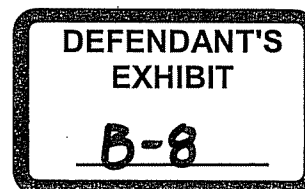


Facts About Red Light Running Crashes in the City of Houston: 1999-2001

Data Caveats

An analysis was conducted of red light running crashes in the City of Houston for 1999-2001. There are some caveats about the data:

1. The data are obtained from the Crash Records Bureau of the Department of Public Safety. This is the state agency vested with documenting crashes for the State. Currently, their reporting requirements are that all fatal crashes, all injury crashes, and all property damage only (PDO) crashes in which one or more vehicles were towed be reported. Thus, they do not include the typical 'fender bender' in which no one is injured and all vehicles are driven away from the crash scene. In other words, the data we have represent the more serious crashes. They are labeled as "serious crashes" in the discussion below.
2. H-GAC has geocoded the crashes. However, because the data are kept in a very old information system by DPS in which road names are represented either by five-digit codes, the first five letters of the road name, or control-section numbers (for rural state roads), there is inevitably some geocoding error. We were able to geocode about 82% of all crashes in the DPS data set with about 90% accuracy on average. Spatial accuracy is within 50-100 yards. One would need actual crash diagrams to have more accuracy.
3. To date, we have geocoded crashes for 1999-2001. Thus, any conclusions about location are only applicable for those years.
4. The definition of a 'red light running crash' is somewhat ambiguous. On the ST3 form, the police officer fills out a "Contributing Factors" box by checking the major factors involved for each vehicle. One item is labeled 'Disregard stop and go signal'. This is clearly a red light running crash. However, there is another item labeled 'Disregard stop sign or light'. DPS explained that this is supposed to be used for stop signs only. However, some officers did not understand this distinction and checked this box for red light running crashes, too. We know this because these intersections had a traffic light and a violation of the traffic control device would have to involve running the red light. Thus, the true number of red light running crashes is greater than what is documented by DPS for the State total. We have labeled this as "probable red light running crashes" in the text below.
5. For some of the intersections, particularly along frontage roads, there are multiple intersections that could have been involved in the crash (e.g., at Greens Rd and IH 45 N, there is a southbound intersection of the west side of IH 45 N and a northbound intersection on the east side of IH 45 N). The data we have cannot easily distinguish between these multiple-intersection locations. A more detailed analysis of these intersections will be necessary to know where exactly the crashes occurred. In addition, there are locations with many red light running crashes where there does not appear to be an intersection (e.g., at Beltway 8 W



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and US 59 W). Again, a more detailed analysis of the actual crash records will be necessary to determine the exact crash locations.

Please cite the Crash Records Bureau of the Texas Department of Public Safety as the source for the crash data and the Houston-Galveston Area Council as the source for the crash analysis.

General Facts

The following information is for crashes in the City of Houston between 1999 and 2001.

1. Between 1999 and 2001, there were 142,967 serious crashes in the City of Houston, an average of 47,967 a year for the period.
2. These crashes constituted 14.4% of the State total for the three year period (995,690).
3. Of the 142,967 serious crashes in the City of Houston, 14,165 definitely involved red light running while and additional 1,618 were probable red light running crashes.
4. Compared to the State total of 55,881 definite red light running crashes, those in the City of Houston represent 25.3% of the State total. Unfortunately, the number of probable red light running crashes for the State is not known. Nevertheless, a disproportionate number of red light crashes in the State of Texas occur within the City of Houston.
5. The number of red light running crashes showed an increasing trend during the period. In 1999, there were 4,728 definite red light running crashes within the City of Houston. By 2000, this number dropped to 4,578, but by 2001 had increased to 4,859. However, when the probable red light running crashes are added to this total, the numbers show a definite increasing trend (5,115 in 1999; 5,325 in 2000; and 5,343 in 2001).
6. Because of the nature of a red light running crash (essentially at right angles), severity levels are high. In the City of Houston, there were an average of 24 fatal and 3,445 injury crashes from red light running between 1999 and 2001. The distribution of red light running crashes is 0.5% fatal, 73.0% injury, and 26.5% for serious property damage only. This is similar to the State average of 0.5% for fatal, 71.3% for injury, and 28.2% for serious property damage only. In the City, there is a slightly higher proportion of injury crashes and a slightly lower proportion of serious property damage only crashes, but the differences are not great.
7. To compare red light running crashes in the City of Houston compared to elsewhere in the State, an index of Serious Crash Risk was used. This is the number of serious crashes per 100 million vehicle miles traveled (VMT). This measure is similar to the crash risk measure used by the National Safety Council and other transportation agencies.

8. Between 1999 and 2001, the serious crash risk for *all* crashes was:

City of Houston	229.0
Eight county region	204.3
State of Texas	155.5

In general, the City of Houston has a more severe safety problem than either the region as a whole nor the State. The crash risk in the City is 1.1 times higher than the region's crash risk and 1.5 times higher than the State crash risk.

9. Between 1999 and 2001, the serious crash risk for red light running crashes was:

City of Houston	22.7
Eight county region	15.4
State of Texas	8.7



For red light running crashes, the City of Houston has a serious crash risk 1.5 times that of the region and 2.6 times that of the State. Red light running is a very serious problem for the City of Houston.

Top 15 Intersections for Red light Running Crashes

Figure 1 shows the major locations for red light running crashes in the region. Table 1 below lists the top 15 intersections for red light running crashes in 1999-2001. The number of crashes occurring at these intersections totaled 1,104 for the three year period. All of these locations are within the City of Houston. They account for 7.8% of all red light running crashes that occurred within the City of Houston over the period and 5.8% of all red light running crashes that occurred in the eight county region. However, even though it's a small percentage, they do represent the top ones where many crashes occur. Eleven of the fifteen intersections are along frontage roads. As mentioned above, we cannot easily tell from these data which side of the freeway the crashes occurred. Nevertheless, the fifteen locations is a start for identifying the likely places for improved enforcement.

**Red Light Running Crashes: 1999-2001
Number of Crashes at Location**



Number of crashes	
#	Less than 25
#	25 - 49
#	50 - 74
#	75 - 99
#	100 or more
	Freeway
	Counties

0 10 20 Miles



Top 15 Intersections for Motor Vehicle Crashes Due To Red Light Running			
Rank	Location	# of Crashes	Severity Distribution
1	Elgin @ Milam	113	No Fatalities 73 Personal Injuries
2	FM 1960 @ SH 249	112	No Fatalities 83 Personal Injuries
3	IH 610 W @ Braeswood	110	No Fatalities 84 Personal Injuries
4	Greens Rd. @ IH 45 N	92	No Fatalities 73 Personal Injuries
5 (tie)	Bissonnet @ BW 8 W	72	No Fatalities 62 Personal Injuries
5 (tie)	Hillcroft @ US 59 W	72	No Fatalities 32 Personal Injuries
7	Pierce @ Fannin	68	No Fatalities 48 Personal Injuries
8 (tie)	Bellaire @ US 59 W	65	No Fatalities 54 Personal Injuries
8 (tie)	Fondren @ US 59 W	65	No Fatalities 56 Personal Injuries
10	BW 8 W @ Bellaire	61	No Fatalities 42 Personal Injuries
11	Rankin Rd. @ IH 45 N	59	No Fatalities 44 Personal Injuries
12	BW 8 W @ US 59 W (Unknown at-grade intersection)	55	No Fatalities 45 Personal Injuries
13 (tie)	Richmond @ BW 8 W	54	No Fatalities 44 Personal Injuries
13 (tie)	Elgin @ Main	54	No Fatalities 42 Personal Injuries
15	Webster @ Fannin	52	No Fatalities 40 Personal Injuries