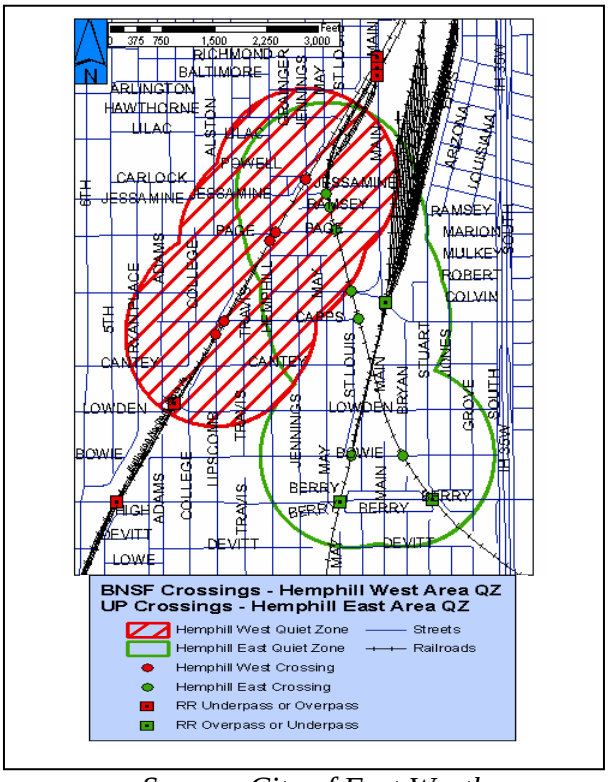
Quiet Zones

The Federal Railroad Administration (FRA) created a rule for cities to create "Quiet Zones" in which trains are not required to sound their horns at controlled crossings (grade crossings). The FRA's website provides flowcharts for determining whether a city can implement a quiet zone.

49 CFR Parts 222 and 229 Use of Locomotive Horns at Highway Grade Crossings: Final Rule

Developing a quiet zone is one way in which a city can mitigate the negative impacts of a freight rail corridor operating near residential areas. Quiet zones are designed to reduce noise around residential areas, schools, hospitals, long-term care facilities, and other noise-sensitive land uses. Grade-crossings within ½ mile of another crossing in a quiet zone are to be included within the quiet zone boundary. Figure 1 shows quiet-zone project areas in Fort Worth where crossings are within ½ a mile of one-another.

FIGURE 1: HEMPHILL WEST AND EAST QUIET ZONES PROJECT



Source: City of Fort Worth

Once a city has decided to move forward with a quiet zone, it is required under 49 CFR 222.43 to notify the freight railroad about the intent to establish a quiet zone. Details that must be included within the letter of notice of intent include: crossing ID number, street name and location, type of warning zone devices that will be deployed, and details of contact person.

Cities must also send a notice of establishment of a railroad zone to the FRA under 49 CFR 222.39(a)(1). The City of Fort Worth website has uploaded a sample notice of intent letter and sample notice of establishment that may be useful local jurisdictions to use.

A quiet zone is created through the use of safety measures that compensate for the absence of horns. For example, this can be achieved through the use of quadrant barriers that are put in place around the crossing. The use of quadrant barriers provides a community relief from whistles and provides a railroad with continued operational functionality to serve a local customer base.

The costs of implementing a quiet zone must be borne by the local jurisdiction – this includes preliminary engineering, construction, maintenance, and replacement of active warning devices or their components. According to the FRA, estimates of costs for quiet zone warning devices, wayside horns or both vary dramatically. For example:

- Four-quadrant gate system - $300,000 to $500,000
- Basic active warning system* $185,000 to $400,000
- Basic inter-connect - $5,000 to $15,000
- Annual maintenance - $4,000 to $10,000

*This includes flashing lights and gates, constant warning time, power-out indicator, and a cabin.

FIGURE 2: FOUR-UADRANT GATE GRADE CROSSING TREATMENT, GARDNER ILLINOIS.

Source: FRA Research Results, RR08-10, October 2009
http://www.fra.dot.gov/downloads/Research/rr0810.pdf

Private developers are often willing to pay for the cost of implementing a quiet zone. For example, the developer of Pacific Station in Encinitas, California, worked with city officials in 2007 to develop a quiet zone near this Transit Oriented Development. Within this 105,000 square foot development, a 50-unit residential block backs onto a busy rail track serving Amtrak, two commuter lines, and 3 to 4 freight trains a day. The developer noted that the benefit of implementing the quiet zone was increased value and satisfaction with the development.

After implementing its quiet zone program in 2006, the City of Fort Worth, Texas created a project priority rating criteria that may also be useful for other cities interested in developing quiet zones. San Diego, California also has a useful Quiet Zone Website that communities may wish to review if they are interested in implementing a quiet zone. The California Public Utilities Commissions also has a useful quiet zone fact sheet and guidance on pedestrian rail crossings.