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# CITY OF BEAVERTON



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## **Photo Red Light Report to the Legislature Process and Outcome Evaluation**

February 2009

# **Photo Red Light Enforcement Project Evaluation**

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**City of Beaverton  
February 2009**

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## **I. Background - Legislative Report Requirements**

Oregon Revised Statute (ORS) 810.434 requires cities using photo red light equipment to provide a public information campaign to inform local drivers about the use of cameras before citations are issued and to produce a report to the legislature once each biennium. The law reads as follows:

- (3) A city that chooses to operate a camera shall:*
- (a) Provide a public information campaign to inform local drivers about the use of cameras before citations are actually issued; and*
  - (b) Once each biennium, conduct a process and outcome evaluation for the purposes of subsection (4) of this section that includes:*
    - (A) The effect of the use of cameras on traffic safety;*
    - (B) The degree of public acceptance of the use of cameras; and*
    - (C) The process of administration of the use of cameras.*
- (4) By March 1 of the year of each regular session of the Legislative Assembly, each city that operates a camera under this section shall present to the Legislative Assembly the process and outcome evaluation conducted by the city under subsection (3) of this section. [1999 c.851 §1; 1999 c.1051 §327; 2001 c.474 §1; subsection (5) of 2001 Edition enacted as 2001 c.474 §3; 2003 c.14 §491; 2003 c.339 §1; 2005 c.686 §1; 2007 c.640 §1]*

## **II. Public Information Campaign ORS 810.434 (3)(a)**

The City of Beaverton is the first city in the state of Oregon to use photo red light technology. While the technology was installed in January 2001, the program really credits its roots back to citizen efforts in the late 1990s. The City of Beaverton initiated an aggressive Red Light Running Campaign in December 1998. The purpose of the campaign was to educate Beaverton residents about the dangers of red light running. The campaign received a grant funded by the Federal Highway Administration, in conjunction with the Chrysler Corporation, and administered by the Oregon Department of Transportation (ODOT) for \$124,003, with the City of Beaverton contributing an additional \$20,107 in fiscal year 1999.

In addition to the public safety campaign, the City of Beaverton targeted specific public information materials to warn drivers that cameras would be used to enforce red light violations prior to the installation of cameras. The City mailed informational post cards to every household in Beaverton. The post cards gave specific details about the upcoming installation of red light camera equipment including: program description, criteria for receiving a citation, signal timing information, fine amounts, and ticket processing information. Beaverton also published articles in its *Your City* newsletter, mailed to every Beaverton household, prior to the installation of camera equipment. The City's elected officials and chief of staff participated in numerous media interviews to help spread the word to the community that red light cameras were coming to Beaverton. Below is a detailed list of actions taken to conduct a public information campaign about the use of red light cameras prior to issuing citations.

### ***City of Beaverton Public Information Campaign Actions Prior to Issuing Red Light Citations***

- Public Service Announcements
- Post Cards / Direct Mail
- Hand Outs at Public Events
- Street Signs
- Radio Messages
- Your City Newsletter
- Media Interviews
- Public Information Phone Line

The City of Beaverton's public information campaign efforts were enormously successful. In March 2001, **99% of Beaverton Residents were Aware of the City's Red Light Campaign**, according to a citizen survey.

### III. Effect of the Use of Cameras on Traffic Safety ORS 810.434 (3)(b)(A)

#### A. Reductions in Red Light Running Violations

Beaverton has analyzed the red light violation data from each of the photo-enforced intersections. *The analysis shows that the City's photo red light intersections have realized a 30% reduction in red light running violations*, comparing the first year of the program to the following years. While the number of violations has drifted up in the last two years – the overall effect of the program has been a dramatic reduction in the number of red light signal violations. This is a tremendous success for Beaverton – and goes a long way to remind drivers “Red Means Stop” in Beaverton.

**Red Light Running Violations at Beaverton Photo Red Light Intersections**

	2001	2002	2003	2004	2005	2006	2007	2008
Violations - Red Light	6,297	5,536	5,383	3,844	4,333	4,461	3,521	3,832

**Overall Reductions in Red Light Running Violations at Beaverton Photo Red Light Intersections**

	2001	Average of 2002-2008	Average Change in Violations
<b>Violations – Red Light</b>	6,297	4,415	<b>-30%</b>

#### B. Reductions in Red Light Running Accidents and Injuries

The City of Beaverton has achieved positive results from the photo red light program. *Injury accidents at Beaverton photo red light intersections have decreased 48%*, comparing the first year of the program to the following years. Overall accidents have decreased 6%, but more importantly the severity of these accidents has been significantly reduced.

**Accidents (Acc) and Injuries (Inj) at Beaverton Photo Red Light Intersections – 2001 through 2008**

Photo Red Light Intersection	2001		2002		2003		2004		2005		2006		2007		2008	
	Acc	Inj	Acc	Inj	Acc	Inj	Acc	Inj	Acc	Inj	Acc	Inj	Acc	Inj	Acc	Inj
Cedar Hills & Walker	13	4	23	2	20	4	23	5	26	4	41	9	28	6	19	2
BH & Griffith	14	3	7	0	10	3	15	1	14	0	15	1	13	0	4	1
Allen & Lombard	21	3	19	2	16	1	16	0	15	3	13	3	14	1	15	1
Scholls & Hall	44	11	32	2	39	4	29	1	38	8	36	2	30	5	33	3
<b>TOTAL</b>	<b>92</b>	<b>21</b>	<b>81</b>	<b>6</b>	<b>85</b>	<b>12</b>	<b>83</b>	<b>7</b>	<b>93</b>	<b>15</b>	<b>105</b>	<b>15</b>	<b>85</b>	<b>12</b>	<b>71</b>	<b>7</b>

**Overall Reductions in Accidents and Injuries at Beaverton Photo Red Light Intersections**

	2001	Average of 2002-2008	Average Change
<b>Accidents</b>	92	86	<b>-6%</b>
<b>Injuries</b>	21	11	<b>-48%</b>

It is critical to note that of the City's four photo red light intersections, the accident numbers at Cedar Hills and Walker are noticeably influencing the overall numbers of the program. The shopping mall located at this intersection, underwent a dramatic \$35 million dollar renovation starting in 2002. This transformation added a 16 screen movie theatre complex, 40,000 square feet of new retail space, six new restaurants, a gourmet grocery store, a new book store, and a sports athletic club. This new development accounts for increased traffic flow to the mall, resulting in higher traffic counts at Cedar Hills Boulevard and Walker Road, and increased accidents. The following chart outlines the number of accidents and injuries at the three remaining photo red light intersections when Cedar Hills Boulevard and Walker Road is removed from the totals.

***Accidents and Injuries at Beaverton Photo Red Light Intersections – 2001 through 2008  
Excluding Cedar Hills Blvd & Walker Rd***

	2001		2002		2003		2004		2005		2006		2007		2008	
	Acc	Inj														
TOTAL without Cedar Hills & Walker	79	17	58	4	65	8	60	2	67	11	64	6	57	6	52	5

When the Cedar Hills Boulevard and Walker Road intersection is removed from the list, *the overall effect of the photo red light intersections is a 24% reduction in accidents and a 65% reduction in injuries.*

***Reductions in Accidents and Injuries at Photo Red Light Intersections –  
Excluding Cedar Hills Blvd & Walker Rd***

	2001	Average of 2002-2008	Average Change
<b>Accidents</b>	79	60	<b>-24%</b>
<b>Injuries</b>	17	6	<b>-65%</b>

**C. Residence of Beaverton Red Light Runners**

The majority of red light runners at Beaverton photo enforced intersections do not live in Beaverton. The City has tracked this number over the years and it remains consistent. *Seventy two percent (72%) of red light runners at Beaverton's photo enforced intersections do not live in Beaverton.* As previously reported, the city faces continual challenges of modifying driving behavior when such a high percentage of red light violators do not live in Beaverton. The city attributes gradual increases in violations to the fact that so many drivers are traveling though the city and do not reside in Beaverton.

#### **IV. Degree of Public Acceptance of the Use of Cameras**

*ORS 810.434 (3)(b)(B)*

The City of Beaverton has conducted several different public opinion surveys over the years. The City hired Davis & Hibbits, Inc. to conduct five of the surveys. The results have been very consistent and demonstrate that Beaverton residents strongly favor the use of cameras for red light.

##### ***Beaverton Public Support for Photo Red Light Enforcement***

	March 1999	Sept 1999	June 2000	March 2001	June 2002	Nov 2002	Dec 2004
Percent of Beaverton Residents who Favor Photo Red Light Enforcement	73%	75%	76%	77%	77%	75%	66%

#### **V. Process of Administration of the Use of Cameras** *ORS 810.434 (3)(b)(C)*

The administrative process for the use of photo red light cameras encompasses many components. The steps for issuing a citation consist of: violation detection, violation processing, quality control checks, review and approval by a police officer, and finally citation creation and mailing. Intertwined in these steps are the city's compliance with legislative requirements dictated in ORS 810.434 and 810.436. After citations are issued they fall under the jurisdiction of Beaverton's Municipal Court.

##### **A. Violation Detection**

The City of Beaverton uses automated enforcement systems to issue citations for red light running violations. The red light camera system is connected to the traffic signal and the camera is only activated when the driver enters the intersection AFTER the light has turned red. The only drivers photographed are those who run the red light.

###### **Vehicle Before the Crosswalk**

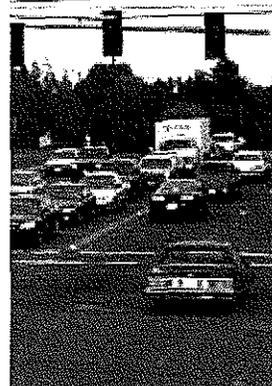


Sensors detect the vehicle before the crosswalk.

Drivers must enter **AFTER** the light has turned red to be photographed.

Drivers are photographed exiting the intersection – proving the violation.

###### **Vehicle Exiting the Intersection**



Each violator receives four photographs in the mail. The first photograph shows the vehicle before the crosswalk and clearly shows the red light. The second picture is a close up of the driver's face to confirm who was driving the vehicle. The third photograph is a close up of the vehicle's license plate. The final photograph shows the vehicle exiting the intersection.

## **B. Violation Processing**

Once a red light running violation has been detected the city's vendor uses encryption technology to safeguard the images against alteration. A search is performed with the Oregon Department of Motor Vehicles (DMV) to determine the registered owner of the vehicle. The vendor also performs a quality control review of each violation. There are several common reasons for why a potential violation is rejected.

### ***Common Reasons for Not Issuing Citations***

- Emergency vehicle with flashing lights
- Driver's gender does not match registered owner
- Driver is unidentifiable
- Can't identify or read license plate
- Wrong or No DMV info available
- Driver or plate obstruction
- Sun glare
- Equipment Issue
- Photograph alignment
- Funeral procession

Photo red light citations are issued following a multi-step process that ensures the digital photographs, violation data and owner information are accurate. If any of the evidence and information does not meet stringent quality control standards, citations are not issued.

A Beaverton police officer reviews each violation, after it has been through the quality control process, and determines whether or not a citation should be issued. After the police officer affirms the citation, their electronic signature is printed on the citation. The City's vendor then prints and mails the citations to the registered owner. The defendant receives a copy of the citation in the mail, along with the four photographs of the violation incident, an explanation letter, the advice of rights information normally found on the back of traffic citations, and a Certificate of Innocence form or Certificate of Non-Liability form (to complete if they were not the driver of the vehicle at the time of the violation).

An important component of Oregon's photo red light statute is that the citation is issued to the *registered owner* of the vehicle. The registration information is determined through the DMV's records. Oregon law requires drivers to maintain their updated address information with the DMV. The

presumption in Oregon on photo red light citations, as with parking tickets, is that the registered owner of the vehicle is the driver at the time of the violation. The onus is on the registered owner to provide evidence if they were not the driver at the time of the violation, through the process of completing a Certificate of Innocence or Certificate of Non-Liability form.

### **C. Municipal Court Processing of Photo Red Light Citations**

The City of Beaverton has the first paperless Municipal Court in the nation. This accomplishment has streamlined the City's citation processing and increased the court's overall efficiency. A violator receiving a photo red light citation has all of the same rights and options as anyone with a traffic violation issued from an officer stop, with the inclusion of the Certificate of Innocence/Certificate of Non-Liability form. If the registered owner of the violating vehicle completes the form, along with providing the court with a photo copy of their driver's license, the citation against the registered owner will be dismissed.

The majority of people who receive photo red light citations plead guilty or no contest and are convicted. Approximately one in five of the violations result in a dismissal due to the completion of a Certificate of Innocence/Non-Liability form. The following chart highlights the outcomes of photo red light citations issued in Beaverton since the inception of the program.

***Outcomes of Beaverton Photo Red Light Citations Issued for Years 2001-2008***

<b>Outcome of Citation</b>	<b>Number</b>	<b>Percent of Total</b>
Convicted	15,786	74.0%
Dismissed – Certificate of Innocence	4,828	22.6%
Dismissed	705	3.3%
Pending	5	0.0%
<b>TOTAL</b>	<b>21,324</b>	<b>99.9%</b>