

Safety on the Proposed Northline LRT Route: 1999-2001

Limitations of the Data

The following information applies to safety along the proposed Northline LRT Route, which includes North Main Street from Downtown to Boundary Street, Hogan Street from North Main to Fulton, Fulton Street from Hogan to Crosstimbers, Irvington Blvd. from Fulton to Cavalcade, Cavalcade from Irvington to Fulton, and Boundary Street from North Main to Fulton. 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 1998-2001 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.

Results

1. Between 1999 and 2001, there were 611 crashes on the proposed Northline LRT Route, which includes North Main Street from Downtown to Boundary Street, Hogan Street from North Main to Fulton, Fulton Street from Hogan to Crosstimbers, Irvington Blvd. from Fulton to Cavalcade, Cavalcade from Irvington to Fulton, and Boundary Street from North Main to Fulton. These included 5 fatal crashes, 29 incapacitating injury crashes, 87 probable injury crashes, 328 possible injury crashes, and 162 serious property damage crashes. Figure 1 shows the location of crashes along the Northline route.
2. Of the 611 crashes, 491 were with other vehicles, 68 were with fixed objects, 8 were with parked cars, 22 were with a pedestrian, and 11 were with bicyclists. Six incidents occurred with the vehicle overturning, and 5 occurred for other reasons not identified.

3. Several locations had multiple crashes (Figure 2). Five locations on the proposed Northline LRT route had 20 or more crashes between 1999-2001. These were:
 - A. The intersection of Fulton and Loop 610 North (53 crashes).
 - B. The intersection of Fulton and W. Patton (36 crashes).
 - C. The intersection of N. Main and Quitman (30 crashes).
 - D. The intersection of N. Main and Crockett (25 crashes).
 - E. The intersection of N. Main and Commerce (20 crashes).

4. 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, three hot spots were identified that had 50 or more crashes:
 - A. In the vicinity of the intersection of Fulton at IH-610 Loop North (69 crashes);
 - B. The intersection of N. Main and Hogan (54 crashes); and
 - C. In the vicinity of the intersection of Fulton and W. Patton (62 crashes)

5. 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 1999 and 2001, the serious crash risk on the proposed Northline LRT route was 1308.8 crashes per 100 million VMT. This is significantly higher than the regional average of 204 serious crashes per 100 million VMT.

Figure 1
Safety on the Northline LRT Route: 1999-2001
Location of Crashes

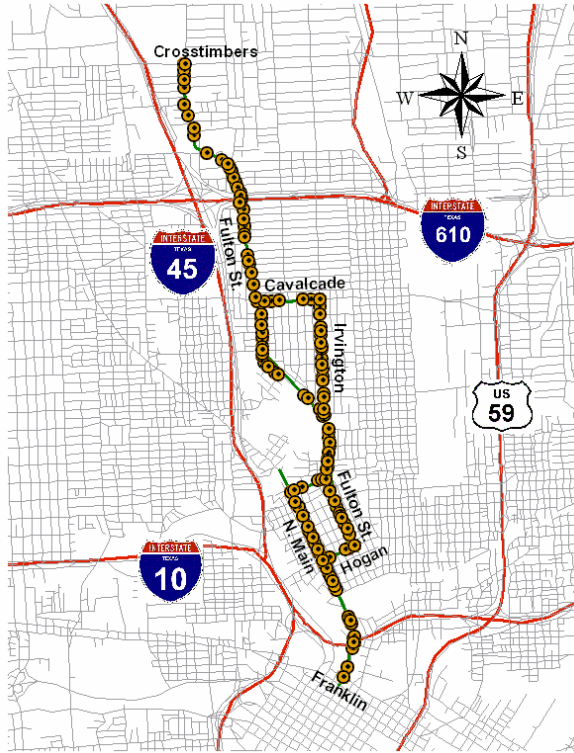


Figure 2
Safety on the Northline LRT Route: 1999-2001
Most Frequent Crash Locations

