Garland & Richardson's Red Light Running Experience

TexITE Fall Meeting

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Presented by:

City of Garland: Allison Franz, E.I.T.
City of Richardson: Jessica Shutt, E.I.T.

Presentation Outline

- History in Each City
- Locations Chosen
- Violation Rate Decline
- Analysis of Crash Rates
- Results in Each City
- Conclusions

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History: Garland

- First cameras in September 2003
- First in State –
  - Don't ask for permission if its not prohibited !!
- Initial Four intersections
  - Two on arterial at arterial
  - Two on arterial at frontage road
- Program expanded in 2006 and again in 2009 to 12 cameras at 11 intersections
- Two cameras were removed due to intersection reconstruction projects

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History: Richardson

- First cameras installed in 2006
  - Three Intersections Initially, Four Cameras (All Arterial/Arterial)
    - Campbell Rd & Coit Rd (2 approaches)
    - Centennial Blvd & Greenville Ave
    - Plano Rd & Arapaho Rd
- Second set of cameras installed in 2008
  - Added Three additional intersections, Five Cameras
    - Belt Line Rd/N Central Expressway (2 approaches)
    - Campbell Rd/N Central Expressway (2 approaches)
    - Jupiter Rd/SH 190 Frontage Road

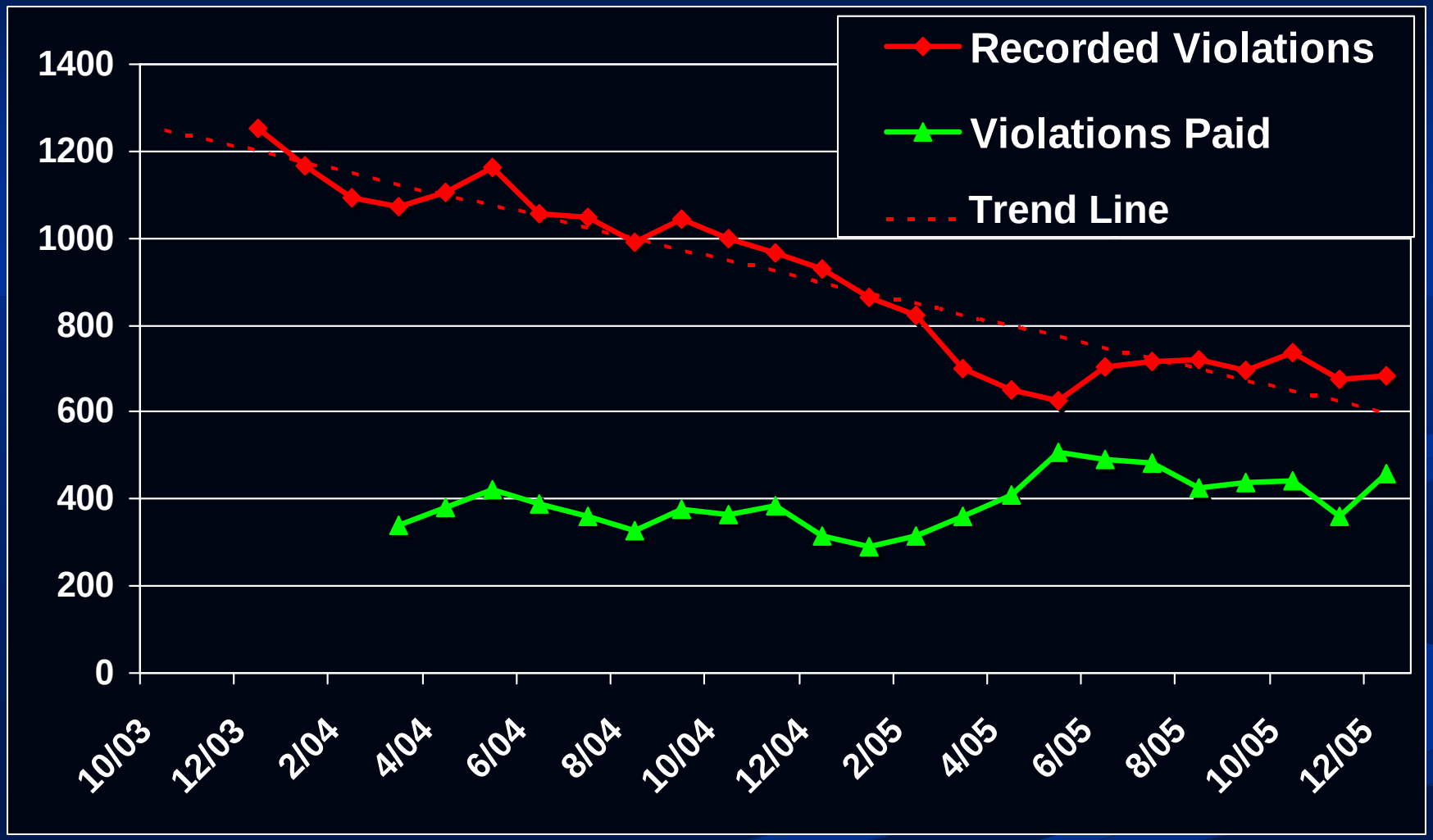
Locations Chosen

- Safety First – Its not for the money !!
- Intersections in both cities chosen based on:
  - Crash rates
  - Traffic volumes
  - Observed violation rates
  - Engineering solutions exhausted

Violations

- Violation point initially set at curb extension, changed to stop bar (per Legislation in 2007)
- Two photographs of violations
  - Advance of stop bar
  - Within intersection
- Video online of violation
- Violations significantly reduced over time

Violation Decline in Garland



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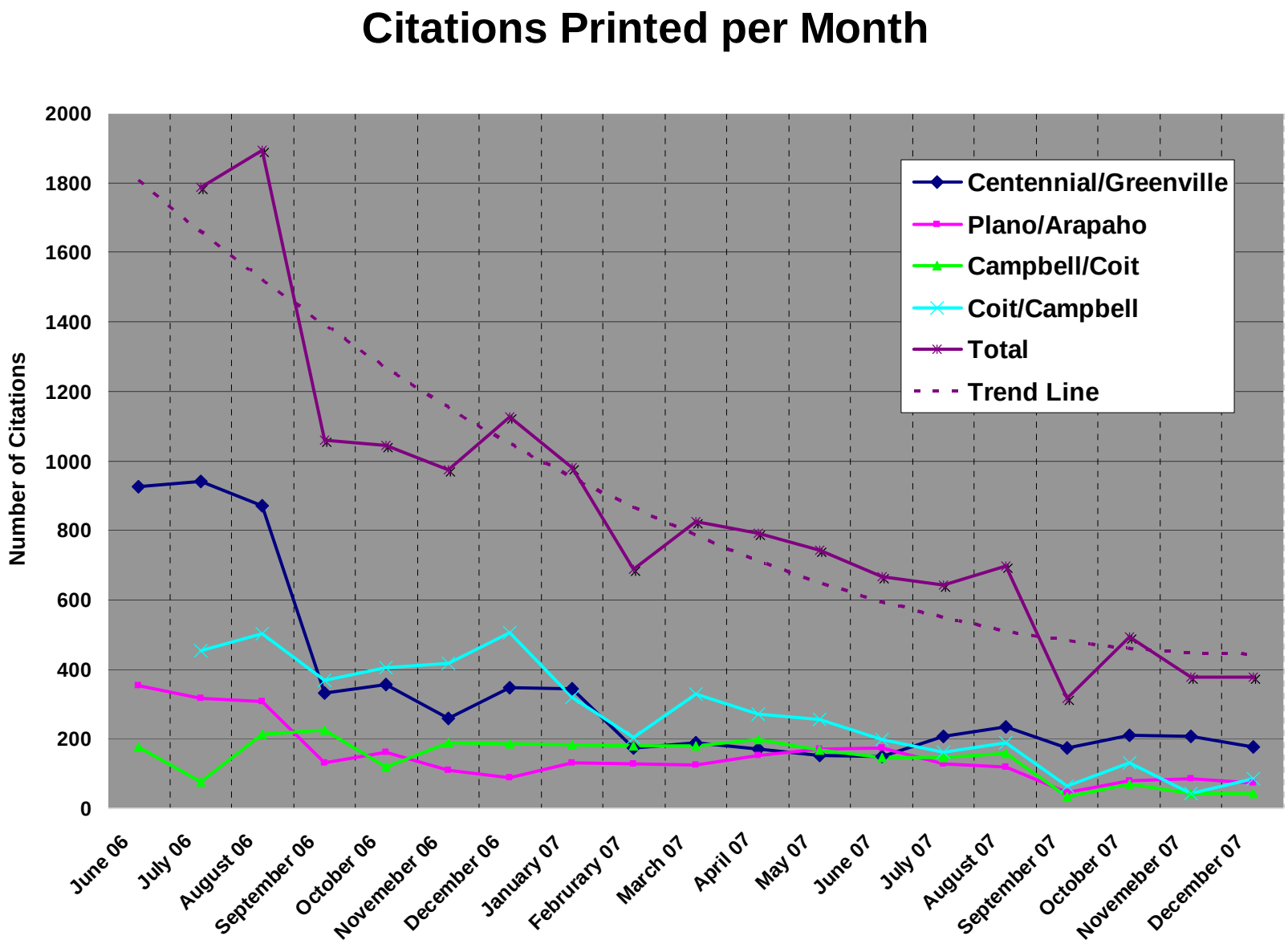
Violation Decline in Richardson



Analysis: Garland

- Initial Analysis
- First update
- Second update
- Program expansion
  - Data reported to TxDOT
- Rear End analysis

Initial Analysis

- Between May 2002 and January 2005
- 16 months of data both before and after
- Crashes also studied at a control group of six similar intersections

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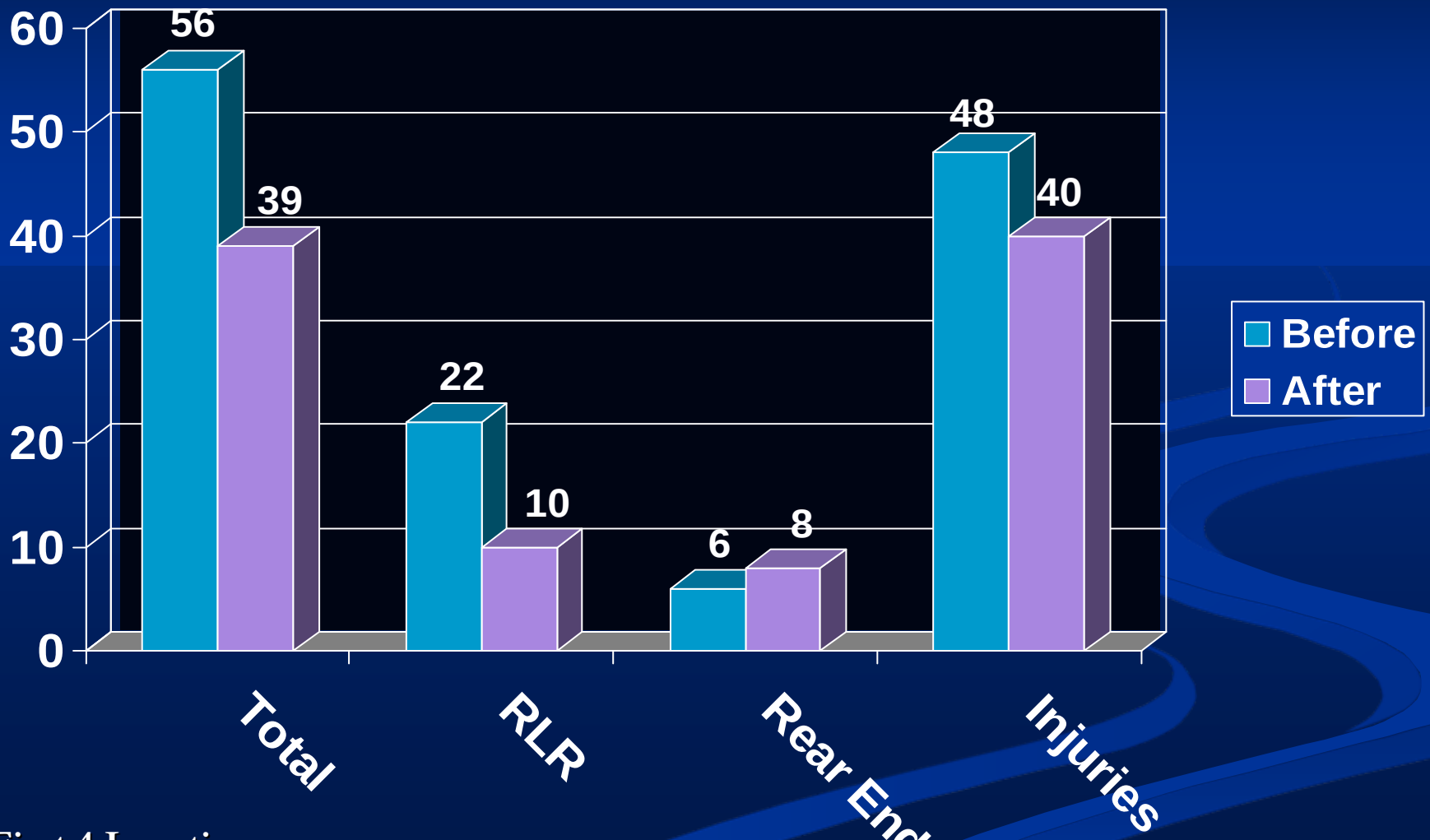
Initial Results



First 4 Locations
16 Months, before and after

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Crashes at Intersections

	4 Intersections WITH Red Light Cameras	Control Group of 6 Intersections
Total Crashes	Decrease 30%	Decrease 6%
Crashes Caused by Red Light Runners	Decrease 55%	Decrease 17%

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First Update

- Between February 2001 and April 2006
- 16 months expanded to 31 before and after
- Same camera and control intersections

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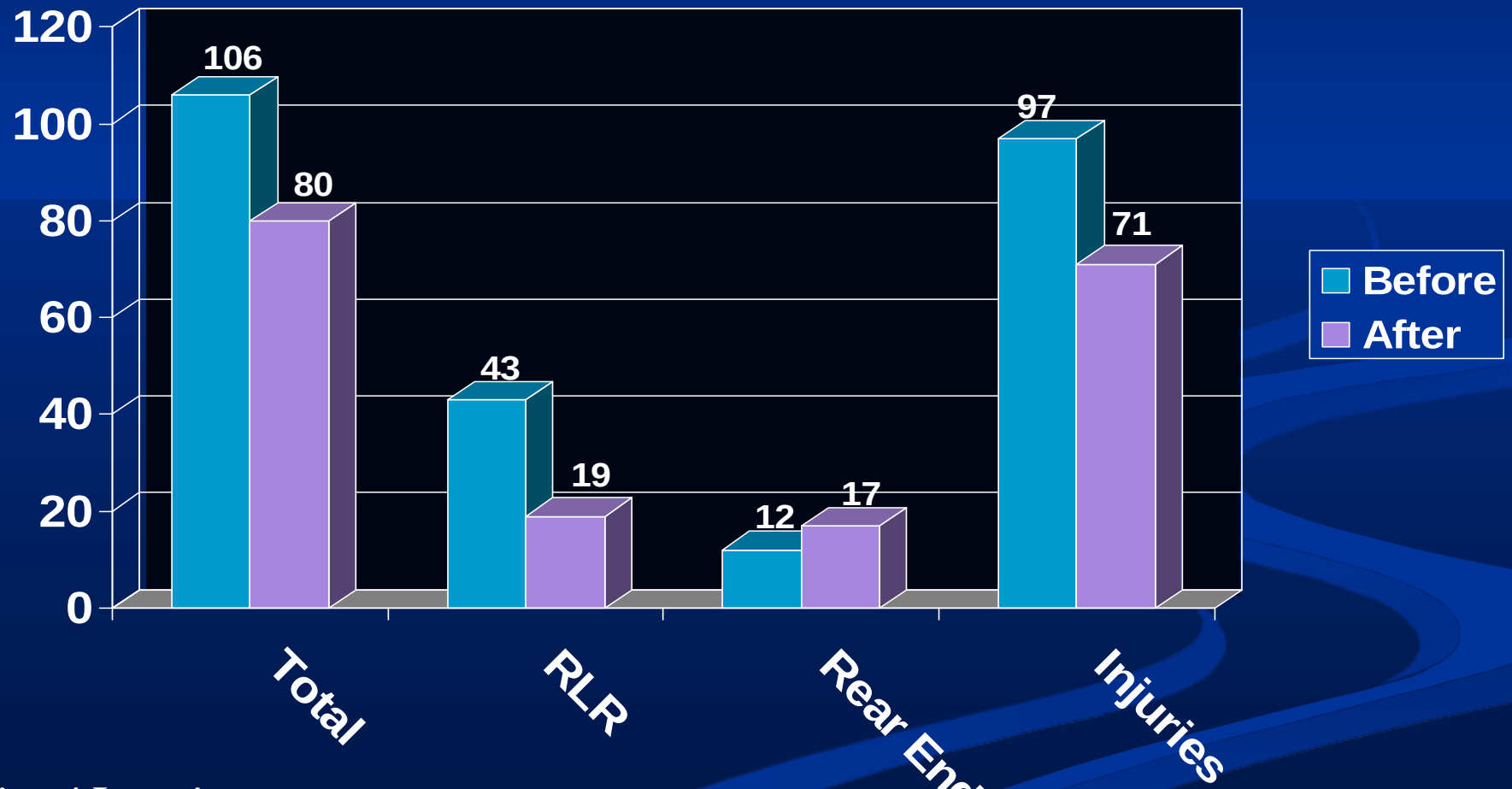
Results of First Update



First 4 Locations
31 Months, before and after

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Crashes at Intersections

	4 Intersections WITH Red Light Cameras	Control Group of 6 Intersections
Total Crashes	Decrease 25%	Decrease 10%
Crashes Caused by Red Light Runners	Decrease 56%	Decrease 38%

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Second Update Analysis

- Updated through December 31, 2007
- Same 31 month before data
- 51.5 months of after-data
- Same camera and control intersections

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Second Update Analysis

- Arterial/Arterial intersections 51.5 months after data with camera
- Arterial/Frontage Road intersections 29 months after data with cameras
- Arterial/Frontage Road intersections 22.5 months after camera removal
- Annualized crash rates

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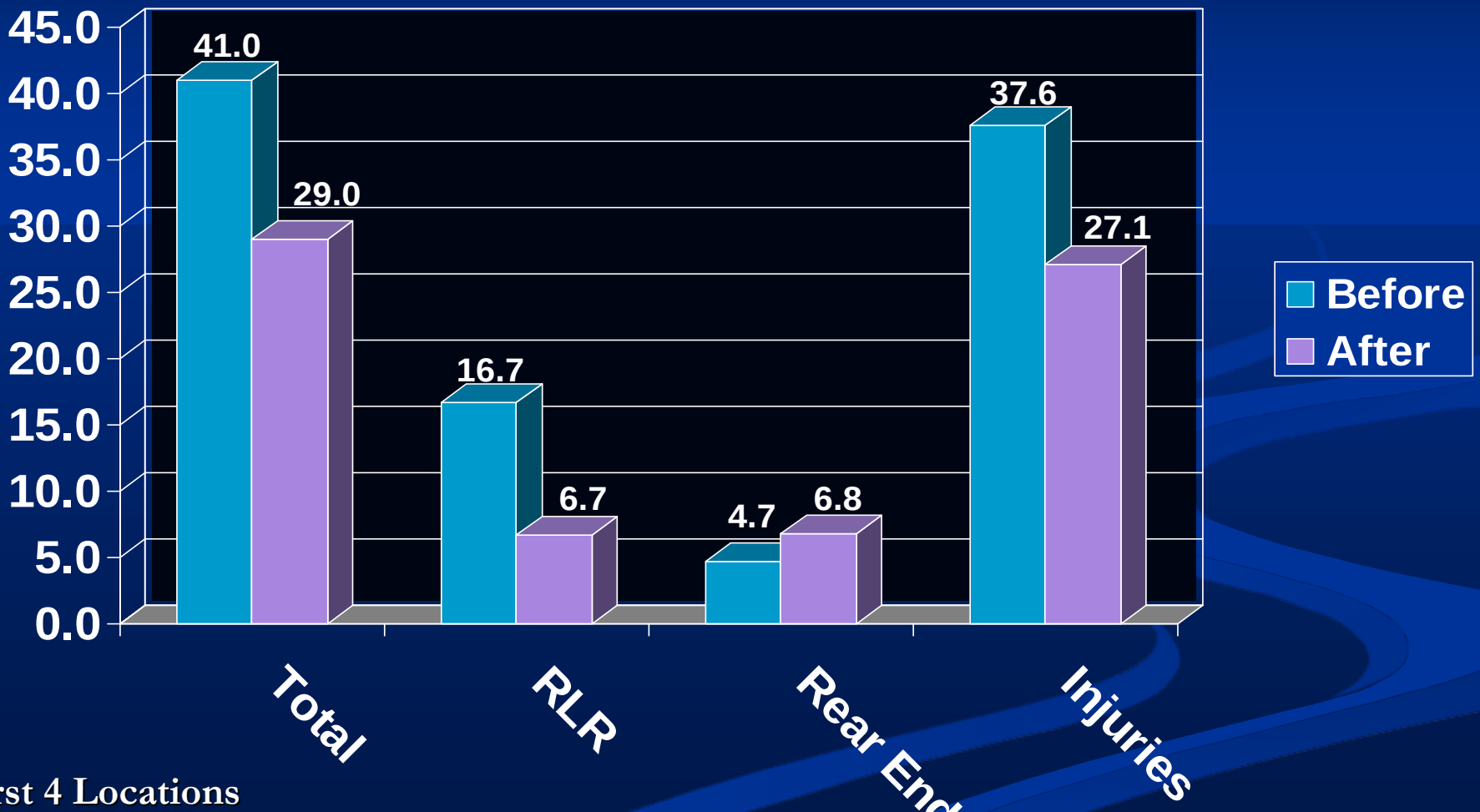
With Cameras in Place



First 4 Locations
31 Months before and 51 after
Annualized Crash Rate

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Crashes at Intersections

	4 Intersections WITH Red Light Cameras	Control Group of 6 Intersections
Total Crashes	Decrease 29%	Decrease 17%
Crashes Caused by Red Light Runners	Decrease 60%	Decrease 46%

First 4 Locations
31 Months before and 51 after
Annualized Crash Rate

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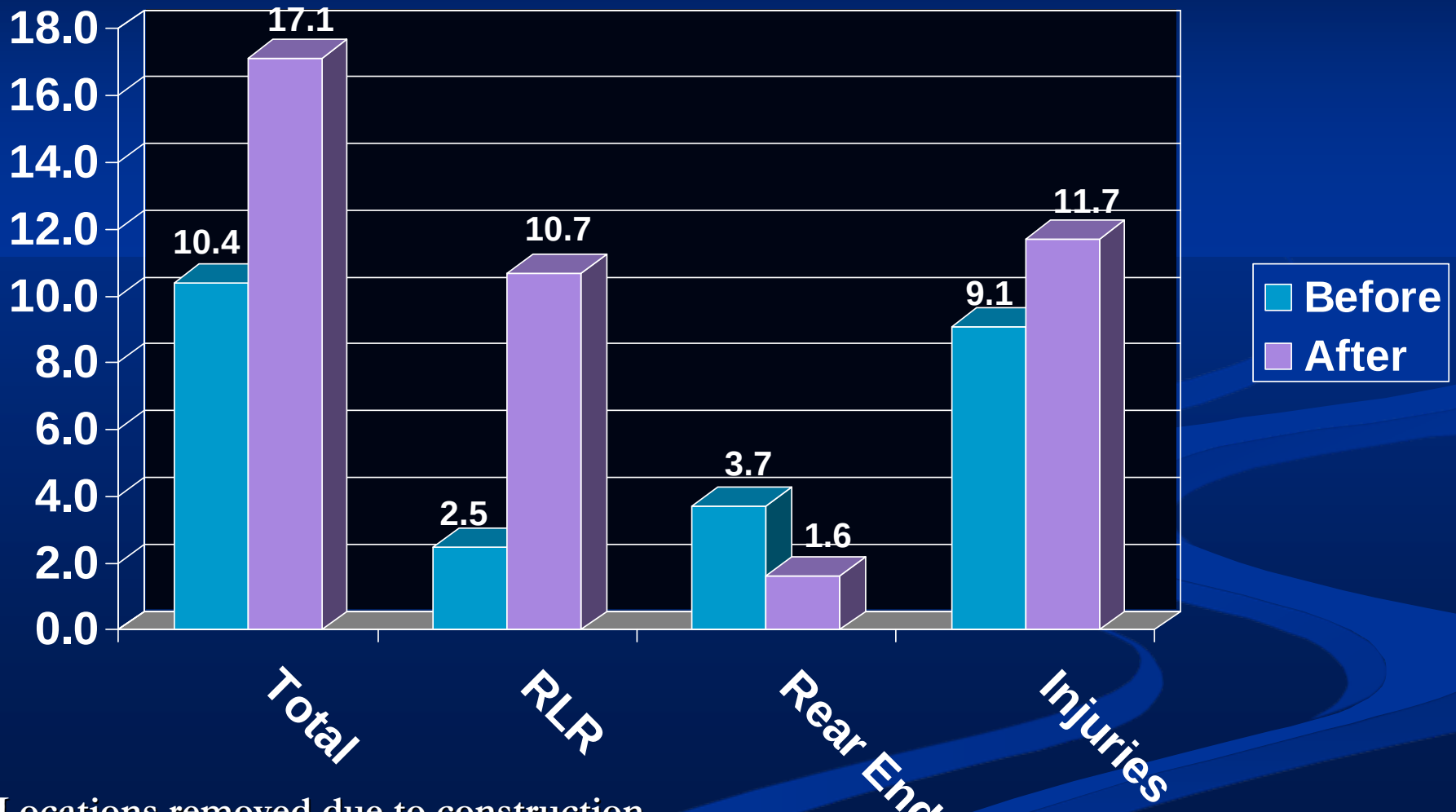
After Camera Removal



2 Locations removed due to construction
Annualized Crash Rate

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Program Expansion

- Six additional intersections added Summer 2006
- Data reported to TxDOT
  - No before data required by Legislature on existing systems
- Eight intersections, with a total of nine cameras
  - Does not include intersections added in 2009

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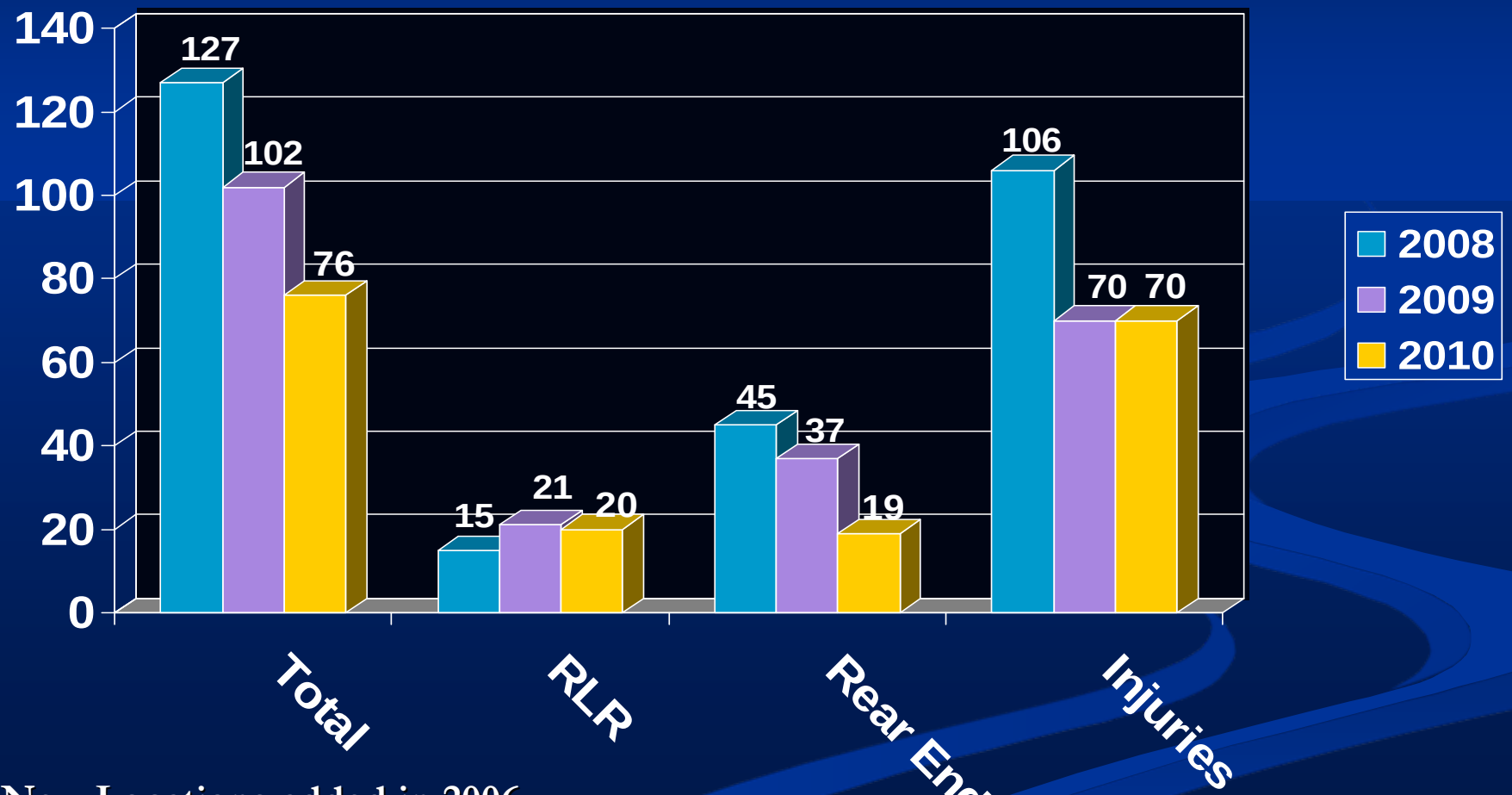
Results of Program Expansion



6 New Locations added in 2006

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Program Expansion

- Three additional intersections added Spring 2009
- Data Reported to TxDOT
  - 18 months before data required
  - 14 months after data

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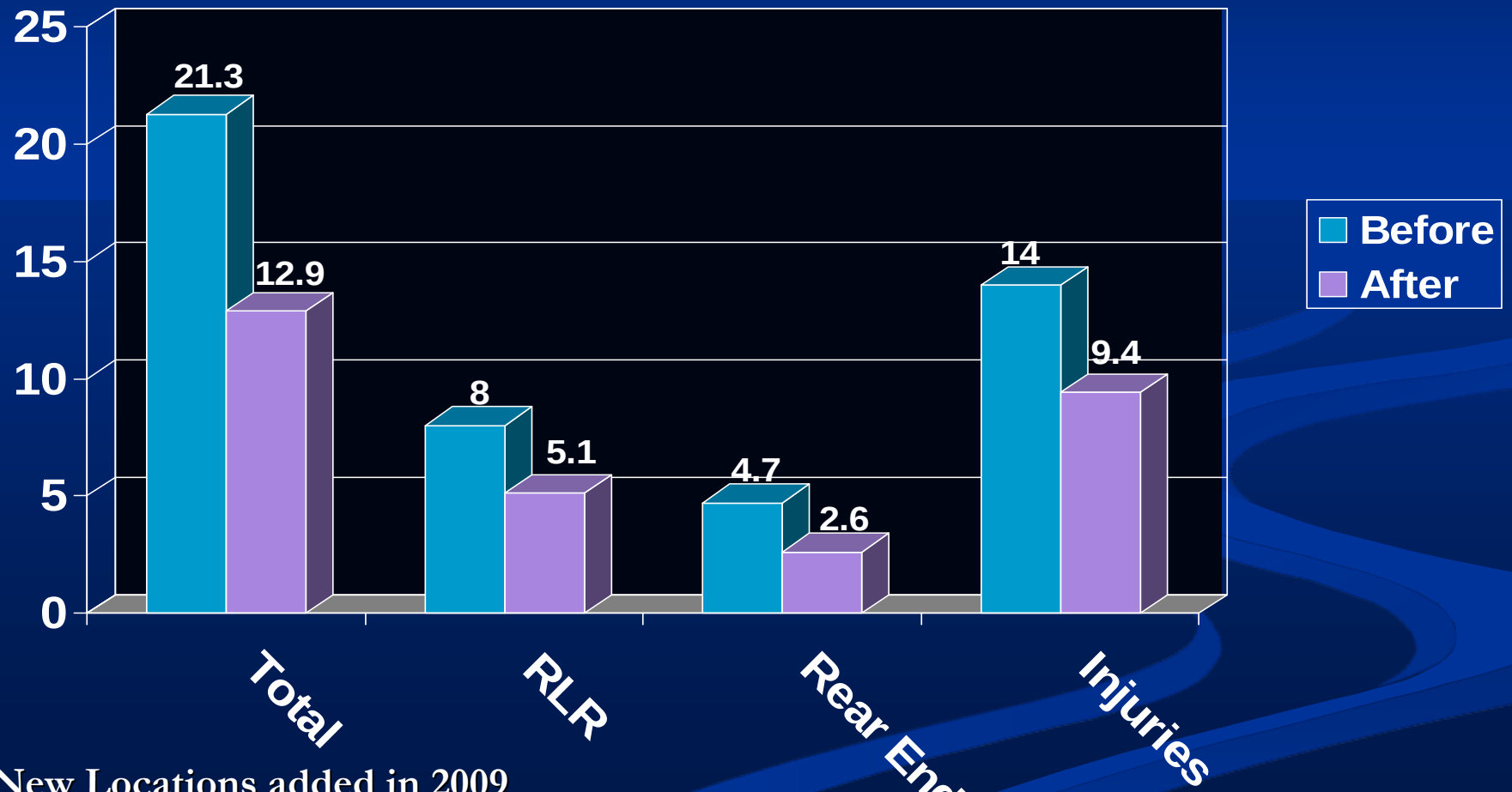
Results of Program Expansion



3 New Locations added in 2009
18 Months before and 14 after
Annualized Crash Rate

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Rear End Analysis

- Eight intersections reviewed
- July 1, 2007 to June 30, 2008
  - Does not include 3 intersections added in 2009
- Rear End Crashes are 35.4% of all crashes
- Only 17.8% of Rear End crashes occurred during signal change

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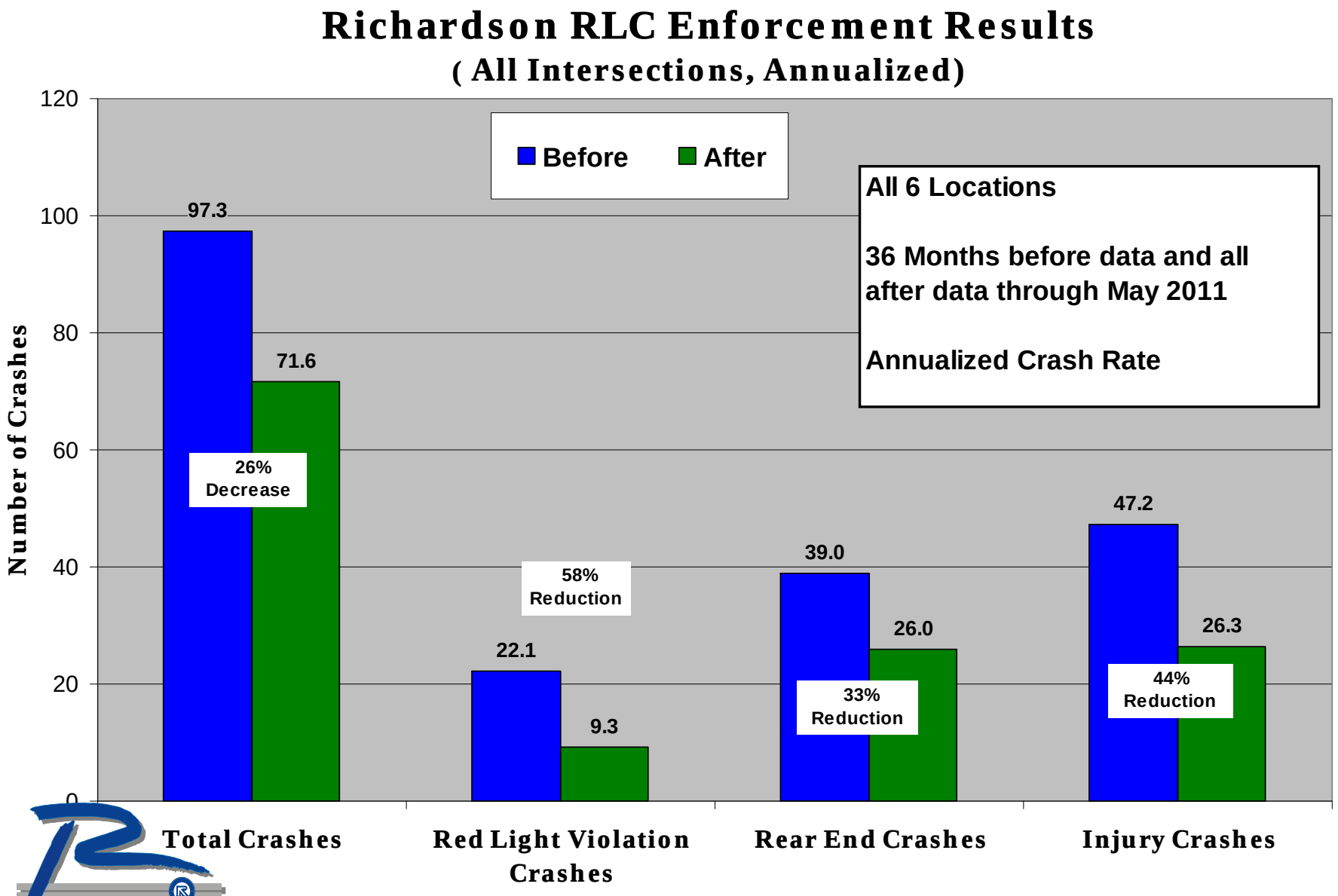
Analysis: Richardson

- Started studies with required TxDOT reporting data in 2008
  - Expanded study to included additional data in City analysis to evaluate more before and after data
- Worked with Police Department to determine what was considered an "Intersection Crash"
  - Anything within 100' of the intersection
- Collected as much data from the state crash report forms as possible

Analysis: Richardson



Results for RLC Enforcement

- Total crashes reduced
- Red light running crashes reduced
- Injuries reduced
- Results consistent over time
- Crashes increased when cameras removed
- A small percentage of rear end crashes are due to signal change

Conclusions

- Overall, reductions in every crash category, red light violation, rear end, and injury crashes make RLC Enforcement an important tool for public safety
- Don't do it for the money – As violations drop consistently, so does the revenue. Don't count on a continuing stream of funds.
- Think twice before removing individual locations just because they don't support the administrative cost any longer – violations and crashes will rise again.
- Pray that the majority of your locations allow the overall system to cover its long term costs.
- Safety First !!!

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Garland & Richardson's Red Light Running Experience

City of Garland:
Allison Franz, E.I.T.
AFranz@ci.garland.tx.us
(972) 205-2437

City of Richardson:
Jessica Shutt, E.I.T.
Jessica.Shutt@COR.Gov
972-744-4320