



City of San Leandro

# Work Session on City Cameras

February 26, 2018

# Alignment with City Council Goals

- Provide quality public safety service and grow our partnership with the community to keep San Leandro safe
  - Technology force multipliers
  - Public safety cameras
- Maintain and enhance San Leandro's infrastructure
- Support and implement programs, activities and strengthen communication that **enhances the quality of life** and wellness, celebrates the arts and diversity and promotes civic pride

# Overview of Tonight's Work Session

- Introduction and background
- Key Topics for City Council Feedback
- Inventory of existing City-operated cameras
- Overview of Police Department public safety camera program
- Overview of red light camera enforcement program
- Overview of potential cameras in city parks
- Summary of draft retention policy
- Request for Council direction

# Introduction & Background

- Topic originated as a City Council request for follow-up in 2016
- Camera inventory presented to Facilities & Transportation Committee on May 3, 2017
- Facilities & Transportation Committee directed staff to schedule work session and provide data-driven proposal for public safety cameras
- City Council identified public safety cameras as priority during January 2018 Planning Session

# Key Topics for City Council Feedback

- Are we on the right track and shall the City further pursue installation of new public safety cameras?
- Maintenance/modernization of existing non-Police Department cameras
- Red light enforcement contract set to expire in April 2019
- Further exploration of safety cameras in city parks to deter/prosecute graffiti & vandalism

# Inventory of Existing Cameras

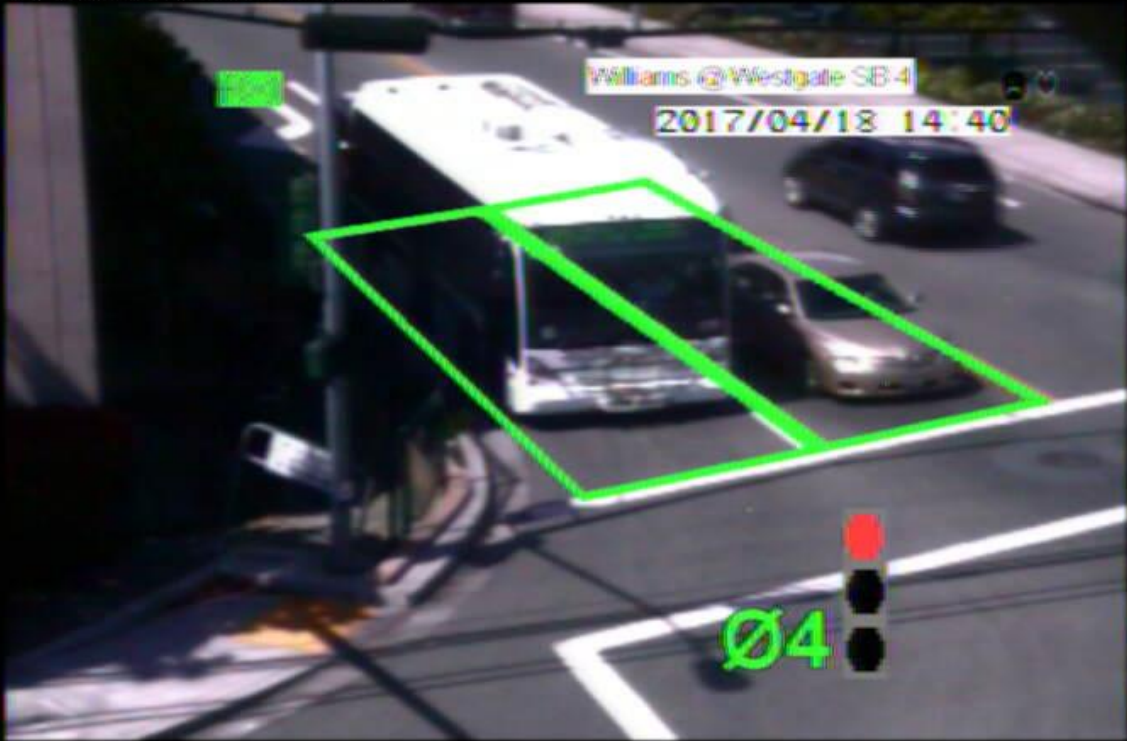
Engineering & Transportation:

- 12 CCTV
- 87 Motion detection

Recording Capability varies between continuous 3-day looping, 14-16 days, to one year

# Williams at Westgate

Williams & Westgate (SB) 04/18/2017 14:40:25



# Davis at SL Blvd

Davis @ San Leandro 04/18/2017 14:45:47



# Inventory of Existing Cameras (cont'd)

## Public Works / Library/Recreation:

- 56 CCTV at various city-owned facilities and community centers
- 46 CCTV at Main & Manor branch libraries
- 12 RealTime (downtown garage)
- 1 drone (not in use)
- 1 self-propelled (sewer camera)
- 1 GoPro (to be mounted on nozzle of hydro-jetter truck)
- 23 CCTV – City Hall
- 4 Council Chambers for recording meetings

Recording Capability varies between continuous recording until system overwrites, to indefinite retention for archival purposes (sewer camera only)



# Main Library



# Inventory of Existing Cameras (cont'd)

## Police:

- 8 license plate readers
- 92 Axon body cameras (retained for 365 days unless part of investigation or claim)
- 15 CCTV - public safety building (retained for 7 days)
- 9 CCTV - Jail (retained for 1 year, unless part of investigation or claim)
- 5 red light cameras
- 2 watch guard cameras on van and rescue vehicle

# Overview of Police Dept. Public Safety Cameras

## Freeway cameras a 'game changer' for Highway 4 gun violence

Pittsburg to head Freeway Security Network Project to fight freeway shootings



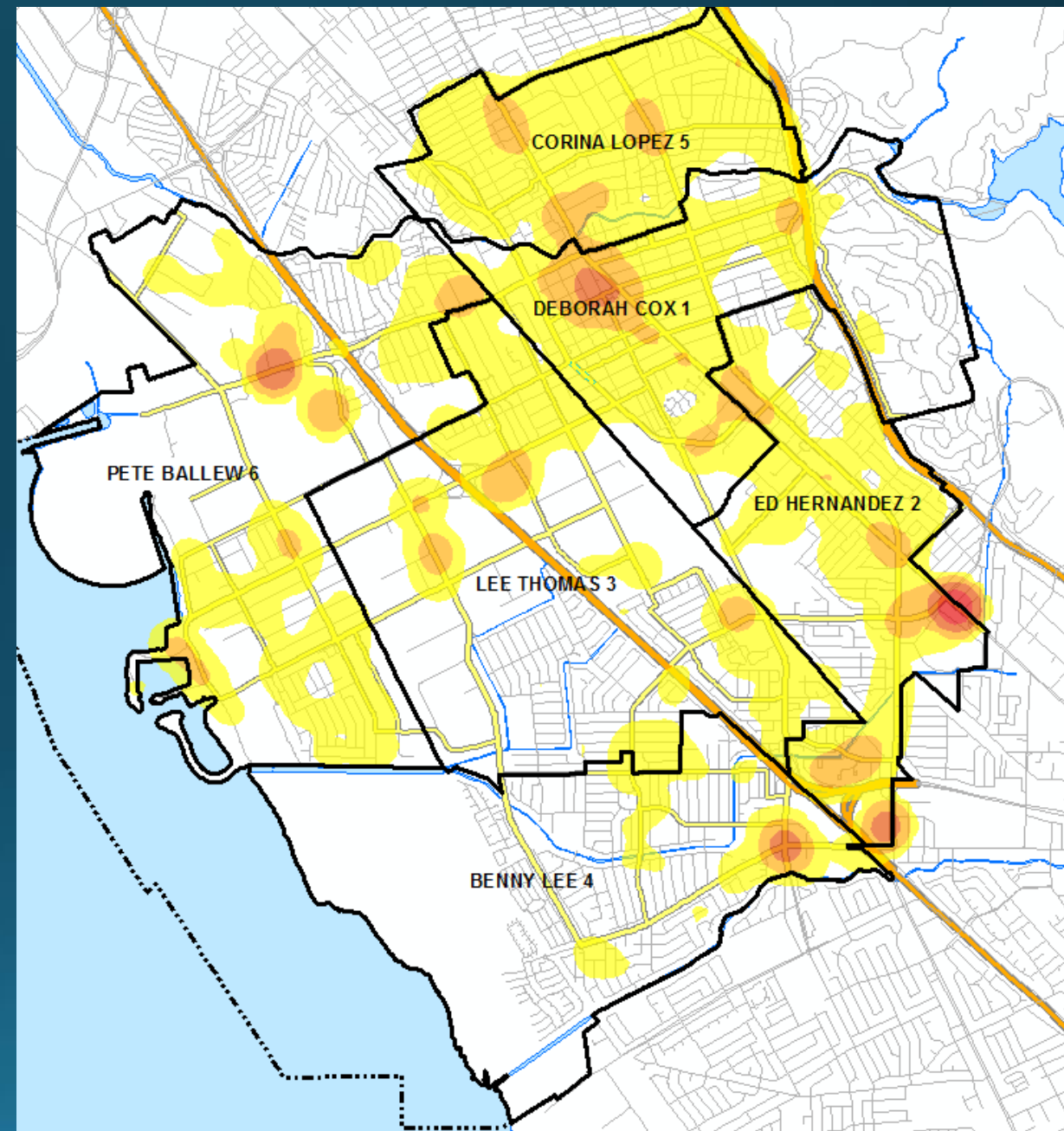
# Methodology & Sources of Data

- 3 years of prior Part 1 crime data (Jan. 2015 - Jan. 2018)
- Access points to City Fiber Loop
- Arrest Data from 2013-2017
- Discussion with SLPD Criminal Investigations Division supervisors
- Locations where major investigations have taken place where cameras were either helpful or needed for case closure and arrest



# Density Map by Council District

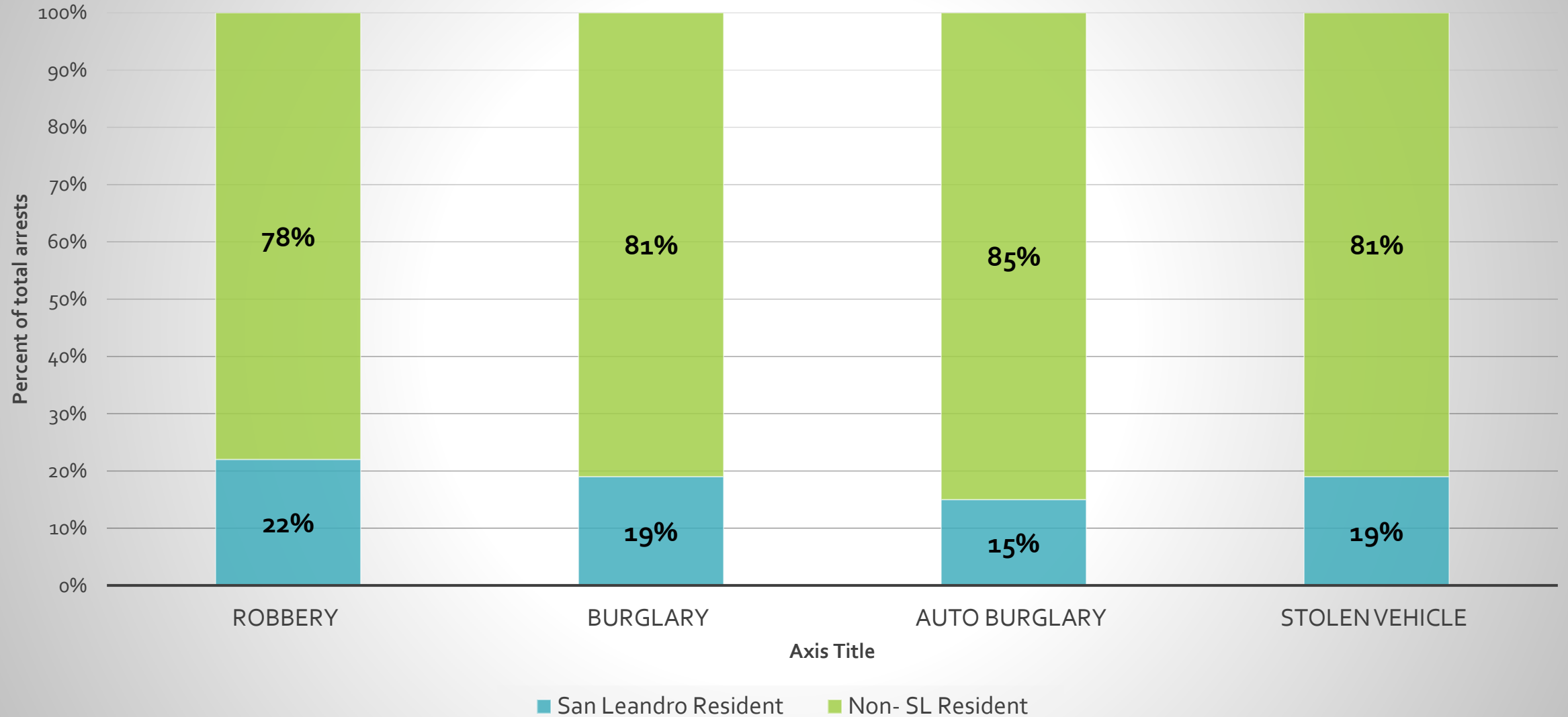
- Represents all Part 1 Crime reported to SLPD from 01/22/2015-01/21/2018
- Red and Orange:  
Areas where reported crime is more dense (more points in equally represented area)
- Yellow:  
Areas where crime has been reported; however less of it has occurred, or is dispersed over area represented



# Arrest Data – Resident % of Total

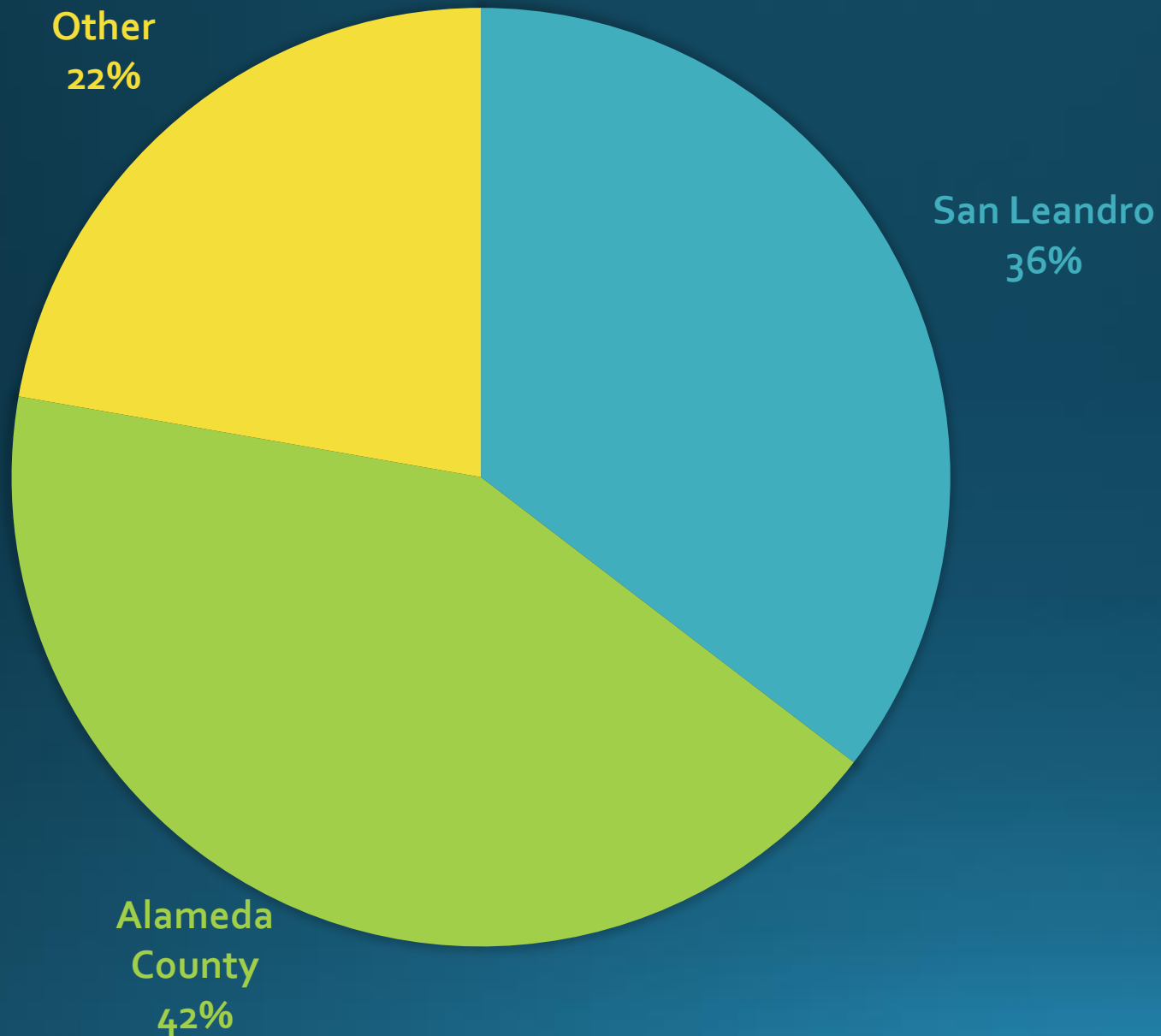
	Robbery	Robbery % of Total	Burglary	Burglary % of Total	Auto Burglary	Auto Burglary % of total	Stolen Vehicle	Stolen Vehicle % of total
<i>San Leandro Resident</i>	90	22%	113	19%	15	15%	131	19%
<i>Non- SL Resident</i>	327	78%	474	81%	85	85%	562	81%
Total	417	N/A	587	N/A	100	N/A	693	N/A

## Resident vs. Non-Resident arrests by Crime Type



\* Includes 5 years of arrest data 01/01/2013-12/31/2017

## 2013-2017 ARRESTS BY LOCATION OF RESIDENCE



Includes:

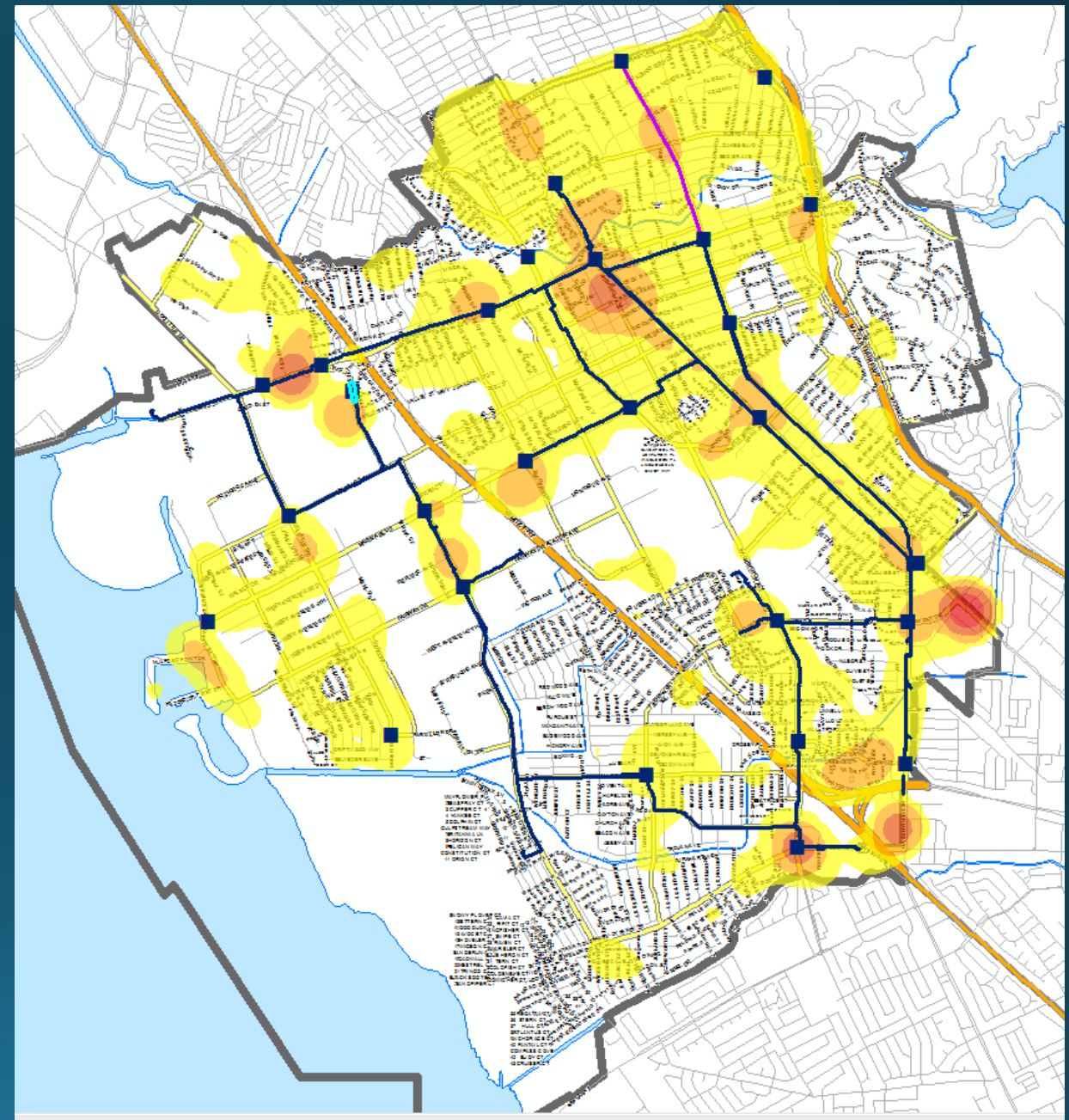
All Arrests 01/01/2013-  
12/31/2017

- Alameda County includes all other cities in Alameda County with exception of San Leandro.
- "San Leandro" may include residents who live in unincorporated Alameda County with San Leandro mailing address



# Potential Locations

- Density Map of Part 1 Crime
- City Fiber Loop
  - Dark blue line
  - Purple line – City Conduit (no fiber)
- Potential Camera Locations
  - Dark blue square icon
  - 27 potential locations identified



# Potential Locations

- Staff does not have a specific proposal at this time regarding specific locations or number of public safety cameras
- Staff seeks City Council direction on overall approach

# Significant cases where cameras may have been helpful

- **Homicide – Kenilworth**
- **Homicide – Heron Bay**
- **Road Rage Homicide**
- **Regional Robbery Series**
- **Robbery / Shooting – Sam's Burgers**

# Significant cases where cameras were instrumental in solving case

- Attempted Homicide/ Rolling Gun Battle
- Rape – Bridge Road
- Kidnapping Attempt – 14700 block of Washington
- Rape –Area of San Leandro BART Station
- Various Residential Burglaries

# Red Light Camera Enforcement Program



# Why Red Light Cameras?

- Red Light Violations cause 100,000 crashes and 1,000 fatalities each year
- Red Light Violations are often deadly
- Red Light Cameras are an effective way to discourage red light running throughout the entire City
- Red Light, Stop Sign and traffic control violations are the most common type of collision
- 70 California law enforcement agencies implemented red light cameras in 2003
- Red light cameras provide 24-7 enforcement
- Reduces risk when Police must often run the red light as well to apprehend and cite a red light violator





# Effective Use of Red Light Cameras

Red Light Cameras provide a positive crash-cost benefit

Most beneficial at intersections where:

- There are few rear-end crashes and many right-angle crashes
- Higher proportion of entering traffic on the major road
- Locations with left-turn protected phases

High publicity levels enhance the benefits of Red Light Camera Systems

Safety Evaluation of Red-Light Cameras – FHWA April 2005(1)

**EXECUTIVE SUMMARY**

## Safety Evaluation of Red-Light Cameras—Executive Summary

FHWA Contact: Michael Griffith, HRDS-02, 202-493-3316

This document is an Executive Summary of the report *Safety Evaluation of Red-Light Cameras*, FHWA-HRT-05-048, published by the Federal Highway Administration in April 2005.

**Abstract**

The fundamental objective of this research was to determine the effectiveness of red-light-camera (RLC) systems in reducing crashes. The study involved an empirical Bayes (EB) before-after research using data from seven jurisdictions across the United States to estimate the crash and associated economic effects of RLC systems. The study included 132 treatment sites, and specially derived rear end and right-angle unit crash costs for various severity levels. Crash effects detected were consistent in direction with those found in many previous studies: decreased right-angle crashes and increased rear end ones. The economic analysis examined the extent to which the increase in rear end crashes negates the benefits for decreased right-angle crashes. There was indeed a modest aggregate crash cost benefit of RLC systems. A disaggregate analysis found that greatest economic benefits are associated with factors of the highest total entering average annual daily traffic (AADT), the largest ratios of right-angle to rear end crashes, and with the presence of protected left-turn phases. There were weak indications of a spillover effect that point to a need for a more definitive, perhaps prospective, study of this issue.

**Introduction and Background**

RLC systems are aimed at helping reduce a major safety problem at urban and rural intersections, a problem that is estimated to produce more than 100,000 crashes and approximately 1,000 deaths per year in the United States.<sup>(1)</sup> The size of the problem, the promise shown from the use of RLC systems in



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# Why Red Light Cameras?

In cities that **turned on** red light cameras



**21% fewer**

fatal red light running crashes  
per capita



**14% fewer**

fatal crashes of all types per capita  
at signalized intersections

than would have occurred without cameras

In cities that **turned off** red light cameras



**30% more**

fatal red light running crashes  
per capita



**16% more**

fatal crashes of all types per capita  
at signalized intersections

than would have occurred with cameras

Effects of Turning On and Off Red Light Cameras  
on Fatal Crashes in Large U.S. Cities  
Insurance Institute for Highway Safety – July 2016



# San Leandro Program Initiation 2005

- Intersections with the Highest Numbers of Accidents
  1. Fairmont Dr/Halcyon Dr and Hesperian Blvd
  2. Lewelling Blvd and Washington Ave
  3. Marina Blvd and Merced Street
  4. Washington Blvd and Halcyon Ave/Floresta Blvd
  5. San Leandro Blvd and Washington Ave
- Intersections with the Highest Red Light Running Complaints
  1. Davis Street and Warden Ave/Timothy Dr
  2. Davis Street and Doolittle Dr
  3. Doolittle Dr and Fairway Dr



# Red Light Camera Actions in 2005

## Key Findings of USDOT report:

- Red Light Violations caused 200,000 crashes and 1,000 fatalities each year
- 70 California law enforcement agencies implemented red light cameras in 2003
- Red light cameras provide 24-7 enforcement
- Reduces risk when Police must often run the red light as well to apprehend and cite a red light violator

# San Leandro Program Initiation 2005

San Leandro Police Department staff evaluated several vendors that provide red light camera programs. Redflex Traffic Systems was selected based on the following criteria:

- 1) Technical aspects of its program
- 2) Positive customer service input
- 3) Familiarity with the Alameda County judicatory process;
- 4) The overall proven success of its programs.



# Red Light Camera Actions

2003: California state legislation enacted to codify red light camera program.

2005: San Leandro joins over 70 law enforcement agencies in California by installing red light cameras at select intersections.

# San Leandro Program Initiation 2005

## Redflex Conducted Video Surveys June 2005

### Intersection

Marina & Merced

Lewelling & Washington

Dutton & MacArthur

Marina & Teagarden

Davis & East 14<sup>th</sup>

150<sup>th</sup> & East 14<sup>th</sup>

Fairmont & East 14<sup>th</sup>

Washington & Halcyon/Floresta

### Traffic Direction

Westbound

Eastbound

Southbound

Westbound & eastbound

Northbound & southbound

Northbound & southbound

Eastbound

All 4 directions

# San Leandro Program Initiation 2005

## Redflex Conducted Video Surveys June 2005

Intersections	NB LT	NB	NB RT	SB LT	SB	SB RT	EB LT	EB	EB RT	WB LT	WB	WB RT
Marina & Teagarden	*	*	*	*	*	*	19	6	35	5	3	0
Davis & East 14th	19	2	2	0	8	0	*	*	*	*	*	*
Fairmont & East 14th	*	*	*	*	*	*	6	21	37	*	*	*
Lewelling & Washington	*	*	*	*	*	*	12	4	0	*	*	*
Washington & Halcyon/Floresta	0	2	2	2	9	0	3	4	12	4	14	10

# San Leandro Program Initiation 2005

After many months of design, review and construction, red light cameras at three locally-controlled intersections were activated on December 12, 2005:

- Marina Blvd and Teagarden Ave
- Washington Ave and Halcyon Dr/Floresta Blvd
- Lewelling Blvd/Washington Ave

Two Caltrans controlled intersections were activated on May 11, 2006 through an encroachment permit process:

- East 14<sup>th</sup> St/Davis St
- East 14<sup>th</sup> St/Fairmont Dr



# Results of First Before & After Study (2010)

## East 14<sup>th</sup> Street at Davis Street

Collision Statistics	Before	After
Number of Collisions	30	27
Collision Rate	0.451	0.406

## East 14<sup>th</sup> Street at Fairmont Drive

Collision Numbers	Before	After
Number of Collisions	22	10
Collision Rate	0.36	0.164

## Marina Boulevard at Wayne Avenue/Teagarden St

Collision Statistics	Before	After
Number of Collisions	18	13
Collision Rate	0.515	0.372

## Washington Avenue at Floresta Boulevard

Collision Statistics	Before	After
Number of Collisions	32*	17
Collision Rate	0.503	0.267

## Washington Avenue at Lewelling Boulevard

Collision Statistics	Before	After
Number of Collisions	34*	26*
Collision Rate	0.484	0.37



# Results of 2016 Before & After Study

## Four ARLE Intersections 9-Year Before and After

01/01/96-12/31/04 (Before) - 01/01/07 to 12/31/15 (After)

Collision Diagram Orientation		Volume (ADT)	Pre ARLE Injury+Fatal #	Pre ARLE Injury+Fatal Rate	After ARLE Injury+Fatal #	After ARLE Injury+Fatal Rate	After - Pre Injury+Fatal Rate
Horizontal	Vertical						
Davis	East 14th	26,100	19	0.22	9	0.1	-0.12
Fairmont	East 14th	40,527	20	0.15	7	0.05	-0.1
Floresta/Halcyon	Washington	32,970	19	0.18	15	0.14	-0.04
Marina	Teagarden	<u>29,700</u>	<u>16</u>	0.16	6	0.06	-0.1
Totals for 4 ARLE Intersections		129,297	74	0.17	37	0.09	-0.08

# Results of 2016 Before & After Study

Eight Non-ARLE Intersections 9-Year Before and After							
01/01/96-12/31/04 (Before) - 01/01/07 to 12/31/15 (After)							
Collision Diagram Orientation		Volume (ADT)	Pre ARLE Injury+Fatal #	Pre 2005 Injury+Fatal Rate	After ARLE Injury+Fatal #	Post 2006 Injury+Fatal Rate	Post 06-Pre '05 Injury+Fatal Rate
Horizontal	Vertical						
Estudillo	Bancroft	23,440	17	0.22	6	0.08	-0.14
Davis	Doolittle	40,741	9	0.07	12	0.09	0.02
Davis	San Leandro	45,200	18	0.12	16	0.11	-0.01
Halcyon-Fairmont	Hesperian	35,840	16	0.14	9	0.08	-0.06
Marina	Alvarado	25,990	7	0.08	7	0.08	0
Marina	Merced	39,110	21	0.16	21	0.16	0
San Leandro	Washington	24,250	19	0.24	8	0.1	-0.14
Fargo	Washington	30,560	19	0.19	10	0.1	-0.09
Totals for 8 Intersections w/o ARLE		265,131	126	0.31	89	0.1	-0.21

# Findings

- Total Collisions at Red Light Locations declined by 47%
- Collisions @ Sample Locations declined by 67%

	Rate 9 Years Before	Rate 9 Years After	Rate Decreased	% Decreased
Average Collision rate at Red Light Locations	0.17	0.09	0.08	<u>47%</u>
Average Collision Rate at Non-Red Light Locations	0.31	0.1	0.21	68%

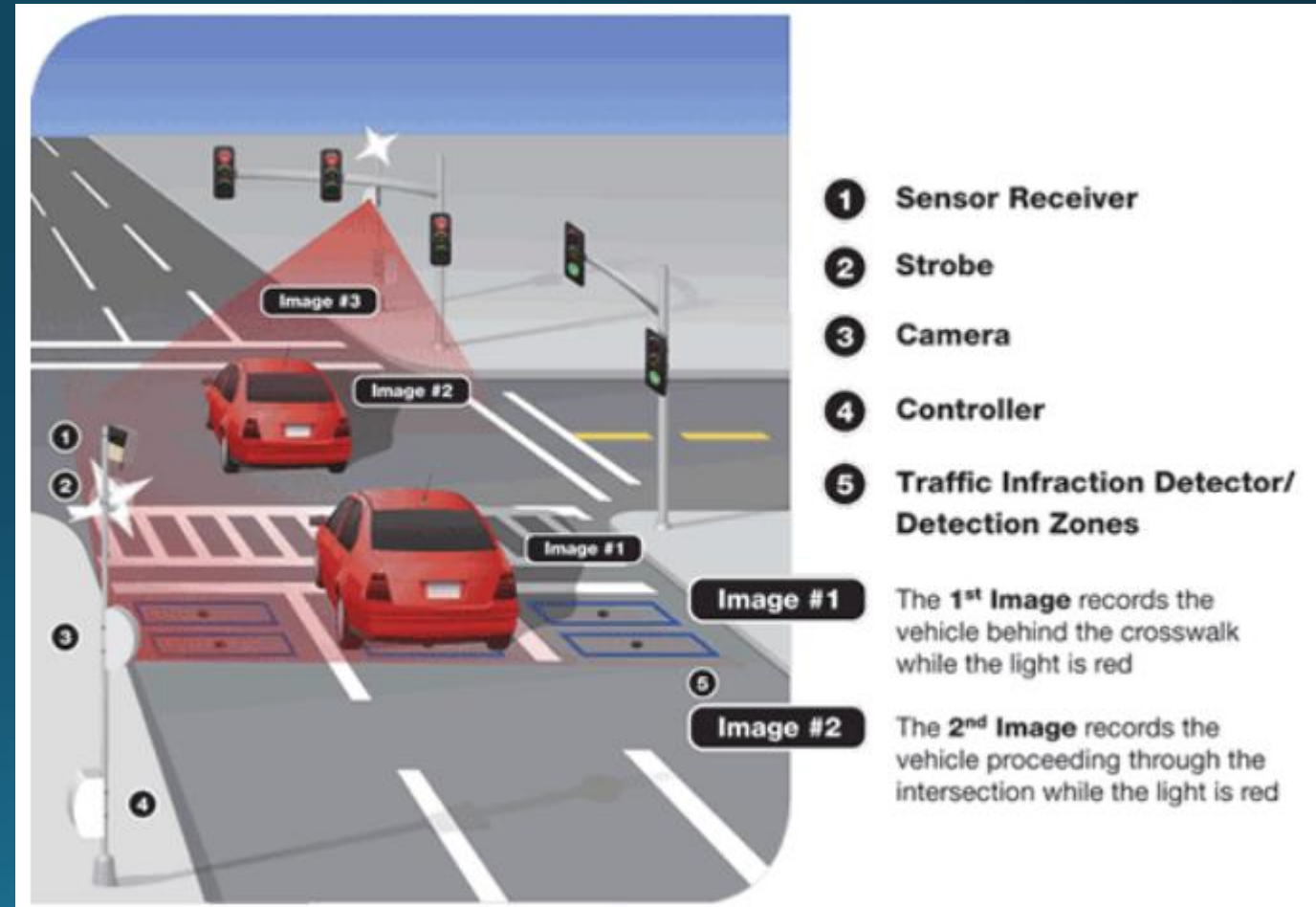
Average Collision Rate = Number of Collisions in every million vehicles entering the intersection

# Overview of Enforcement Process

- Red light cameras monitor intersections more effectively and efficiently than humans
  - 24/7 traffic monitoring
  - Decrease speeding and running red lights
- Significantly improve road safety and public security, according to the Insurance Institute for Highway Safety
- Force Multiplier
  - Police rely on these cameras to improve public safety so that resources can be deployed where they are most needed

# What is a Photo Red Light Violation?

- Cameras take video and photographs of vehicles that cross the intersection on a red light
- A photograph is taken of the front of the vehicle and front license plate when the vehicle's speed activates a sensor located before the intersection
- A photograph is also taken of the driver
- Video of the violation is recorded
- Video and photographs submitted to law enforcement for staff review
- Citation is mailed to the registered vehicle owner if staff agrees a violation occurred



# Total Photo Enforced Violations/Citations (2017)

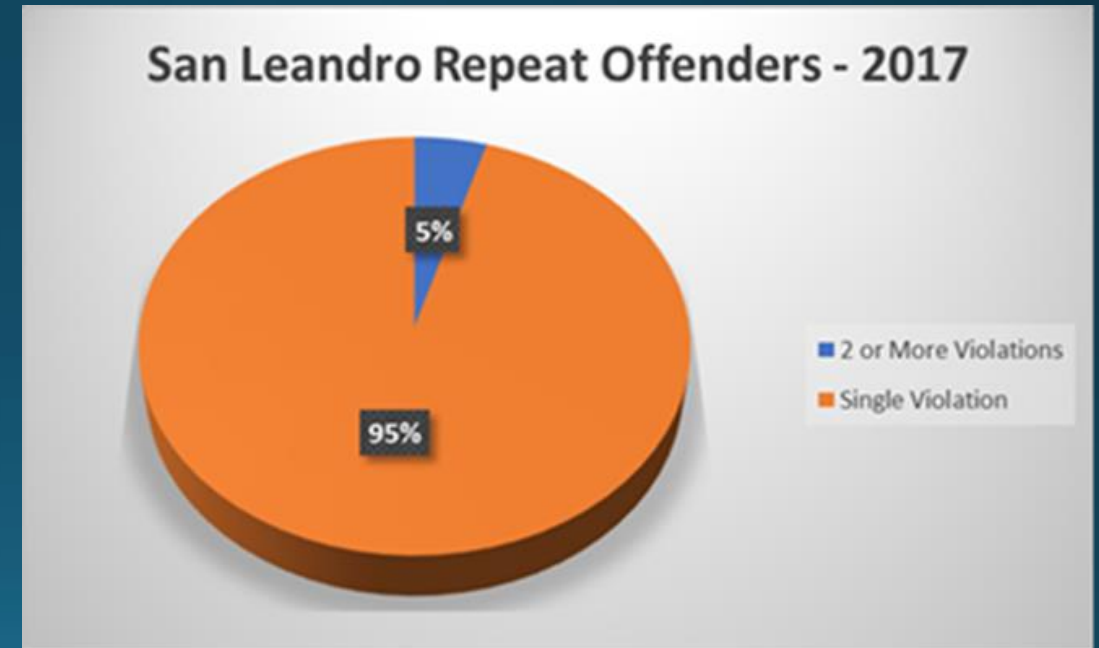
- RedFlex logged 17,220,783 vehicles that travelled through all five (5) approaches
  - 0.08% of those commuters received either a courtesy notice or citation
  - 0.06% received a citation
- Total alleged violations = 14,432
- Total citations filed with the courts = 10,537





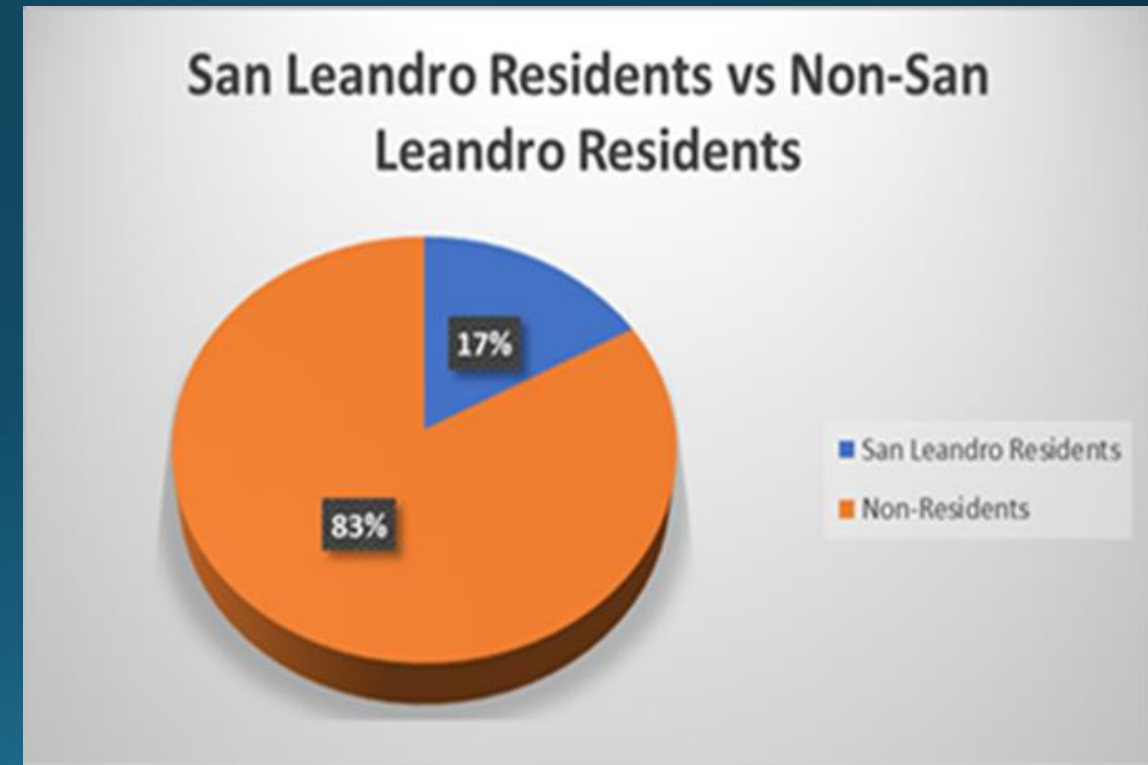
# Red Light Camera – Repeat Offenders

- Out of the 14,432 violations in 2017, only 669 were repeat offenders
  - 2 Violations - 572
  - 3 Violations - 61
  - 4 or more Violations - 36



# Red Light Camera – Notices Issued to SL residents vs. Non-SL residents

- Out of the 10,537 citations filed with the courts during the 2017 calendar year, 17% of those citations were issued to San Leandro residents





# Overview of Potential Cameras in City Parks

- Cameras could assist in deterrence or prosecution of vandalism / graffiti
- Potential connection to SL “Wi-Fiber” system



# Summary of Draft Administrative Retention Policy

- For official use only
- Would apply to video recordings from all cameras operated, controlled, or maintained by all City Departments, except the Police Department
- Recordings shall be kept and maintained by the City for a period of up to seven (7) days from the date of recording. Thereafter, they shall be deleted or discarded.
- Video recordings may be maintained for longer than seven days if:
  - part of a civil or criminal investigation,
  - subject to a valid court or administrative order,
  - subject to a litigation hold as determined by the City Attorney, or
  - upon direction of the City Manager
- Access to footage restricted to only those with direct responsibility for operation of the cameras, or the City Manager, E&T, IT, or PW Dept. heads
- Audio recording prohibited

# Summary/ Key Topics for City Council Feedback

- Are we on the right track and shall the City further pursue installation of new public safety cameras?
- Maintenance/modernization of existing non-Police Department cameras
- Red light enforcement contract set to expire in April, 2019
- Further exploration of safety cameras in city parks to prevent/prosecute graffiti & vandalism