I have a couple comments after reviewing your Draft Environmental Impact Statement on the Proposed Rule for the Use of Locomotive Horns at Highway Grade Crossings.

1. The estimate for Minimum Population Concerned about Train Horn Noise and Likely to seek relief through mitigation (page 4-15) lists 12,240 cumulative impacted and 3,910 severely impacted for New York. This number is woefully low. On Long Island alone there are many more than 12,140 people concerned with train horn noise and likely to seek relief. The recent problem of horn noise concerning the new LIRR locomotives highlighted this problem. In spite of efforts by the LIRR to move the horn mounting location to alleviate noise pollution many people are interested in seeking relief from train horn noise. This issue is very much a concern in densely populated areas like Queens, Nassau and Suffolk counties in New York.

The LIRR Commuters Campaign recommends that this number be adjusted upwards.
We estimate that there are more than 100,000 people are impacted and more than 25,000 in severely impacted.

2. In regard to your directionality studies and information (page 2-2) there are some additional factors which have an affect on noise and have not been mentioned. In addition to the mounting location of the horn on the locomotive the type of horn is also a significant factor. Flat mechanical horns can maintain a significant portion of the volume in a 270-degree sound pattern. Clearly this causes the impact and severe impact areas to be much larger and the negative affects on people to be much more pronounced. Long "standard" air horns can have a much more concentrated sound pattern that maintains significant volume in about a thirty-degree forward sound pattern. Clearly the forward location is where the sound is needed to be a proper warning and anything to the sides is just sound pollution.

The FRA should also consider advanced horn designs that produce a distinct "forward and down" sound pattern - as are used by some city ambulances. Surely horn modifications would be a much more cost effective way to alleviate noise problems as opposed to the many necessary grade crossing modifications to implement a quite zone. In addition to horn type various sound baffles could also be used to help reduce the volume of noise to the sides and rear of trains, at minimal cost.

3. In the Environmental impact study it seems that targeted areas were chosen just by the number of grade crossings involved. This number is not sufficient to estimate the effect of train horn noise, rather a number that is the product of rail traffic volume (number of trains per day) multiplied by the number of crossings should be used. In New York the LIRR runs about 740 trains per day and has 296 grade crossings. We estimate that LIRR engineers blast their horns more than 97,000 times EACH DAY in a densely crowded suburban area with a total population of more than three million people.

In much of the country the majority of rail traffic is for freight delivery - while fewer areas are mostly for commuter transportation. These two different areas have vastly different considerations for horn use however. While there are only 296 LIRR grade crossings some of these crossings can have 30 or more trains crossing per hour. All 296 LIRR grade crossings have at least dual crossing gates while some have 4-quadrant gates. With the standard long-long-short-long horn blasts it amounts to 120 separate horn blasts per hour in a very densely populated area. No freight service could produce this type of horn frequency.

We recommend allowing commuter railroads, like the LIRR, to use only two blasts of the horn i.e. a long-short. This would help alleviate the noise problem at virtually no coast while still providing a safety warning. In fact some engineers are already doing this at night.