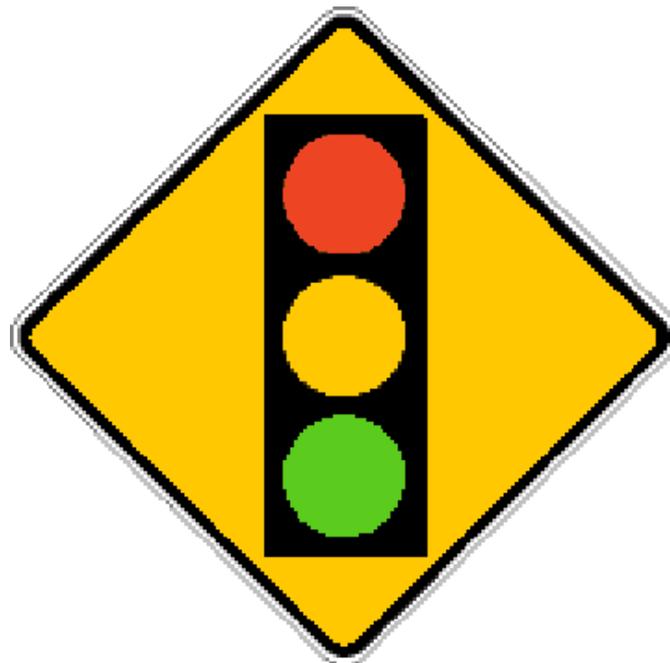


# Portland Red Light Camera Program



# PORTLAND'S APPROACH to SAFETY

## Comprehensive Traffic Safety Approach

- (E)ngineering
- (E)ducation
- (E)nforcement
- (E)ncouragement
- (E)valuation
- (E)quity

## Focus on the Most Vulnerable First

- Children and Seniors
  - In 2008, 23% of PDX population under 18
  - In 2008, 13% of PDX population over 65
- People with disabilities



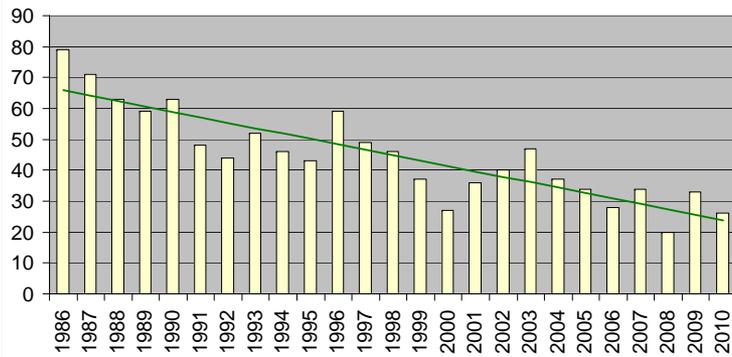
## Provide for Many Travel Options

**PARTNERSHIPS:** transportation  
police, neighborhoods, schools,  
emergency response, business,  
advocates working together

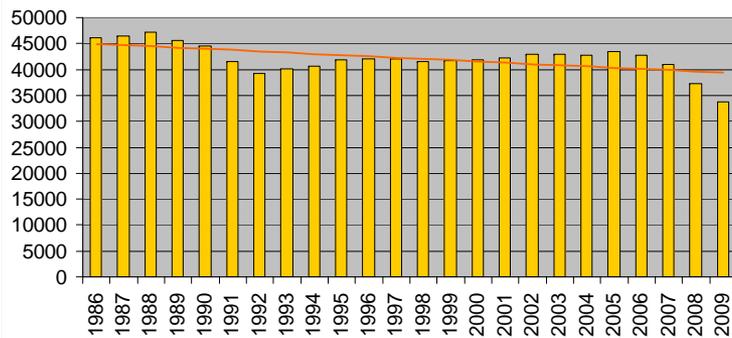
# SAFETY IS IMPROVING FOR EVERYONE

ALL TRAFFIC FATALITIES ARE A SYMPTOM OF THE SAME DISEASE

PORTLAND: TOTAL TRAFFIC FATALITIES  
1986 - 2010



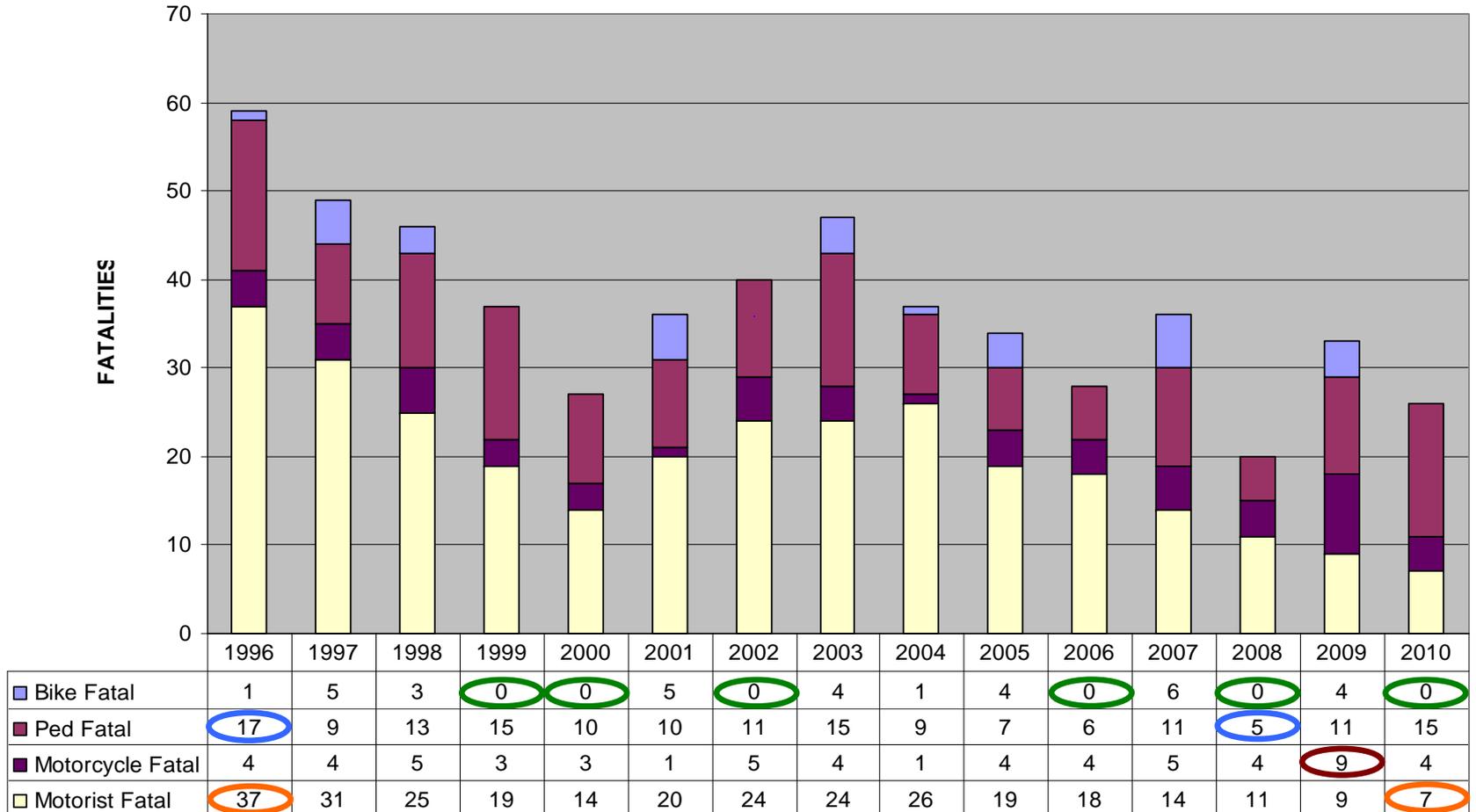
USA: TOTAL TRAFFIC FATALITIES  
1986 - 2009  
(2010 not yet available)



- **Traffic Fatalities** per 100,000 residents in Portland:
  - **Going down 6 times faster than USA**
  - **Going down 3 times faster than State of Oregon**
- The conditions that improve multi-modal transportation **improve safety for everyone**: speed reduction, less DUII, better compliance with traffic rules, better organization of modes

# SAFETY IS IMPROVING FOR EVERYONE

TRAFFIC FATALITIES IN PORTLAND  
by mode of travel  
1996-2010

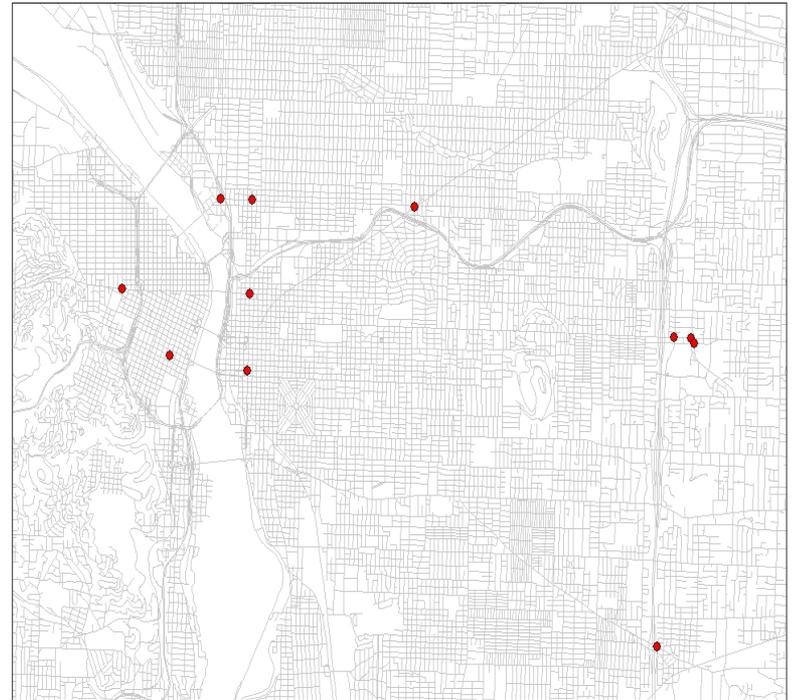


Bicycle and pedestrian traffic is estimated based on the best indicators available. For pedestrians, originating transit boardings are represented. For bicycle use, annual bicycle counts on 4 downtown bridges are represented.

# Where do we put RLC?

- Crash history and observed violation data
- Locations where equipment is feasible to locate
- Review of yellow change intervals and other visibility factors
- Cost-benefit analysis

Portland Red Light Camera Locations



12 Cameras at 11 Intersections

## Red Light Camera – System Features

- Multiple Camera Choices
  - Gatsometer GS-11
  - ACS RLCS-1
- Resolution up to 21 Mega Pixels
- Non-Invasive Vehicle Detection
- 12-Second Video Clips

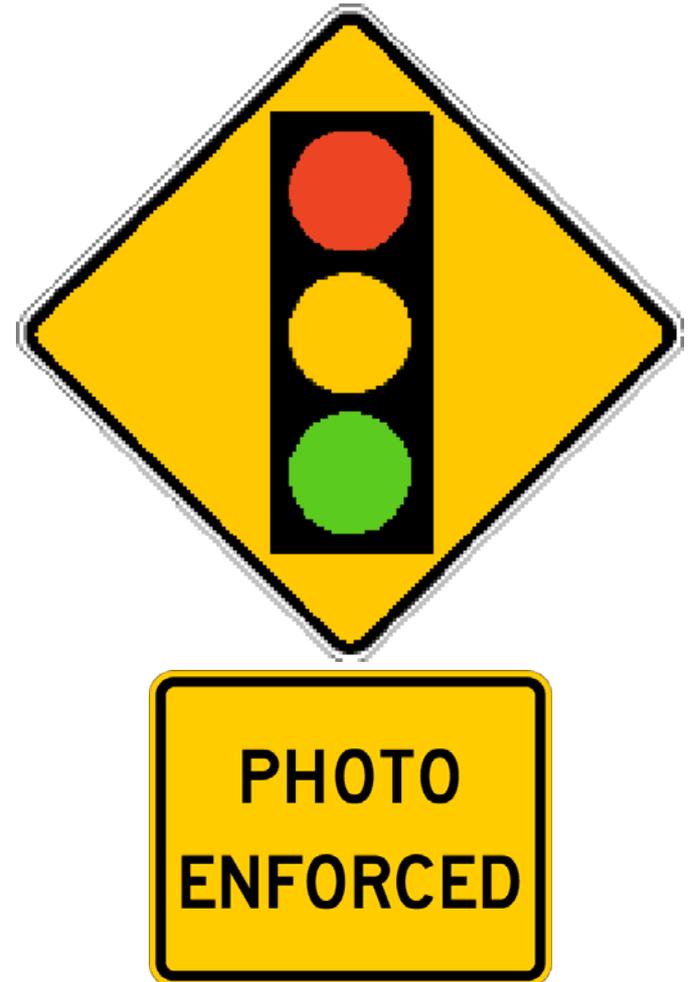


# Crash Types Evaluations

- Intersections with RLC typically consist of a high right-angle and turning crash types
- Possible increase rear-end crashes
- Reduce Head-on crashes

# RLC Performance Measurements

- Before violation and after installation violation data gathered
- Initial reduction in violations: 69% to 93%
- Violations then level while camera is present
- To date, 167,895 violations observed
- To date, 81,183 citations issued
- 48% issuance rate



# RLC Performance Measurements

- **Factors Resulting in Non-Issuance of Citations**

<b>No Plate</b>
<b>Gender Match Failure</b>
<b>Clarity of Driver</b>
<b>Framing of Driver</b>
<b>Emergency Vehicle</b>
<b>Driver Obstructed</b>
<b>No Registration Info from DMV</b>
<b>Framing of Car</b>
<b>Glare on Windshield</b>

# Crash Type Performance Summary

- Annual Average Crash Types - All Approaches

	<b>2005</b>	<b>2007</b>	<b>2009</b>	<b>2011</b>
<b>Total Crashes</b>	11%	-21%	-33%	-39%
<b>Angle</b>	-4%	-26%	-37%	-48%
<b>Rear End</b>	140%	15%	-13%	-19%
<b>Turning</b>	-44%	-38%	-43%	-46%
<b>Pedestrian</b>	0%	0%	-75%	-40%

# Disregard Crashes Performance

	All Approaches				Enforcement Approaches			
	2005	2007	2009	2011	2005	2007	2009	2011
<b>Disregard Crashes</b>	-43%	-31%	-41%	-51%	-51%	-13%	-33%	-50%
<b>Annual Average Disregard Injury per Intersection</b>	-68%	-36%	-39%	-49%	-58%	-32%	-33%	-44%
<b>Annual Average Disregard PDO per Intersection</b>	-26%	-27%	-42%	-53%	-48%	7%	-33%	-53%

# Injury Reduction

	All Approaches				Enforcement Approaches			
	2005	2007	2009	2011	2005	2007	2009	2011
<b>Annual Average Total Injuries per Intersection</b>	-26%	-30%	-38%	-42%	-34%	-25%	-28%	-48%
<b>Annual Average Disregard Injury per Intersection</b>	-68%	-36%	-39%	-49%	-58%	-32%	-33%	-44%

# Fiscal Accounting

<b>PROGRAM COSTS 2002-2008</b>	<b>02/08</b>	<b>08/09</b>	<b>09/10</b>
Initial Capital Expense	\$350,000	\$35,000	\$
Lease Fees	\$1,102,000	\$262,000	\$248,000
Citation Processing Expense	\$978,750	\$185,000*	\$186,882
Police Court Expenses	\$225,300	\$35,000*	\$42,613
<b>Sub Total</b>	<b>\$2,656,050</b>	<b>\$517,000</b>	<b>\$478,495</b>
		<b>Total Expenses</b>	<b>\$3,651,545</b>

<b>PROGRAM REVENUE 2002-2008</b>	
2002-03	\$545,200
2004-08	\$2,055,911
2008-2010	\$1,025,000*
<b>Total Revenue</b>	<b>\$3,626,111</b>

**Total Net Revenue 2002-2010 : \$25,434**

Note: \* 08/09 revenues are estimated