Pilot Project to Co-locate DPS Officers in the ADOT Traffic Operations Center (TOC)

A Regional Strategy to Improve Freeway Traffic Incident Management

MAG Management Committee
August 6, 2014

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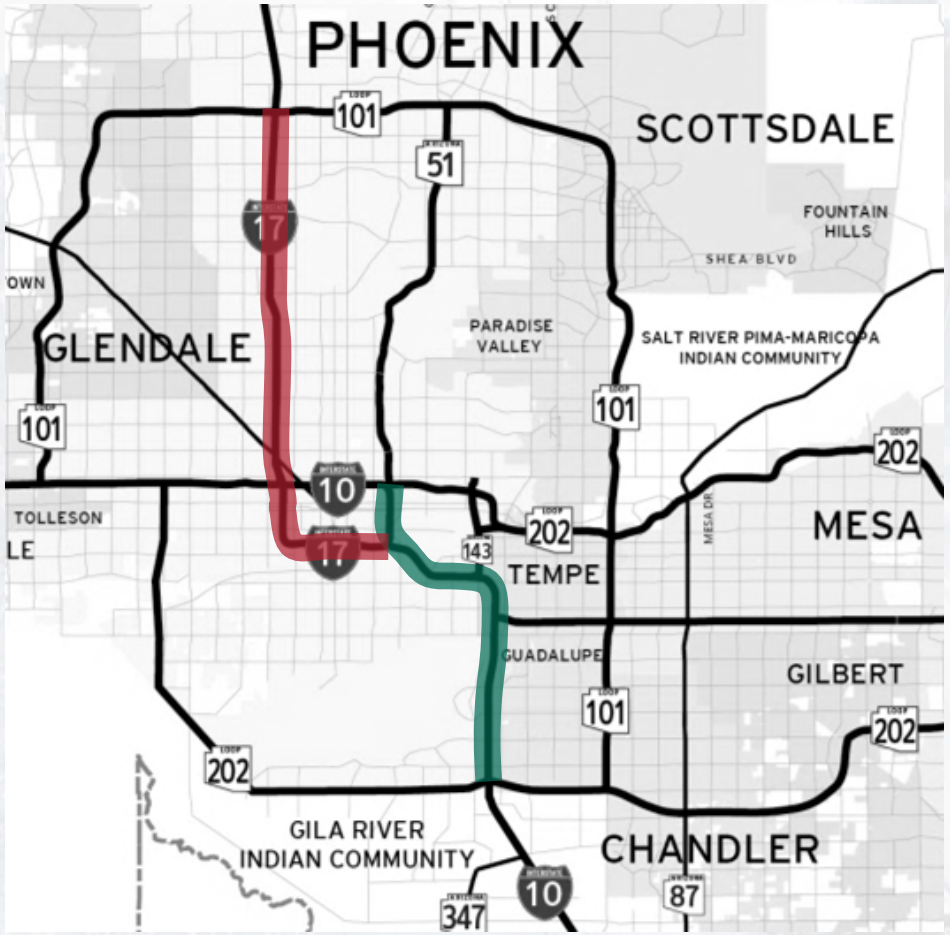
Background

- **I-10/I-17 Corridor – 35-mile "Spine"**
- **$1.47B** programmed in the RTP for corridor improvements
- Previous Corridor EIS Studies cancelled
- New Corridor Master Plan is underway
- Need for Near-Term Improvements in Corridor Operations
- Recommendation from Action Plan for Improving Corridor Operations
  - DPS Co-location at ADOT TOC



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Responses to Questions from the June Meeting

BENEFITS & COSTS:

- Despite anecdotal evidence no studies documenting benefit-cost of co-location

- Benefits were estimated through a traffic simulation analysis by MAG staff
  - **SCENARIO:** 2 hour closure of I-10EB between 51st & 43rd Avenue on a weekday 6am - 8am
  - **ASSUMED:** "25% reduction in closure duration due to co-location" – Utah DOT experience
  - **RESULT: Overall traffic congestion (person-hours delay) reduced by 33 percent**

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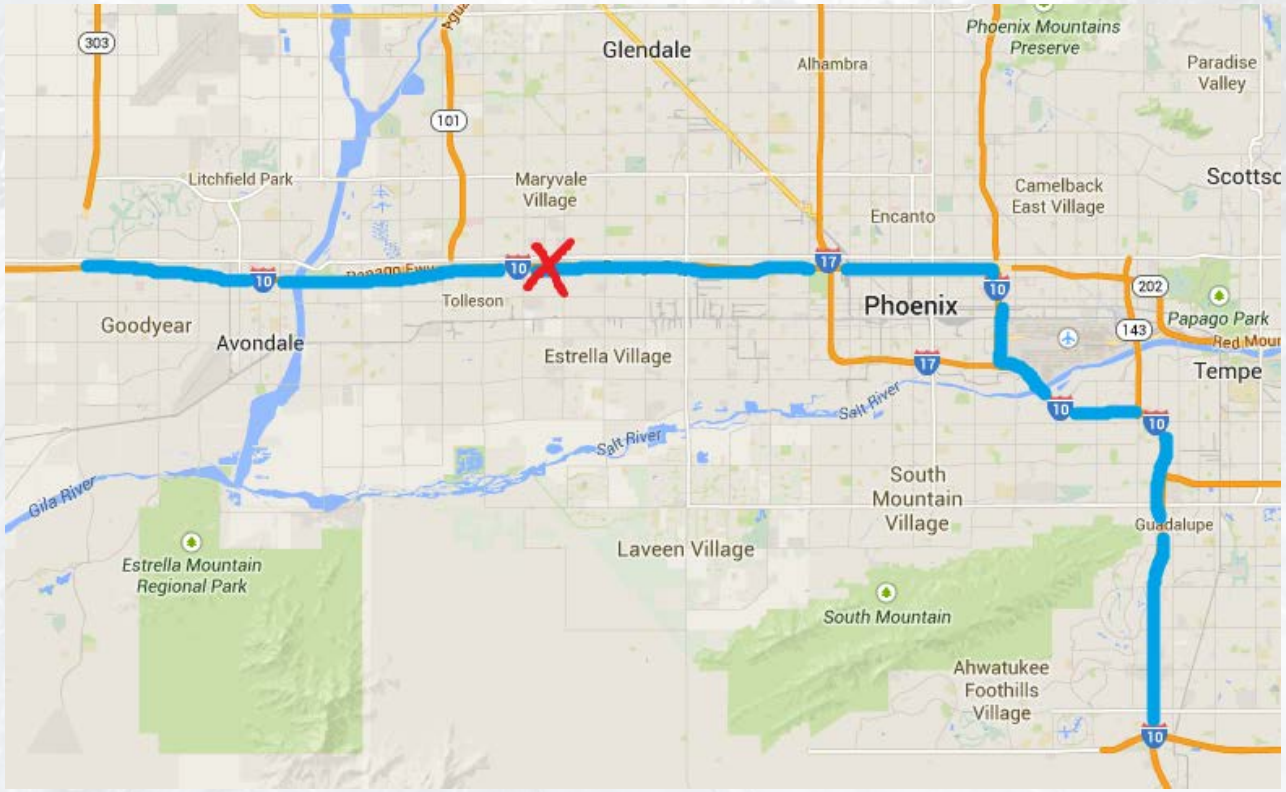
Value of Time Savings

- 33 percent reduction in traffic delay translates to $220,000 in savings
- For year ending June 30th, I-10 segment experienced 30 closures of average duration 3-hrs
- Annual Value of Time Savings for 36-mile I-10 segment = $6.6million



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DPS Responses to Questions

Attachment One included with the Summary Transmittal provides DPS responses to key questions posed at the June meeting

- Major Kelly Heape will elaborate on these responses

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Benefits of Co-locating a DPS Officer in the TOC

- Reduce traffic congestion times and secondary collisions
- Monitor active incidents and mobilize effective response
- Unrestricted DPS CAD access
- Timely updates to police, fire and other first responders
- Serve as Point of Contact

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Traffic Congestion and Secondary Collisions

- Reduce traffic congestion times and secondary collisions
  - Mobilize effective investigative, road clearance, and traffic diversion assets
  - Monitor the Queue

- Secondary collisions on state roadways remain at 6.22%
- Traffic congestion significantly impacts business

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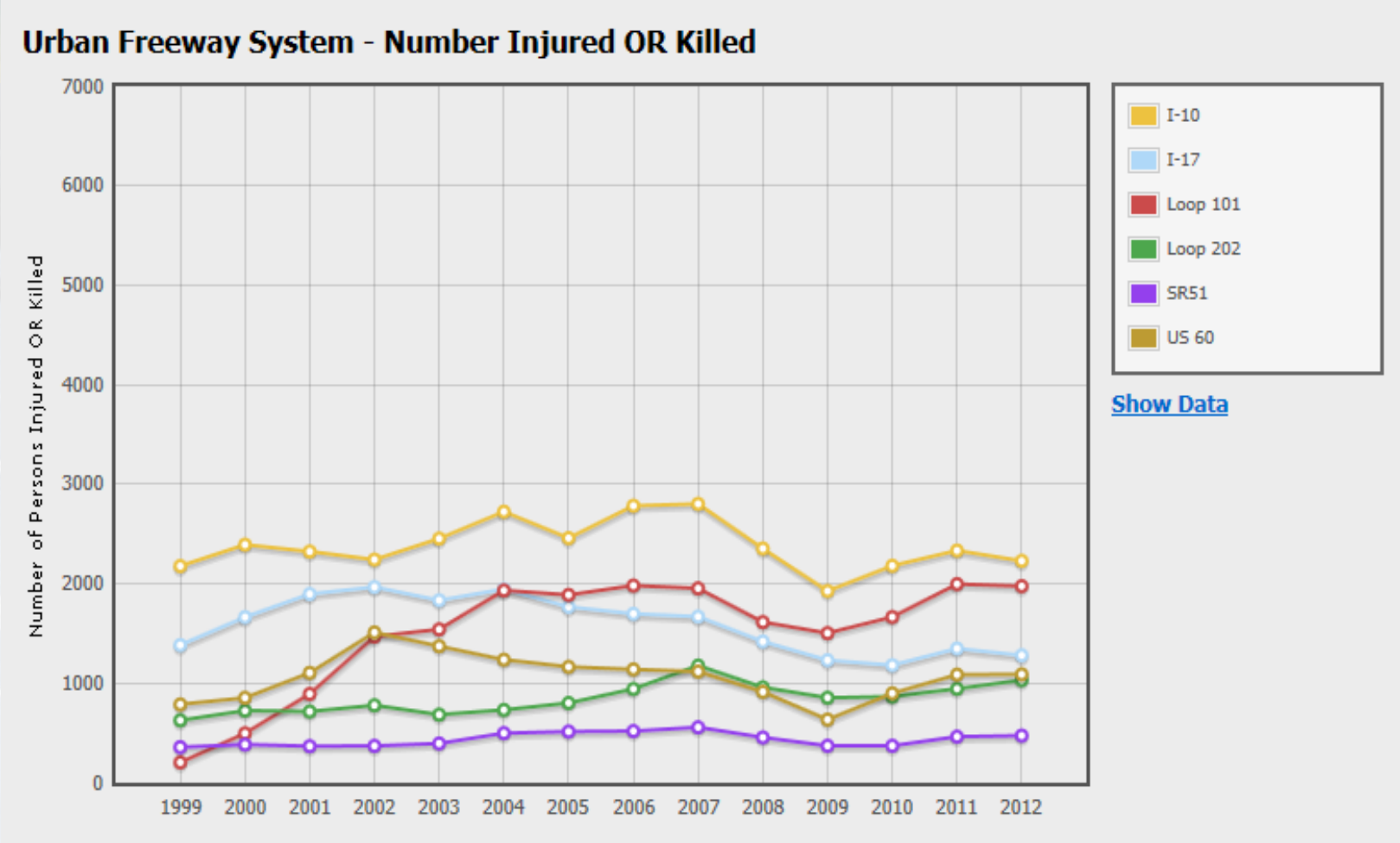
Freeway Crashes in the MAG Region



Freeway Crashes in 2012

All Crashes: 18,183

Number Injured or Killed: 8,082

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Monitoring Active Freeway Traffic Incidents

- Monitor active incidents and mobilize effective responses
  - Traffic camera verification of incident
    - Initial 911 reports are often inaccurate and most always incomplete
  - Sooner mobilization of correct resources
  - Reduce response times of first responders

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Computer Aided Dispatch (CAD)

- ADOT TOC Operators have restricted access to DPS's CAD system; cannot view incidents unrelated to traffic
  - Cannot view incidents like manhunts and other agency assists, even when they affect traffic

- A DPS officer would have unrestricted access to CAD and could significantly increase effectiveness of coordination efforts within the TOC

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Updates for First Responders

- Timely updates to police, fire and other first responders
  - Changes to incident dynamics: fire, hazards, secondary collisions
  - Ingress and egress routes
  - Roadway hazards for first responders
  - Active police situations: jumpers, car jacking, armed suspects
  - Hazardous materials
  - Reduction or increase in first responders

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DPS Officer as Point of Contact

- Serve as Point of Contact
  - Media/social media requests
  - Incident commanders
  - Other agencies

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Coordinated Incident Response

- TOC Operators and DPS officer locate active collisions and incidents on traffic cameras and the officer ensures appropriate resources are called:
  - Police, fire, ambulance
  - ADOT, ALERT
  - Tow trucks; heavy, medium, light, boom, special recovery
- A police officer in the TOC possesses the experience and authority to evaluate an incident scene and activate these resources

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Why not sooner?

- TOC originally opened in 1990 with the purpose of supporting highway and tunnel maintenance
- Original design included:
  - 5 workstations
  - 2 desks for personnel from private media companies
- From 1990 to 2006 TOC's responsibilities evolved to include:
  - Becoming ADOT's primary contact for maintenance, traffic signals, signing and striping, and ITS
  - Coordination of planned events and construction
  - Development and implementation of ITS infrastructure for all of ADOT

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TOC Control Room - 2001

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CAD is Introduced to the TOC

- Prior to the introduction of CAD, TOC operated off of information from units in the field and radio scanners
  - Scanners only received radio traffic from DPS in the Phoenix Metro area
- TOC was granted access to the DPS CAD system in 2006
- Operators were then able to monitor traffic related incidents on a statewide bases
- ADOT notification of roadway incidents from DPS became instant and automated

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TOC Control Room - 2006

While the TOC now had CAD access, the design had not changed

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The Remodeling

- In October of 2011 the TOC got a face lift
  - Replaced analog equipment with digital technology
  - A new monitor wall
  - A re-designed workstation layout that included space for ADOT Public Information Officers, ECD, and DPS
- In addition to TOC Operators, ADOT Public Information Officers now staff the Control Room 20 hours a day, 7 days a week

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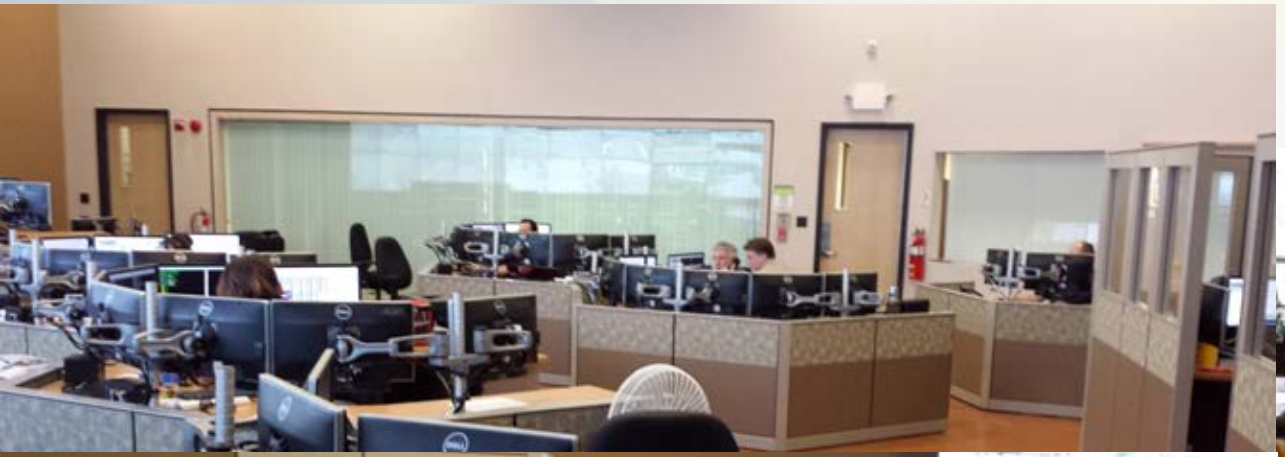
TOC Control Room 2014



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Evaluation Component of 3-Yr Pilot Project

- An interagency initiative between DPS, ADOT & MAG to establish a data archive for Traffic Incident Management metrics - based on best practices

- MAG will utilize this data produce an annual performance report on Freeway Traffic Incident Management (TIM) during the Pilot Project

- A comparison of TIM performance “before” and “after” DPS co-location

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Committee Action

- Recommend approval to fund a **three-year pilot project** with an evaluation component to co-locate three DPS officers and one DPS supervisor in the ADOT Traffic Operations Center,
- Equally share the first year cost of $450,000 and subsequent annual cost of $425,000 with the Arizona DOT, and
- Redirect the MAG share from the MAG Regional Freeway and Highway Program Management Consultant funds of $225,000 for the first year and $212,000 annually for 2nd and 3rd years.

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Pilot Project to Co-locate DPS Officers in the ADOT Traffic Operations Center

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