Criteria for selection of demonstration projects have included the following:

1. Minimum duplication in the factors to be tested in each project, including natural limitations such as terrain and route location.

2. Use of limited available resources to provide improvements which will provide most efficiently and promptly the positive service improvements and innovations needed for a valid test of public reaction.

3. Train speeds measurably faster than, and standards of riding comfort substantially superior to those, now attained, as a basis for an adequate test of the market.

The timing of both the Washington-New York and the New York-Boston demonstrations of rail passenger service deserve an explanation.

Undoubtedly in the winter and early spring of 1966 when the demonstrations were being set up an optimistic view prevailed as to the time that would be required for the engineering, the building and the testing of new equipment. Considering that none of the equipment suppliers had built equipment of this kind before delivery commitments could not be based on prior experience. Nevertheless the car builders for both demonstrations accepted in their contracts penalty provisions for late delivery. Based on the estimates of time of delivery for equipment starting dates were set for the demonstrations. In the case of the demonstration between Washington and New York the time required for up-grading of the roadbed was thought to be the critical element and it governed the starting date. In April 1966, before the contract for the building of the Washington-New York demonstration cars was awarded, the Department of Commerce and the Pennsylvania Railroad agreed that ". . . the demonstration was expected to start in October 1967."

About 8 months after the award of contracts for construction of the equipment it became apparent that the Budd Co. would have difficulty in delivering equipment on time for the Pennsylvania Railroad to start the demonstration on October 29. A decision had to be made by the Railroad and the Government as to whether to hold to the original starting date. The Government took the view that an extra effort should be made by the Budd Co. to get equipment built as soon as possible. On this basis the Government agreed to pay for overtime and extra costs incurred by Budd up to a total of $220,000. Also the Government insisted that October 29 be retained as a target for starting the demonstration and public statements were made to that effect by the director of the Office of High Speed Ground Transportation.

Very clearly at this time the Pennsylvania Railroad, the Budd Co. and the electrical suppliers had very serious doubts that enough equipment could be ready for service by October 29. The office of High Speed Ground Transportation is responsible for holding to the original starting date.

The Government believed that there was an urgency (and there still is) to get the information which would be provided by the Washington-New York demonstration and in light of this urgency that it was desirable to set an early date for the start.

The measure of success or failure, however, in getting equipment designed, built, tested and into operating condition expeditiously should probably rest more on a comparison with the time required to carry out other similar projects than on whether or not an early estimate of time of delivery was met.

In making this determination it should be understood first that there is not an easy basis of comparison between this equipment and other rail passenger equipment which has been built in recent years. The electrically propelled cars which are to operate between Washington and New York are the most technologically advanced ever built. The complexities in the control system have required much more testing than was anticipated.

It may be noted that the Japanese National Railroad cars, the only ones comparable to the Metro-liners, were engineered, built, tested and put into service over a three year period. The delivery time for transit cars, without major design improvements, averages 14 months. Also it may be pointed out that a study of 12 U.S. Air Force weapon system development programs has revealed that on the average the time required for these programs has been 36% longer than estimated. Looked at in this light and considering the amounts of their own money committed over the contract price, the record of the equipment suppliers in this project does not seem to deserve much censure. In any case the holdup in the delivery of the cars has been completely without funding cost to the government. The chart following shows the present expenditures by the government and estimated expenditures by the private parties.