

Safety in City of Alvin

The following information applies to safety in the City of Alvin in Brazoria County. First, there are some caveats about the data:

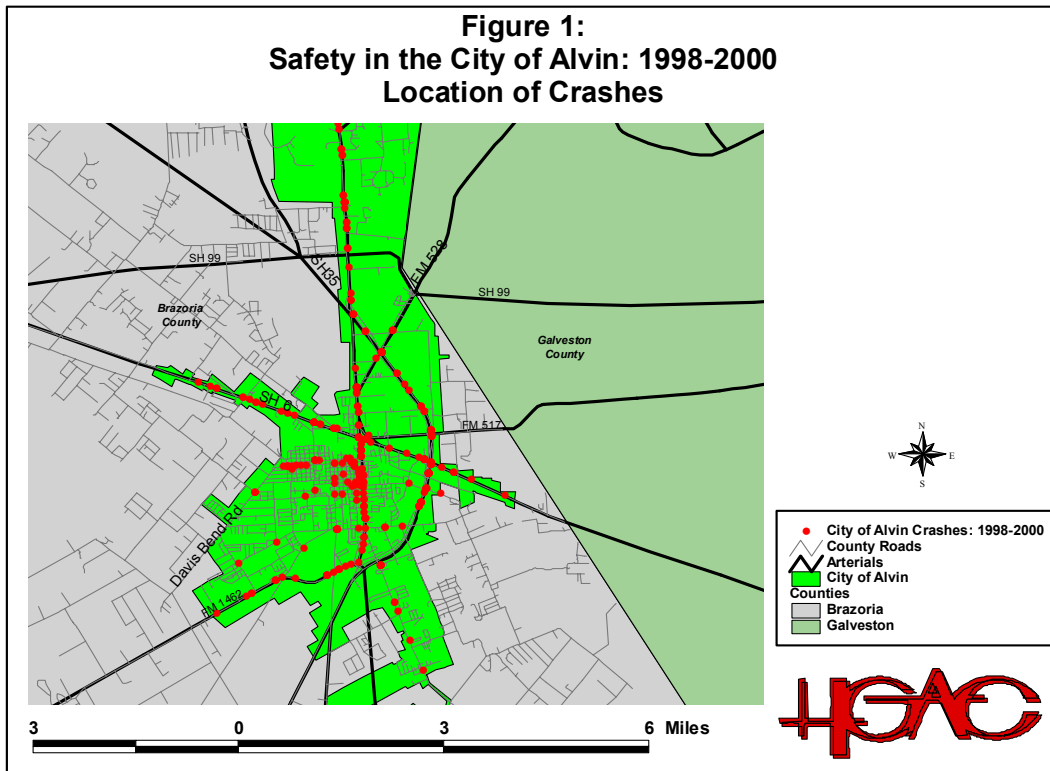
1. The data H-GAC has analyzed is distributed by the Accident Records Bureau of the Department of Public Safety. This is the state agency vested with documenting crashes for the State. Currently, their reporting requirements are that all fatal crashes, all injury crashes, and all property damage only (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.
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. H-GAC was able to geocode about 82% of all crashes in the DPS data set with about 90% accuracy on average.
3. To date, crashes for 1998-2000 have been geocoded. Thus, any conclusions about location are only tentative.
4. Spatial accuracy is within 50-100 yards. One would need actual crash diagrams to have more accuracy.
5. Please cite the Accident Records Bureau of the Texas Department of Public Safety as the source for the crash data and cite the Houston-Galveston Area Council as the source for the crash analysis.

The results of the analysis in the City of Alvin were as follows:

1. Between 1998 and 2000, there were 1138 crashes in the City of Alvin. These included 6 fatal crashes, 406 incapacitating injury crashes, 218 non-incapacitating injury crashes, 441 possible injury crashes, and 406 serious property damage crashes. Figure 1 shows the location of crashes in the City of Alvin.
2. Of the 1138 crashes, 933 were with other vehicles, 130 were with fixed objects, 28 were with bicyclists, 10 were with pedestrians, 9 were with parked cars, and 2 were with animals.

3. Several locations and roads had multiple crashes (Figure 2). The following roads have a high number of crashes: SH 35 (101 crashes), SH 6 (66 crashes), and FM 528 (26 crashes). Eight locations in the City of Alvin had 20 or more crashes between 1998-2000. These were:
 - A. At the junction of SH 35 and FM 528 (35 crashes);
 - B. SH 35 between SH 6 and Old Galveston Rd. (33 crashes);
 - C. BS 35 just north of West South St. (29 crashes);
 - D. SH 35 just north of the junction with FM 517 (24 crashes);
 - E. SH 35 just north of House St. (23 crashes);
 - F. At the junction of BS 35 and SH 6 (22 crashes);
 - G. Just south of the intersection of SH 35 and SH 6 (22 crashes); and
 - H. SH 35 between House St and CR 155 (20 crashes).
4. The number of crashes on four particular roads within the city was requested. These are:
 - A. SH 35: 297 crashes, including intersections with SH 6, BS 35, FM 528, FM 517, and FM 1462.
 - B. BS 35: 146 crashes, including intersections with SH 35, SH 6, and FM 1462.
 - C. SH 6: 141 crashes, including intersections with SH 35, BS 35, and FM 517.
 - D. FM 528: 48 crashes, including intersections with SH 35 and BS 35.
 - E. Davis Bend Rd: 7 crashes at the intersection with Fairview Dr/House St.
5. Crash hot spots are small areas where there is a concentration of crashes. They are a better indicator of hazard than a single location since they consider the interaction of several roads in affecting safety. Using the *CrimeStat* program, five hot spots were identified that had 10 or more crashes. These were clustered in central Alvin. Figure 3 shows a map of these hot spots. The four most serious are:

- A. A 0.26 mile stretch of SH 6 at the junction with SH 35 (18 crashes);
 - B. A 0.27 mile stretch of BS 35 between Avenue D and Old Galveston Rd. (17 crashes);
 - C. A 0.30 mile stretch of FM 528 at the junction with SH 35 (13 crashes);
 - D. A 0.27 mile stretch of BS 35 between West Sidnor and East House St. (12 crashes); and
 - E. A 0.30 mile stretch of Old Galveston Rd. just north of the junction with SH 35 (11 crashes).
6. Based on the estimate of VMT from our modeling group, *serious crash risk* was calculated. This is the number of serious crashes per 100 million vehicle miles traveled (VMT). Between 1998 and 2000, serious crash risk on SH 288 was 299 crashes per 100 million VMT. This is significantly higher than the regional average of 199 serious crashes per 100 million VMT.



**Figure 2:
Safety in the City of Alvin: 1998-2000
Frequent Crash Locations**



**Figure 3:
Safety in the City of Alvin: 1998-2000
Location of Crash Hot Spots**

