

CITY OF CAMBRIDGE
COMMUNITY DEVELOPMENT DEPARTMENT
City Hall Annex - Inman & Broadway - Cambridge, Mass. 02139

(617) 876-6800
EXTENSION 344

October 26, 1978

Mr. James L. Sullivan
City Manager
City Hall
Cambridge, Massachusetts 02139

Dear Mr. Sullivan:

Enclosed is a letter from the tunnel consultant hired by the City, Robert Jenny of Jenny Engineering. Mr. Jenny has reviewed the plans and specifications for the Harvard-Porter tunnel and has concluded that the effects of tunnel construction will not be detrimental to the Cambridge community.

On October 11, 1978, Mr. Jenny met with representatives from the Red Line Construction Task Force to discuss their questions about the tunnel contract. He returned to Cambridge on October 19, 1978, to inspect the route and to meet with additional Task Force members. And, at the Task Force meeting on October 24, 1978, Mr. Jenny presented his findings. After extensive questioning from the Task Force members, a consensus was reached that his report be accepted.

According to Mr. Jenny, the specifications will adequately protect the citizens of Cambridge. The Community Development Department along with other city departments will monitor the MBTA to insure that the specifications are adhered to. Community residents will continue to be informed about construction progress, and we will vigorously pursue their questions and concerns.

A somewhat expanded report will be submitted by Mr. Jenny in the near future. Copies will be made available to Task Force members and interested citizens. Mr. Jenny remains available to answer additional questions pertaining to the Harvard-Porter Tunnel. Please contact me if you require additional information.

Sincerely yours,

Richard Fahlander

RF:mg

cc: Mayor Thomas Danahy
City Council
Red Line Task Force

Enclosure

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OFFICE OF THE
CITY MANAGER



JENNY ENGINEERING CORPORATION

318 SOUTH ORANGE AVENUE
SOUTH ORANGE, N. J. 07079

PHONE: AREA CODE 201
761-6800
CABLE: JENECO

October 23rd, 1978

City of Cambridge
Community Development Department
City Hall Annex
Cambridge, Massachusetts 02139

Attention: Mr. Richard Fahlander

Subject: Red Line Extension
Harvard Square to Porter Square

Gentlemen:

The contract documents for the above referenced project have been reviewed and site visits conducted to familiarize ourselves with the tunnel work proposed by the MBTA.

We have been asked to comment on the following aspects of the work:

- (1) The effects of drilling and blasting portions of the tunnels.
- (2) The effectiveness of a tunnel boring machine in excavating the tunnels.
- (3) Why were deep tunnels constructed rather than shallow tunnels as envisioned at the time the environmental impact study was prepared.
- (4) The quantities of excavated materials that would be removed from the various work sites.

- continued -

Our comments are as follows:

- (1) Effects of drilling and blasting - because of the depth of the rock tunnels, we feel the drilling and blasting will have no disruptive effects to individuals nor cause any damage to structures along the route providing that the work is done in accordance with the contract specifications.
- (2) Tunnel boring machine - a tunnel boring machine could be used to construct the tunnels. However, shield enclosure, modifications to the cutterhead and cutters would be required in the earth and mixed face reaches of the tunnel.
- (3) Construction of deep tunnels - I can only speculate that at the time of the environmental impact study, the MBTA envisioned conventional shallow subway stations, hence maximum gradients for the track would probably not allow the tunnels to be set deep enough to penetrate the rock. Since the Porter Square Station is now a deep station, this constraint no longer exists.
- (4) As of this writing, I have not yet determined these quantities.

In summary, I feel that the decision to allow the Contractor to choose his excavation method(s) for the tunnels is a correct decision. The specifications covering excavation support and drilling and blasting are of excellent quality. While underground blasting will be noticeable, the effect on structures and the public will not be detrimental if all work is done in accordance with the specifications.

To be sure, the public will be inconvenienced sporadically to some degree by certain associated construction operations. These operations, however, will be of a temporary nature, with the exception of trucking, and are generally considered to be unavoidable. Again, the specifications require Contractor compliance to specific rules and regulations which will minimize disturbance and disruption to the public. In

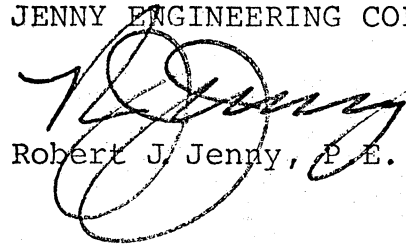
October 23rd, 1978

general, I feel the deep tunnel design is preferable to a shallow scheme because it will eliminate many of the problems associated with near-surface subway construction.

Should you require any additional comments, please feel free to contact me.

Very truly yours,

JENNY ENGINEERING CORPORATION



Robert J. Jenny, P. E.

RJJ:jmb

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CITY OF CAMBRIDGE

CAMBRIDGE, MASSACHUSETTS 02139
Tel. 876-6800

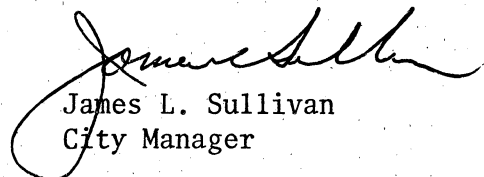
EXECUTIVE DEPARTMENT
JAMES L. SULLIVAN
City Manager

October 30, 1978

To the Honorable, the City Council:

I transmit herewith communication from Richard Fahlander
of the Community Development Department, with a copy of
a letter from Robert Jenny of the Jenny Engineering Company,
relative to the Red Line Extension.

Very truly yours,



James L. Sullivan
City Manager

JLS/b

S-428

RE: report from Jenny Engineering Co. per-
taining to the Red Line Extension.

InCity Council,

October 30, 1978

10-30-78

Placed on file