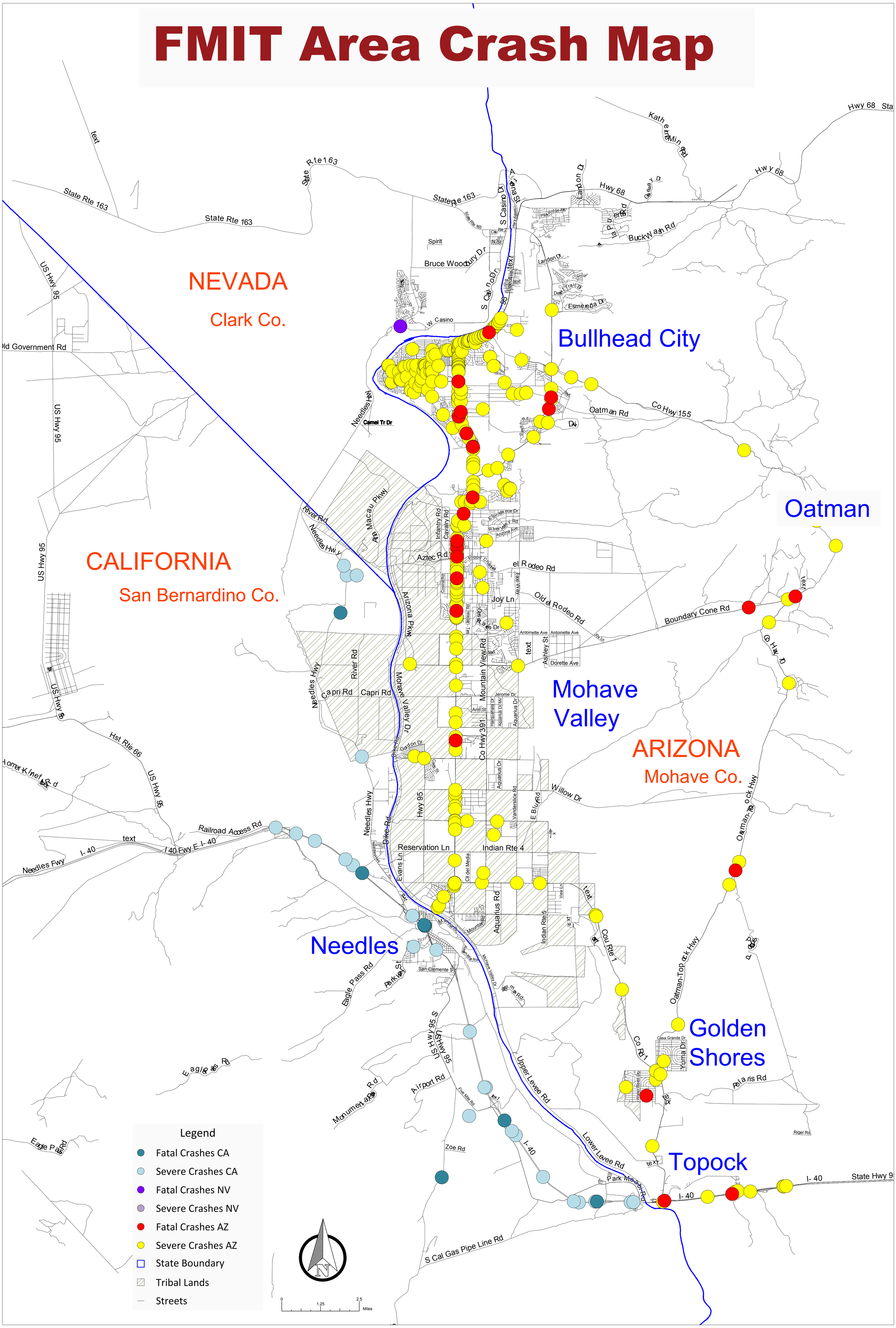
Yucca
163
68
93
95
40
9.86 mi
© 2016 Google
Google earth
Imagery Date: 1/14/2015 34°53'33.46" N 114°40'00.57" W elev 718 ft eye alt 43.08 mi

FMIT Area Crash Map



FMIT Crash Map

NEVADA

Clark Co.

ARIZONA

Mohave Co.

CALIFORNIA

San Bernardino Co.

Mohave Valley

Needles

Legend

- Fatal Crashes CA
- Severe Crashes CA
- Fatal Crashes NV
- Severe Crashes NV
- Fatal Crashes AZ
- Severe Crashes AZ
- State Boundary
- Tribal Lands
- Streets

0 1.75 3.5 Miles

FMIT Tribal Transportation Safety Planning
Tuesday, March 21, 2017 at 10:00 am
Tribal Offices, 500 Merriman Street, Needles, CA

Meeting Notes

1. Greetings - Sign In Sheet attached
2. Review Meeting Notes from February 7, 2017
3. Review all emphasis areas from analysis
4. Review strategies for each emphasis area and approach to implement
    a. Add curve signage under Road Departure strategy
    b. Add soil stabilization with chip seal for Road Shoulder strategy
5. Comments on Draft Safety Plan
    a. Received ADOT comments from Todd Steinberger via email
    b. Tribe – push out all dates on implementation to give time to work on these strategies (review, planning, programming, funding, coordination)

FMIT Safety Plan Meeting
March 21, 2017 at 10:00 am
Headquarters, Needles, CA

Sign In Sheet

Name	Department	Telephone	Email
1. Gregg Whaley	Mohave County	928-757-0924	gregg.whaley@mohavecounty.us
2. KEN PAETZ	ADOT REGION TRAFFIC	(928)681-6022	KPaetz@AZdoT.GOV
3. Wayne Nelson	Planning	760.629.4591	waynerelson@fortmojave.com
4. Elisabeth Whitlock	High Road Engineering	435-767-8481	ewhitlock@highroadengineering.com
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Elisabeth Whitlock

From: Todd Steinberger <TSteinberger@azdot.gov>
Sent: Monday, March 20, 2017 8:53 AM
To: ewhitlock@highroadengineering.com
Cc: Kenneth Paetz
Subject: FMIT Safety Plan Comments

Elisabeth,

Below are my comments.

1. Refer to Page 4. What are the specific improvements at Camp Mohave Road? We are working on roundabout projects at Camp Mohave Round and Aztec Road on the State Route 95 corridor. They are not traffic circles, they are roundabouts. We will also have median from Hammer Lane to Aztec Road on State Route 95. Also the time frame needs to be removed from the Corwin Signal Project. Mohave County's traffic circle in Golden Shores is also a roundabout not a traffic circle.

2. We are also currently working on a Corridor Study on State Route 95 from Teller Lane to the Laughlin Bridge.

3. On Page 8 it refers to coordinate with ADOT to increase law enforcement. We do not have control over law enforcement on the State Route 95 corridor.

4. Concrete median will also assist to prevent head on collisions.

5. Also for clarification purposes the ADOT route that runs from the Laughlin Bridge to the Needles Bridge is Arizona State Route 95.

Thanks

Todd Steinberger, PE
Arizona Department of Transportation
Northwest District
Assistant District Engineer
Office: 928-681-6039
Cell: 480-236-8655

Confidentiality and Nondisclosure Notice: This email transmission and any attachments are intended for use by the person(s)/entity(ies) named above and may contain confidential/privileged information. Any unauthorized use, disclosure or distribution is strictly prohibited. If you are not the intended recipient, please contact the sender by email, and delete or destroy all copies plus attachments.
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APPENDIX C

Fort Mojave Indian Tribe
Safety Plan Contact List

Tribal Council	First Name	Last Name	Title	Telephone	Email
Council	Timothy	Williams	Chairman	760-629-4591	TimothyWilliams@fortmojave.com
Council	Shan	Lewis	Vice Chairman	702-334-2611	ShanLewis@fortmojave.com
Council	Colleen	Garcia	Secretary	702-493-1128	ColleenGarcia@fortmojave.com
Council	Norvin	McCord	Member	760-362-2488	NorvinMcCord@fortmojave.com
Council	Martha	McCord	Member	702-525-8279	MarthaMcCord@fortmojave.com
Council	Johnny	Hemmers	Member	928-234-7465	JohnnyHemmers@fortmojave.com
Council	Nichole	Garcia	Member	760-861-4213	NDenson@fortmojave.com

Tribal Departments	First Name	Last Name	Title	Telephone	Email
Agriculture, Land and Water Resources	John	Algots	Director	928-346-1606	algots@aol.com
Aha Macav Housing Authority	Angela	Rios-Howard	Tenant Occupant Specialist	928-346-1330	rios-howard.a@fmitamhe.org
Education Department	Christina	Cameron-Otero	Director	928-346-1121	tribaled1@ftmojave.com
GIS Department	Craig	Gordon	Director	928-346-1801	cgordon@ftmojave.com
Health Department / Health Clinic	Sierra	Medrano	Safety Officer	928-346-4679	sierra.schaffer@ihs.gov
Roads Department	Joe	Garcia	Director	928-330-2045	joegarcia@fortmojave.com
Tribal Court	Bill	Snodgrass	Prosecutor	928-346-2400	billsnodgrass@ftmojave.com
Police Department	Andrew	Davis	Detective	928-346-1521	adavis@fmtpd.org
Planning Department	Wayne	Nelson	Tribal Planner	760-629-4591	WayneNelson@fortmojave.com

Safety Partners	First Name	Last Name	Title	Telephone	Email
BIA Colorado River Agency	Kellie	Youngbear	Superintendent	928-669-7111	kellie.youngbear@bia.gov
Mohave County Public Works	Steven	Latoski	Director	928-757-0924	steven.latoski@mohavecounty.us
Mohave County Public Works	Gregg	Whaley	Traffic Control Supervisor	928-757-0924	gregg.whaley@mohavecounty.us
Mohave County Public Works	Les	Henley	Engineering Manager	928-757-0910	leslie.henley@mohavecounty.us
City of Needles	Rick	Daniels	City Manager	760-326-2113	ndlscitymgr@citlink.net
Bullhead City Public Works	Pawan	Agrawal	Director	928-763-0128	pagrawal@bullheadcity.com
Clark County Public Works	Denis	Cederburg	Director	702-455-6000	dlc@ClarkCountyNV.gov
San Bernardino County Public Works	Gerry	Newcombe	Director	909-387-8104	gnewcombe@dpw.sbcounty.gov
WACOG Plannng	Justin	Hembree	Planner	928-377-1070	justinh@wacog.com
Mohave County Emergency Services	Byron	Steward	Coordinator	928-757-0930	Byron.Steward@mohavecounty.us
ADOT Northwest District Office	Alvin	Stump	District Engineer	928-777-5879	astump@azdot.gov

Fort Mojave Indian Tribe
Safety Plan Contact List

ADOT Northwest District Office	Ken	Paetz	Regional Traffic	928-681-6022	kpaetz@azdot.gov
Mohave County Sheriff	Jim	McCabe	Sheriff	928-753-0753	mcso@mohavecounty.us
San Bernardino County Sheriff	Ross	Tarangle	Captain	760-326-9200	needlesstation@sbcsd.org
Northern Arizona Consolidated Fire District	Patrick	Moore	Fire Chief	928-757-3151	p.moore@northernazfire.com
Arizona Department of Public Safety - Kingm	Jamie	Clark	Captain	928-753-5552	district1@azdps.gov

Fort Mojave Indian Tribe

TIMOTHY WILLIAMS – Chairman
SHAN LEWIS – Vice Chairman
COLLEEN GARCIA – Secretary
MARTHA McCORD – Council Member • NICHOLE GARCIA – Council Member
NORVIN McCORD SR. – Council Member • JOHNNY HEMMERS – Council Member
500 Merriman Avenue • Needles, CA 92363
(760) 629-4591 • FAX (760) 629-5767

November 1, 2016

Timothy Williams
Fort Mojave Indian Tribe
500 Merriman Avenue
Needles, CA 92363
Via Email: timothywilliams@fortmojave.com

RE: Tribal Transportation Safety Plan

Dear Chairman Williams,

The Fort Mojave Planning Department is preparing a Tribal Transportation Safety Plan through a Federal Highway Administration safety initiative in Indian Country. We want to inform you of our effort and ask that you support us towards zero fatalities or serious injuries on the roadways in our region. Our plan will follow the States' Strategic Highway Safety Plan by focusing on the 4 E's, engineering, education, enforcement, and emergency response. Furthermore, we will focus on the issues specific to our Tribe across western Arizona, eastern California, and southern Nevada.

At this time we are asking all of the stakeholders in transportation safety to share with us any written plans, ongoing coordination efforts, or other information that would align with our shared approach. We are also requesting any traffic incident data that you may have at a tribal government (or personal) level which identifies a particular problem. Our team is seeking to gather as much information as possible to fully analyze the transportation related risks facing tribal members across the region.

Once the available data has been analyzed, we will be developing areas of concern and identifying strategies to improve transportation safety. It is our hope to collaborate with the Council as well as each tribal department during this planning process to include a multi-disciplinary approach. We will be holding meetings in October through February to complete the Safety Plan, and invite the Council and all members to participate.

Thank you for your time and consideration in our request. Please send any information to me at the enclosed address or by email at WayneNelson@fortmojave.com by November 30, 2016.

Respectfully,
Wayne Nelson, AIA
Tribal Planner

Fort Mojave Indian Tribe

TIMOTHY WILLIAMS – Chairman
SHAN LEWIS – Vice Chairman
COLLEEN GARCIA – Secretary
MARTHA McCORD – Council Member • NICHOLE GARCIA – Council Member
NORVIN McCORD SR. – Council Member • JOHNNY HEMMERS – Council Member
500 Merriman Avenue • Needles, CA 92363
(760) 629-4591 • FAX (760) 629-5767

November 1, 2016

Sierra Medrano, Safety Officer
Health Department / Health Clinic
Fort Mojave Indian Tribe
500 Merriman Avenue
Needles, CA 92363

Via Email: sierra.schaffer@ihs.gov

RE: Tribal Transportation Safety Plan

Dear Ms. Medrano,

The Fort Mojave Planning Department is preparing a Tribal Transportation Safety Plan through a Federal Highway Administration safety initiative in Indian Country. We want to inform you of our effort and ask that your department partner with us towards zero fatalities or serious injuries on the roadways in our region. Our plan will follow the States' Strategic Highway Safety Plan by focusing on the 4 E's, engineering, education, enforcement, and emergency response. Furthermore, we will focus on the issues specific to our Tribe across western Arizona, eastern California, and southern Nevada.

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Thank you for your time and consideration in our request. Please send any information to me at the enclosed address or by email at WayneNelson@fortmojave.com by November 30, 2016.

Respectfully,
Wayne Nelson, AIA
Tribal Planner

Fort Mojave Indian Tribe

TIMOTHY WILLIAMS – Chairman
SHAN LEWIS – Vice Chairman
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MARTHA McCORD – Council Member • NICHOLE GARCIA – Council Member
NORVIN McCORD SR. – Council Member • JOHNNY HEMMERS – Council Member
500 Merriman Avenue • Needles, CA 92363
(760) 629-4591 • FAX (760) 629-5767

November 1, 2016

Alvin Stump, District Engineer
ADOT Northwest District Office
1109 E Commerce Drive
Prescott, AZ 86305

Via Email: astump@azdot.gov

RE: Tribal Transportation Safety Plan

Dear Mr. Stump,

The Fort Mojave Indian Tribe is preparing a Tribal Transportation Safety Plan through a Federal Highway Administration safety initiative in Indian Country. We want to inform you of our effort and ask that your agency partner with the Tribe towards zero fatalities or serious injuries on the roadways in our region. Our plan will follow the States' Strategic Highway Safety Plan by focusing on the 4 E's, engineering, education, enforcement, and emergency response. Furthermore, we will focus on the issues specific to our Tribe across western Arizona, eastern California, and southern Nevada.

At this time we are asking all of the stakeholders in transportation safety to share with us any written plans, ongoing coordination efforts, or other information that would align with our shared approach. We are also requesting any traffic incident data that you have at a local level which identifies a particular problem. The Tribe is seeking to gather as much information as possible to fully analyze the risks facing tribal members across the region.

Once the available data has been analyzed, we will be developing areas of concern and identifying strategies to improve transportation safety. It is our hope to collaborate with you in the future to implement those strategies that would be most effective on a multi-agency, multi-disciplinary level. We realize that most of the roadways carry us across geographic boundaries, and that it is necessary to consider the broader transportation network surrounding tribal lands. The Fort Mojave Tribe would also like for your agency to consider the Tribe a partner in the national goal of reducing fatalities on our roadways.

Thank you for your time and consideration in our request. Please send any information to me at the enclosed address or by email at WayneNelson@fortmojave.com by November 30, 2016.

Respectfully,
Wayne Nelson, AIA
Tribal Planner