

City of Tucson Traffic Safety Camera Program

**Presented by the
Tucson Police Department
September 9, 2015**



Traffic Safety Camera Program

History and Background:

- January 2007: Mayor and Council approved the Traffic Safety Camera Program.
- Tucson had been ranked fourth in the nation by the Insurance Institute for Highway Safety (IIHS) for traffic collision fatalities related to red light violations.
- The City of Tucson currently operates Traffic Safety Camera systems at eight (8) intersections.
- The intersections enforce:
 - Red light violations at 26 separate approaches.
 - Speed violations at 21 separate approaches.
- The program also deploys two mobile safety vans within the city limits of Tucson identifying speed violations.
- The following list provides information on intersections and dates placed into service.



Traffic Safety Camera Program

Intersection

Grant Road and Tanque Verde Road
Nogales Highway and Valencia Road
22nd Street and Wilmot Road
River Road and Oracle Road
Speedway Boulevard and Kolb Road
Grant Road and Swan Road
Broadway Boulevard and Craycroft Road
6th Avenue and Ajo Way

Date Placed in Operation

October 29, 2007
January 26, 2008
February 20, 2008
March 29, 2008
November 26, 2010
December 17, 2010
February 27, 2011
October 31, 2011

Mobile Van

Mobile Safety Van #1
Mobile Safety Van #2

July 2007
October 2009





Red-Light

SB E Grant Rd @ Tanque Verde Rd
 WB E Valencia Rd @ S Nogales Hwy
 NB S Nogales Hwy @ E Valencia Rd
 WB E Valencia Rd (LHT) @ S Nogales Hwy
 WB E 22nd St (LHT) @ S Wilmot Rd
 WB E 22nd St @ S Wilmot Rd
 EB 22nd St @ S Wilmot Rd
 EB 22nd St (LHT) @ S Wilmot Rd
 SB N Oracle Rd (LHT) @ W River Rd
 SB N Oracle Rd @ W River Rd
 NB N Oracle Rd @ W River Rd
 NB N Swan Rd @ E Grant Rd
 SB N Swan Rd @ E Grant Rd

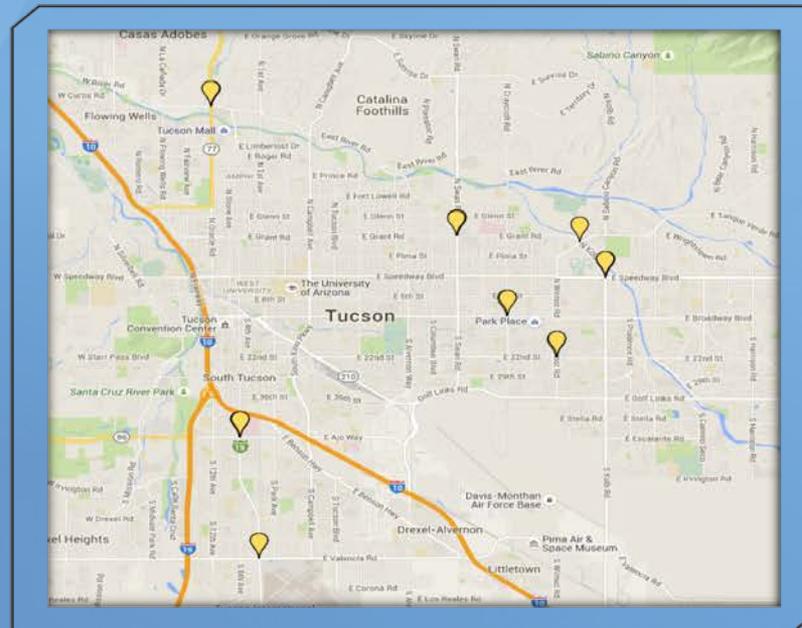
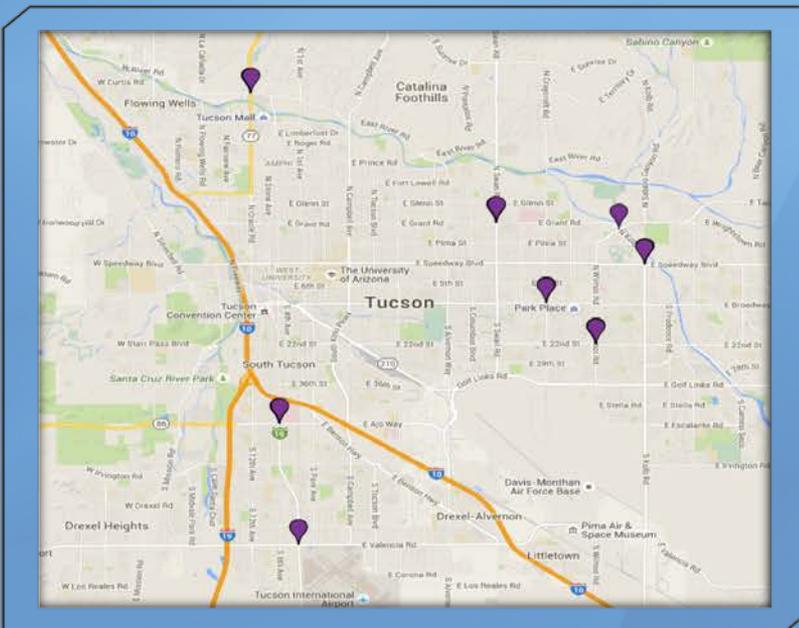
NB N Kolb Rd @ E Speedway Blvd
 SB N Kolb Rd @ E Speedway Blvd
 WB E Speedway Blvd @ N Kolb Rd
 EB E Speedway Blvd @ N Kolb Rd
 SB N Craycroft Rd @ E Broadway Blvd
 WB E Broadway Blvd @ S Craycroft Rd
 EB E Broadway Blvd @ S Craycroft Rd
 EB E Grant Rd @ N Swan Rd
 WB E Grant Rd @ N Swan Rd
 NB S 6th Ave @ E Ajo Way
 EB E Ajo Way @ S 6th Ave
 SB S 6th Ave @ E Ajo Way
 WB E Ajo Way @ S 6th Ave



Intersection Speed

SB E Grant Rd @ Tanque Verde Rd
 WB E Valencia Rd @ S Nogales Hwy
 NB S Nogales Hwy @ E Valencia Rd
 EB E 22nd St @ S Wilmot Rd
 WB E 22nd St @ S Wilmot Rd
 SB N Oracle Rd @ W River Rd
 NB N Swan Rd @ E Grant Rd
 SB N Swan Rd @ E Grant Rd
 WB E Grant Rd @ N Swan Rd
 EB E Grant Rd @ N Swan Rd
 NB N Kolb Rd @ E Speedway Blvd
 SB N Kolb Rd @ E Speedway Blvd
 EB E Speedway Blvd @ N Kolb Rd

WB E Speedway Blvd @ N Kolb Rd
 SB S Craycroft Rd @ E Broadway Blvd
 EB E Broadway Blvd @ S Craycroft Rd
 WB E Broadway Blvd @ S Craycroft Rd
 EB E Ajo Way @ S 6th Ave
 NB S 6th Ave @ W Ajo Way
 SB S 6th Ave @ W Ajo Way
 WB E Ajo Way @ S 6th Ave

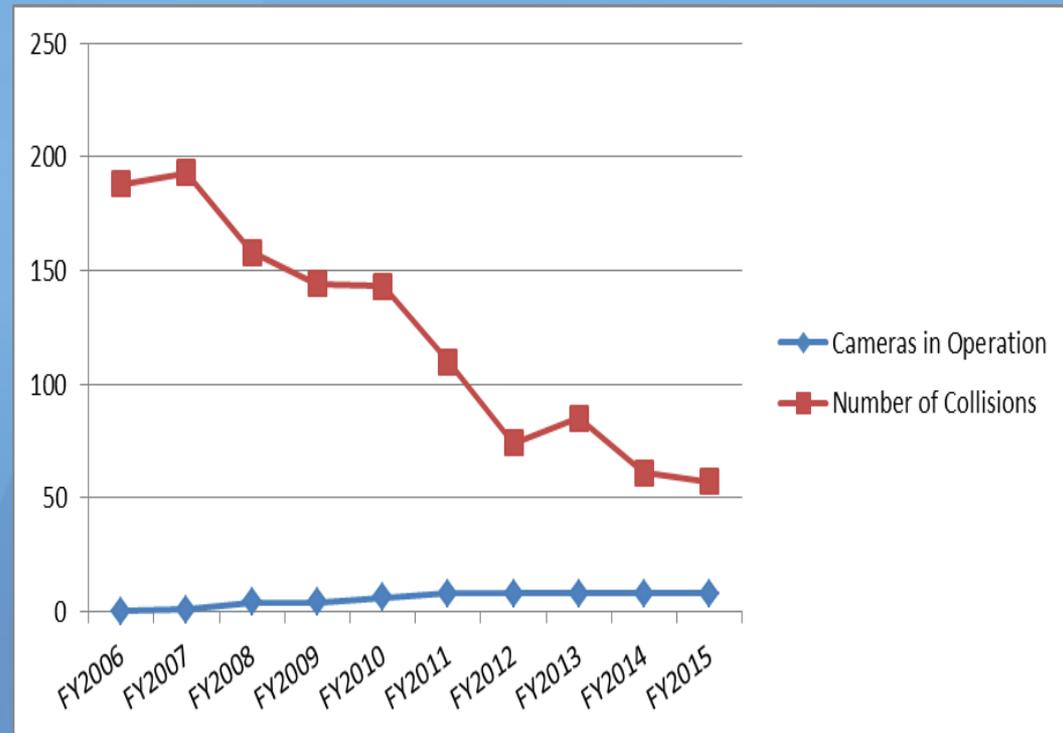


Traffic Safety Camera Program

The total number of collisions for the eight intersections in FY 2006:
188 collisions

The total number of collisions for FY 2015:
57 collisions*

Collisions have been reduced by 70 % at eight monitored intersections



*Change in Police Response to some collisions in 2011



Traffic Safety Camera Program

Potential Financial Impact and Cost Savings of the Traffic Camera Safety Program:

Nationally, a total of 32,719 people died in motor vehicle crashes in 2013. The U.S. Department of Transportation's most recent estimate of the annual economic cost of crashes was **\$242 billion dollars.** *

** Blincoe, L.J.; Miller, T.R.; Zaloshnja, E. and Lawrence, B.A. 2015. The economic and societal impact of motor vehicle crashes, 2010 (revised). Report no. DOT HS-812-013. Washington, DC: National Highway Traffic Safety Administration.*



Traffic Safety Camera Program

Potential Financial Impact and Cost Savings Continued:

- In November 2011, AAA Insurance published a report titled; **“Crashes Vs Congestion, What’s the cost to Society?”**
- After compiling data for each Metropolitan Statistical Area (MSA), including Tucson, a cost was applied to monetize fatalities and injuries.
- The report uses the U.S. DOT’s 2009 Value of a Statistical Life (VSL) of **\$6 million** for the average cost of a fatality, and \$126,000 for the average cost of an injury.



Traffic Safety Camera Program

Potential Financial Impact and Cost Savings Continued:

- The U.S. DOT defines the **Value of a Statistical Life (VSL)** as the estimated monetary benefit of a reduction by one in the expected number of fatalities.
- The U.S. DOT memorandum estimates:
 - **Property Damage**
 - **Traffic Delay**
 - **Lost Productivity**
 - **Costs of Police and Follow-up Investigation**
 - **Medical**
 - **Legal**
 - **Insurance Services**
- The tables listed on the next slide used the U.S.DOT's 2009 VSL value of \$6 million for the average cost of a fatality, however the current 2015 value is an estimated **\$9 million**.



Traffic Safety Camera Program

| Metropolitan Area | Metro Area Size | Number of Fatalities | Number of Injuries | Cost of Fatalities (Millions) | Cost of Injuries (Millions) | Total Cost of Crashes (Millions) |
|-------------------|-----------------|----------------------|--------------------|-------------------------------|-----------------------------|----------------------------------|
| Tucson | Medium | 92 | 7,926 | \$552 | \$999 | \$1,551 |

| Metropolitan Area | Population | Total Cost of Crashes (Millions) | Total Cost of Crashes per person |
|--------------------|------------|----------------------------------|----------------------------------|
| Tucson, AZ* | 1,020,200 | \$1,551 | \$1,520 |
| Salt Lake City, UT | 1,130,293 | \$1,672 | \$1,480 |
| Bakersfield, CA* | 807,407 | \$1,328 | \$1,644 |
| Tulsa, OK | 929,015 | \$2,237 | \$2,408 |

*Cities with Traffic Camera Safety Program.

Source: "Crashes Vs Congestion, What's the cost to Society?," November 2011, AAA Insurance.



Traffic Safety Camera Program

| | Tucson, AZ - Violation Events and First Notice Counts | | | | | | | |
|----------------------|---|------------|---------------------|----------------------|-----------|------------|---------------------|----------------------|
| | 2014 | | | | 2015 | | | |
| | RL Events | SOG events | Citations Issued RL | Citations Issued SOG | RL Events | SOG events | Citations Issued RL | Citations Issued SOG |
| Grant @ Tanque Verde | 3,789 | 333 | 1,236 | 140 | 2,587 | 267 | 836 | 117 |
| Grant @ Swan | 12,128 | 1,373 | 4,271 | 491 | 8,932 | 1,086 | 2,940 | 387 |
| Valencia @ Nogales | 4,805 | 1,360 | 1,486 | 485 | 3,235 | 706 | 994 | 257 |
| 22nd @ Wilmot | 7,192 | 527 | 1,464 | 115 | 5,379 | 496 | 1,294 | 133 |
| Oracle @ River | 6,951 | 574 | 2,085 | 167 | 4,227 | - | 1,333 | - |
| Speedway @ Kolb | 13,392 | 5,041 | 3,804 | 1,957 | 8,962 | 3,830 | 2,792 | 1,516 |
| Broadway @ Craycroft | 16,505 | 2,252 | 5,430 | 700 | 6,773 | 1,511 | 2,137 | 476 |
| Ajo @ 6th | 6,449 | 1,567 | 2,041 | 604 | 2,649 | 639 | 934 | 246 |

2014: Total RL Citations: 21,817 SOG: 4,659

Total Citations for 2014: **26,476**

2015: Total RL Citations: 13,260 SOG: 3,132

Total Citations for 2015: 16,392 (Year To Date)



Traffic Safety Camera Program

Tucson Police Department Staffing for Patrol and Traffic Enforcement Divisions and Their Respective Citation Statistics

(BETWEEN JULY 1, 2014 AND JUNE 30, 2015)

NUMBER OF OFFICERS/LPOs ON 06/30/15 (ACTUAL)

| Division | Officers |
|----------|----------|
| FSB | 380 |
| Motors | 20 |
| Total: | 400 |

(Source: FSB Weekly Staffing Report dated 06/28/15)
(Source: Telestaff filter by rank and assignment on 6/30/15)

| Division | Citation Count |
|----------|----------------|
| ODS | 8,329 |
| ODW | 7,970 |
| ODM | 10,189 |
| ODE | 10,256 |
| ODD | 5,478 |
| Motors | 22,632 |
| Total: | 64,854 |



Traffic Safety Camera Program

Comparison of the Traffic Camera Safety Program enforcement statistics to TPD patrol personnel

- The Average number of Traffic Citations per Officer, Lead Police Officer in FSB, and Motors (FY15): .974 cites per day = **162 citations per officer annually**
- **Traffic Camera Safety Program Statistics: 2014:** Total RL Citations: 21,817
SOG: 4,659
- **Total Traffic Camera Safety Program Citations for 2014: 26,476**
- 26,476 (Photo Enforcement Citations) / 162 (average annual citations written by a TPD Patrol Officer) = **approximately the production of 163 officers annually.**



Summary Notes

- Traffic safety cameras **operate 24 hours per day, seven days per week** and continually capture violations in a **cost efficient** manner that **could not be duplicated by human enforcement**.
- **Commissioned police officers review each violation to validate the event** and compare the photo of the driver with the Motor Vehicle Division (MVD) photo of the registered owner of the vehicle.
- Of all the photo enforcement events captured in CY 2014 and so far in 2015, **33% were issued citations**. 40% were not issued for a variety of reasons, 27% were issued as notice of violation (*Fine not issued with NOV's*)
- The City has experienced a **70% decrease in annual collisions at the 8 intersections** monitored by cameras... 188 in FY 2007 to 57 in FY 2015.



Summary Notes

- **Over 85%** of drivers receiving a citation **did not receive a second citation.**
- In FY 2015 **10,396 violators completed defensive driving school.**
- In FY 2015 the City collected **\$1,773,533.00 (net)** plus \$616,844.00 in police and court costs for a total of **\$2,390,377.00**
- In FY 2015 Photo Enforcement was responsible for 26,476 citations = **29% of all citations** for the year, the **equivalent of 163 additional patrol officers.**



Summary Notes

When Cameras are Removed...

- Pima County DOT recorded that the Nogales Highway and Swan Road locations, **speeding violations tripled from 2013 to 2014.**
- When cameras went dark in Pima County, Tucson violations temporarily increased at neighboring Tucson locations by up to **39%.**
- Houston Police Department – HPD crash statistics show an increase of **117%** over the last four years without cameras, including a **30% increase in fatal collisions.**
- Virginia Beach, **red-light running rates quadrupled within one year** at intersections where cameras were shut down.



Traffic Safety Camera Program

Questions?



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