First Year Evaluation Results from the Co-location of DPS Troopers at the ADOT Traffic Operations Center (TOC)

A Regional Strategy to Improve Freeway Traffic Incident Management

MAG Management Committee
February 10, 2016

MARICOPA ASSOCIATION of GOVERNMENTS
ADOT
U.S. Department of Transportation
Federal Highway Administration

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Evaluation Study

- ADOT & MAG funded 3-Yr Pilot Project
  - Co-location of DPS troopers at the TOC started in October 2014
  - 3-months of staff training
  - The program fully operational in January 2015

- All crash clearance data gathered using the DPS electronic reporting system - TraCS

- Evaluation compared 9-months of BEFORE Vs AFTER performance data:

  Jan-Sept 2014 Vs Jan-Sept of 2015

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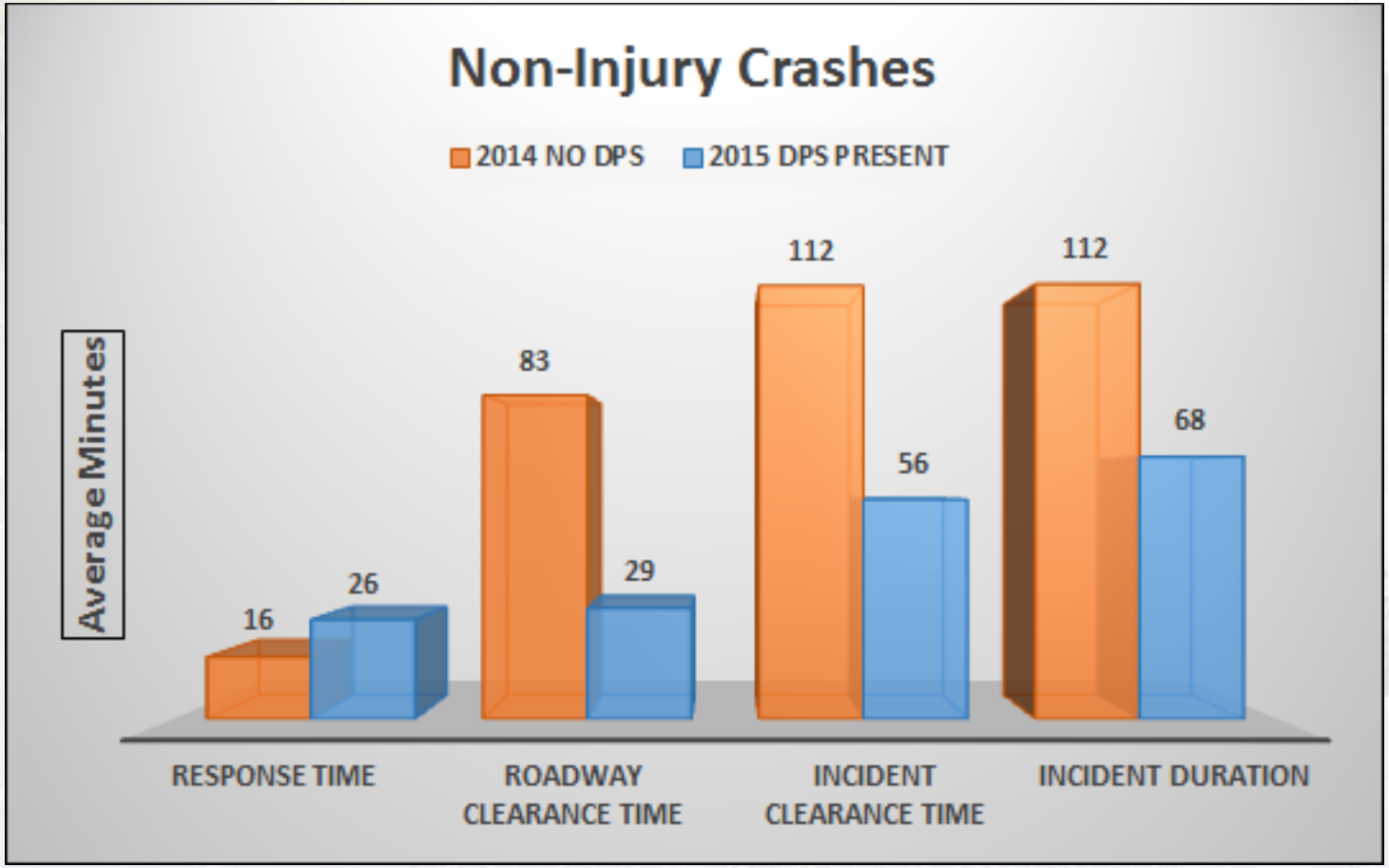
Freeway Crashes with No Injuries



+ 63% **-65%** **-50%** **-39%**

Comparison:
2014(Jan–Sept)
NO DPS
Vs
2015 (Jan-Sept)
DPS Present

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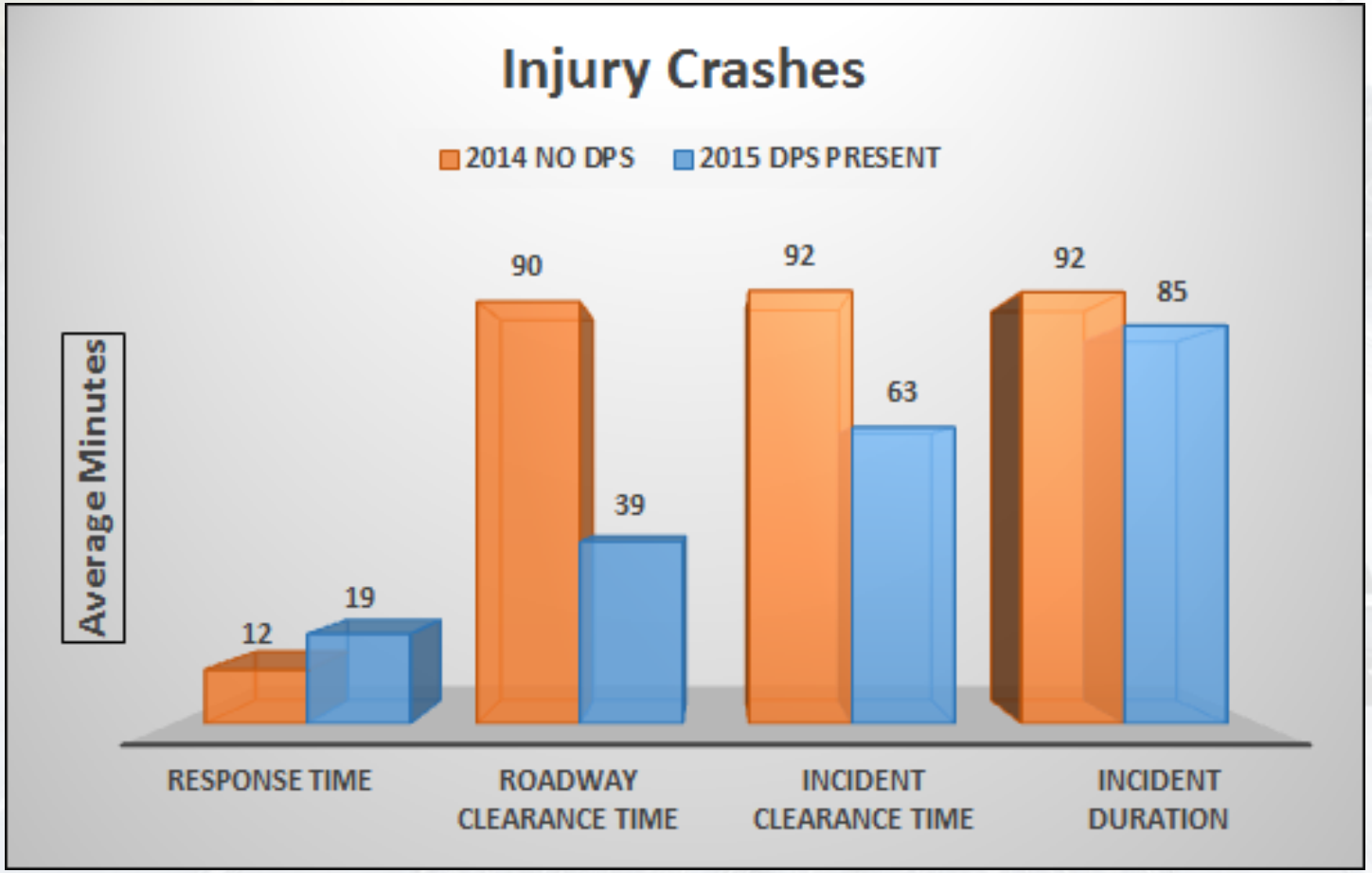
Freeway Crashes with Injuries



+ 58% **-57%** **-32%** **-8%**

Comparison:
2014(Jan–Sept)
NO DPS
Vs
2015 (Jan-Sept)
DPS Present

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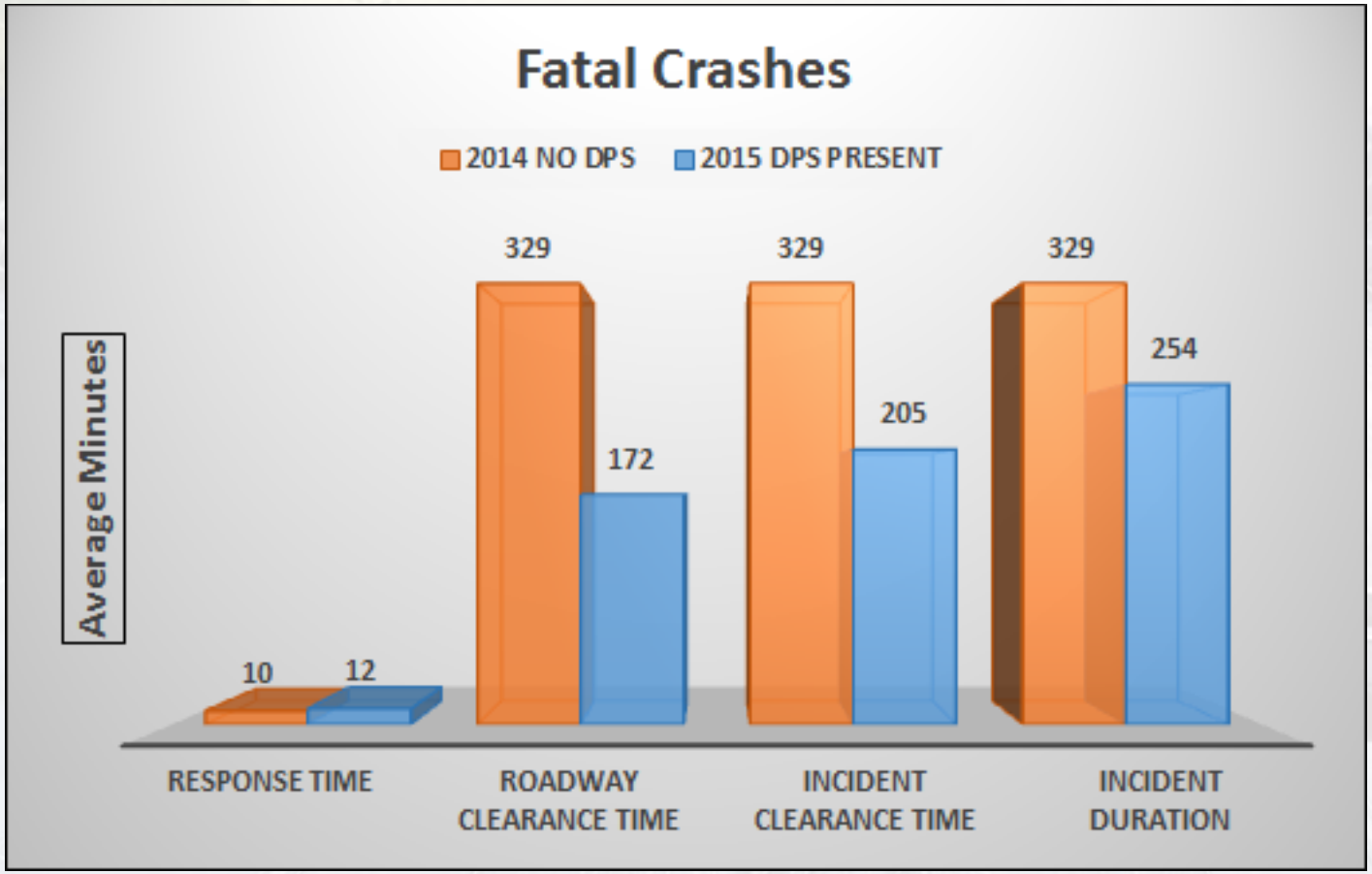
Fatal Crashes on Freeways



+ 20% **-48%** **-38%** **-23%**

Comparison:
2014(Jan–Sept)
NO DPS
Vs
2015 (Jan-Sept)
DPS Present

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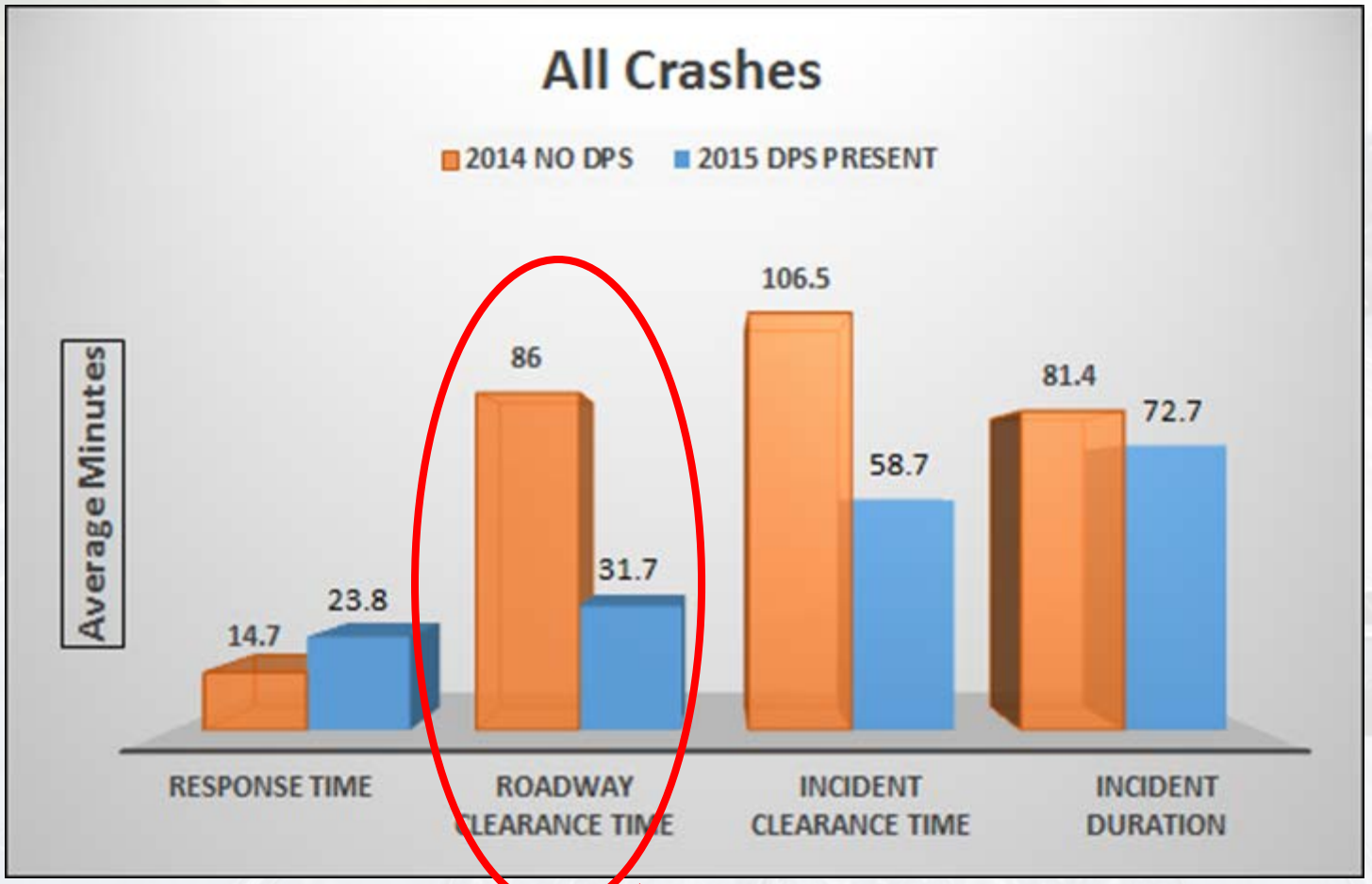
All Freeway Crashes



Comparison:
2014(Jan–Sept)
NO DPS
Vs
2015 (Jan-Sept)
DPS Present

+62% **-63%** **-45%** **-11%**

Reduced by 54 minutes

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Crashes Cleared by DPS "Before" Vs "After"

- **Before: 2014 Jan – Sept = 11,243 crashes**

- **After: 2015 Jan – Sept = 13,862 crashes**

An increase of 23 % for all crashes

Road deaths in Arizona increased by **19 %** in 2015 Vs 2014 (Jan-Aug)

Nationally all road deaths increased by **14 %** (Jan-Jun)

& serious injuries increased by **30 %**

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Media Event Held on Jan 19th

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Estimated Economic Benefit to MAG Region

- Regional Traffic Simulation Model -DynusT
  - Compared total traffic delay experienced by travelers in 2014 & 2015
  - Used observed crash numbers & actual time taken to clear crashes

- Estimated Traffic Delay on Regional Road System
  - In 2015, the total traffic delay experienced by travelers was reduced by nearly **8.4 million vehicle-hours**
  - Equivalent to **$165 million** in savings
  - Does not include potential savings from secondary crashes reduced

- Cost of the program: $450,000 in Year 1, $425,000/Yr in Years 2 & 3

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Summary

- Despite a 23% increase in the number of freeway crashes, the time to clear all freeway lanes at crash sites have been **reduced by nearly one-hour**

- Overall savings due to reduced traffic delay during 2015 is estimated at $165 million

- Year#1 Benefit:Cost = 368:1

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Pilot Project to Co-locate DPS Troopers at the ADOT Traffic Operations Center

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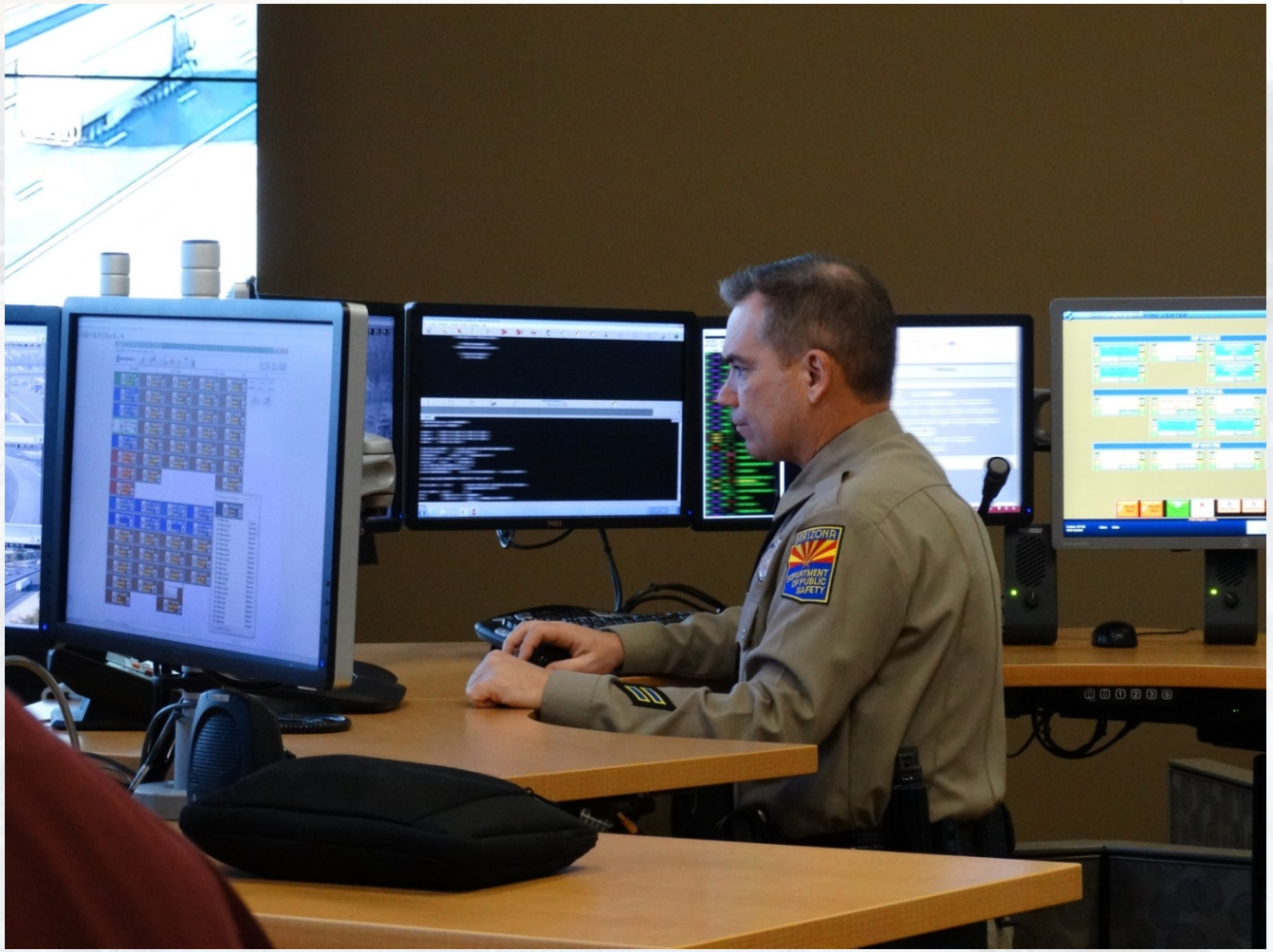

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