



**MASSACHUSETTS
BAY
TRANSPORTATION
AUTHORITY**

50 High Street, Boston, MA 02110

OCT 17 11 14 AM '83

October 13, 1983

Mr. Joseph E. Connarton
Deputy City Clerk
Cambridge City Hall
Cambridge, MA 02439

Dear Sir:

Please be advised that I received your letter today, October 13th, regarding Monday night's public hearing. I regret that I will not be able to attend. However, if the Council wishes, I will be glad to meet with them on an alternative date in order to brief them on the Red Line.

I share the concern of the Cambridge City Council over service disruptions on the Red Line. Restoring Red Line service to the level our riders have a right to expect is our number one priority, and I want to provide you with a current assessment of Red Line operations and the steps we are taking to improve service.

On September 10, 1983 the MBTA construction program moved into the final phase of the Red Line Extension Northwest to Alewife. To complete this effort, it was necessary to undertake very complex construction phasing. Essentially fifty percent of the new Harvard Square Station was constructed and MBTA operations were relocated to the new alignment. The previous track and subway was then demolished to enable construction of the balance of Harvard Square Station, mezzanine and bus tunnels. This interim operation, providing service using only half of the station, will continue until the end of 1984 when the Harvard Square Station is complete and service is extended to Alewife.

While we are in this temporary mode of operation, there are several issues which will affect Red Line service and have recently caused noticeable delays. These issues involve a temporary turnback facility, signals and communications, and rolling stock availability.

TEMPORARY TURNBACK FACILITIES

Until September 6, 1983 the northern most terminus of the Red Line was the Harvard Brattle Station. The station was designed as a 3-track turnback facility allowing both Braintree and Ashmont trains to reverse direction on a 3-minute headway. To enable the Authority's contractor to complete construction of the new station, it was necessary to abandon this facility and turn trains northwest along the new alignment.

Because of design and land constraints at Harvard Square, the new station is built as a two level structure; the northerly track being built above the southerly track. Although switching facilities are available prior to entering Harvard Square Station, the design is such that trains cannot be turned to accommodate a 3-minute headway and, therefore, that crossover is available only in emergencies.

To attempt to maintain a 3-minute headway, a 2-track turnback was constructed beyond Davis Square Station in Somerville. This is the first point where the tracks are parallel and a crossover is available for switching. Consequently, each Red Line train must travel 2 1/2 miles beyond Harvard Square to reverse direction. Even at Davis Square it is an extremely difficult and complex operation to turn 54 trains during the "rush hours" or in 180 minutes. Travelling this additional distance before going back into revenue service in a southerly direction makes schedule adherence more difficult than it was with the 3-track Harvard Brattle operation.

Extra manpower has been assigned to the Davis Square location to expedite the turning of trains. Even with this emphasis all switching and signaling must function perfectly if a 3-minute headway is to be maintained.

SIGNALS AND COMMUNICATIONS

For several years the MBTA has undertaken a program to replace its seventy year old wayside signal system with a more modern audio frequency system known as Automatic Train Control (ATC). The signal system conversion has been accomplished in phases to enable train operation during its implementation. The new extension from Harvard to Davis Square was constructed with ATC. The system was designed and constructed over the past several years, and was placed into revenue operation for the first time on September 10, 1983.

After several days of operation it became increasingly apparent that there was a need to recalibrate the speed commands and block lengths. The ATC calibration as set on September 6, 1983 resulted in a number of bottlenecks that would not permit the operation of the scheduled 3-minute headway.

MBTA engineers immediately began to investigate the matter and identified a number of areas over the entire length of the Red Line where time savings could be realized. Changes were made within 48 hours of the opening and other changes over the last 20 days. On Friday, September 30, the Massachusetts Department of Public Utilities tested and certified the most significant changes enabling a less restrictive Red Line operation. These adjustment will allow improved adherence to the current schedules. Nevertheless the entire signal system is being evaluated by MBTA staff and outside experts to assure maximum flexibility and efficient train movement.

ROLLING STOCK AVAILABILITY

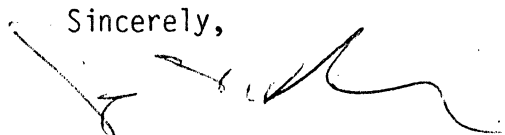
The opening of the new Harvard Square Station and the extension beyond has added seventeen percent more miles to the Red Line operation and, therefore, has placed increased demands on the Authority's fleet of rolling stock equipment. Twenty four hour maintenance operations have been instituted to assure a maximum car availability for peak period service.

In order to maintain headways with extended service, it is necessary to utilize all Red Line equipment available to us including some of our oldest-- Bluebird cars. These cars are scheduled to be completely rebuilt as part of an ongoing program by General Electric in South Boston. The refurbishment process takes six months and the first car is scheduled to be returned to the MBTA on the first of November. As rebuilt cars are returned to the MBTA, we will commit the Bluebird cars into the rebuild program. Therefore, as the rebuild program continues, the Authority's Red Line passengers will begin to experience a more reliable service, although there will be no net increase in the size of the fleet until the fall of 1984.

Efforts are underway to expand the fleet and purchase 58 new cars for the Red Line. However, delivery of this order will not take place until 1986.

I hope this information will be helpful in addressing the concerns of your constituents. If I can be of further help, please do not hesitate to call.

Sincerely,



James F. O'Leary
General Manager

JFO/mac

cc: Mayor Alfred Vellucci
Councillor David A. Wylie



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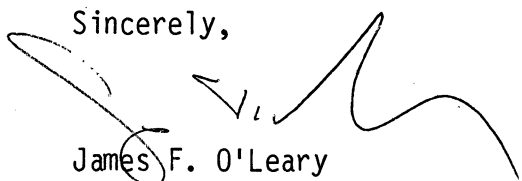
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