

REGION OF OTTAWA-CARLETON  
RÉGION D'OTTAWA-CARLETON

REPORT  
RAPPORT

Our File/N/Réf.           **50 12-00-0022**  
Your File/V/Réf.

DATE                       01 June 2000

TO/DEST.                 Co-ordinator Transportation Committee

FROM/EXP.                Director Engineering Division  
                                  Environment and Transportation Department

SUBJECT/OBJET           **SOUTHEAST TRANSITWAY - RIVERSIDE STATION TO  
BILLINGS BRIDGE STATION - INVESTIGATION OF NOISE  
ATTENUATION FENCING OPTIONS**

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**DEPARTMENTAL RECOMMENDATION**

**That Transportation Committee recommend Council direct staff to take no further action in the investigation of noise attenuation fencing options along Pleasant Park, Mountbatten, Blossom Drive and Lamira Street, abutting the Southeast Transitway, as the investigation has not provided an alternative which has the consensus of all the residents.**

**BACKGROUND**

Following the opening of the Southeast Transitway between Riverside Station and Billings Bridge Station in the Fall of 1996, the Region received a number of complaints from residents about noise levels resulting from OC Transpo bus operations on this section of the Transitway.

To address these concerns, a public meeting was held on 05 November 1997 at the Rideau Park United Church in Alta Vista. As a result of the meeting, Regional staff agreed to undertake noise monitoring at two locations along the eastern side of the Transitway on selected residences on Pleasant Park Road and Mountbatten Avenue. Three additional noise monitoring locations on Lamira Street were approved by Transportation Committee on 04 February 1998 and approved by Council on 25 February 1998. Each noise monitoring location was selected by the residents at the public meeting as being representative of each residential area along this section of the Southeast Transitway.

The report concluded that in accordance with Regional policy criteria, increased noise levels as a result of Transitway operations were insufficient to warrant any mitigation measures. The monitoring results, the Region's policy criteria under which the results were evaluated and the conclusions of the study are available on the Region's web page (Transportation Committee, 07 July 1999 – Item 3, Southeast Transitway, Riverside Drive to Billings Bridge Station, Noise Monitoring Report).

At the 07 July 1999 meeting, where the report was tabled, Councillor Hume and Mr. Haddad of 146 Pleasant Park both addressed Transportation Committee on behalf of the affected residents. As a result of their presentations, Committee carried two motions as follows:

1. That the Transportation Committee approve in principle the installation of a solid plank noise barrier fencing for the properties along Pleasant Park, Mountbatten and Blossom Drive abutting the Transitway and that staff report back to Committee on the acceptance of the property owners concerned regarding a continuous barrier as well as their acceptance of ongoing maintenance of the barrier and on the specific design and specific costs for the recommended noise barrier fencing in the event that residents are accepting of the earlier points as per Figure 1.

(Figure 1 showed the geographical area in question and was marked during the meeting to indicate that the fence location referred to above ran along the rear lot line, on the private property of the Pleasant Park and Mountbatten lots where they abut the emergency fire access lane).

2. That staff be directed to investigate alternative solutions including the installation of solid plank noise barrier fencing for the homes along Lamira Street and that a report on the options be presented to Committee.

## INTRODUCTION

When considering the impact of noise on communities abutting a Regional Road or Transitway, the Region's noise policy considers the noise levels averaged over a 16 hour time period. However, at the public meeting of 05 November 1997, the residents were adamant in noting that they were more concerned with the peak noise as each bus passed by, particularly at night.

Staff consulted with Mr. Neil Standen, P.Eng., the acoustics expert who carried out the earlier noise study in this area on behalf of the Region and who is conversant with the issues along this section of the Transitway. Based upon his earlier knowledge and experience, Mr. Standen was asked to assess a range of noise barrier fencing heights in terms of their ability to attenuate the peak noise levels from individual bus pass by events as identified by the residents.

Mr. Standen advised that to achieve the perception for the human ear that the maximum (or peak) loudness is attenuated by about half, that maximum loudness would need to be attenuated by 10 dBA.

This is the minimum attenuation needed to produce an acceptable, and perceptible, reduction in the noise impact. The bus noise would still be audible, but at 50% of its former level.

Based upon this philosophy and supported by detailed technical analysis, Mr. Standen drew several key conclusions:

1. In order to reduce the loudness of individual bus pass by events by 10 dBA, the noise barrier fencing, in the locations specified in the Transportation Committee motions, would need to be 4 m. (13 ft.) high;
2. A barrier 5 m. (16 ft.) high would be needed to provide any perceptible reduction in the peak noise levels at 2098 Lamira Street;
3. A barrier 2.5 m. (8 ft.) high would provide insufficient attenuation to be perceived as any meaningful improvement; and
4. A 4 m. barrier will not attenuate noise impacting second storey windows at night.

Based on the foregoing conclusions staff made a presentation to the residents of Pleasant Park, Mountbatten and Lamira on 29 March 2000.

The presentation illustrated the recommended 4 m. high fencing located on, and at the rear of, the Pleasant Park and Mountbatten properties and bordering on the adjacent public property (Option 1, Sketch 1). The design assumptions and estimated costs were also tabled.

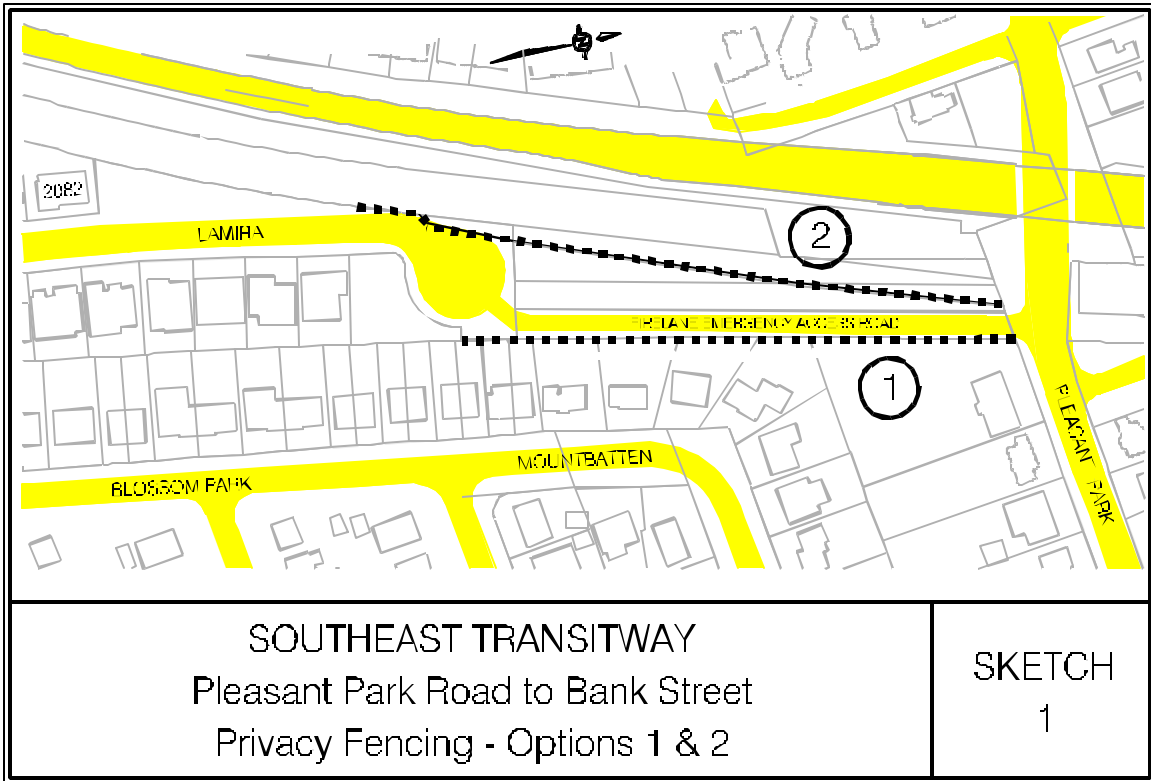
The public property noted above lies between the Pleasant Park and Mountbatten properties and the CN right-of-way. It is currently owned by the City of Ottawa and, in part, is encumbered with an emergency fire access lane for the Ottawa Fire Department (OFD) from Pleasant Park to the Lamira cul-de-sac. Discussions with the OFD revealed that the emergency access lane is no longer required for this purpose and they have no further interest in this facility.

Recent correspondence received from the City of Ottawa has indicated that the City is prepared to convey this property to the Region for \$1.

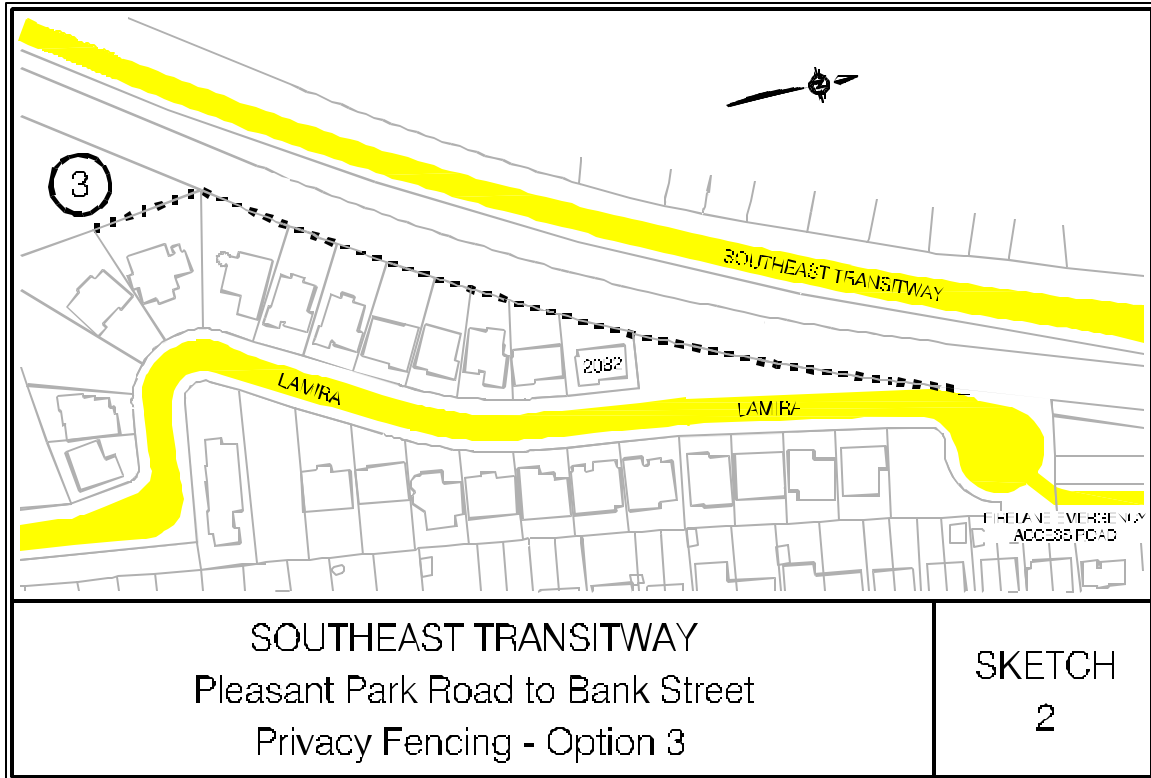
During discussions with CN Rail, the railway indicated that although they would entertain rigidly controlled access by a fencing Contractor, they would not permit the fence to be located on CN property.

Therefore, with this information at hand, staff also prepared a similar option with the same 4 m. high fencing located on the public property immediately adjacent to the CN Rail right-of-way (Option 2, Sketch 1).

Options 1 and 2 both extend from Pleasant Park Road to the Lamira Street cul-de-sac.



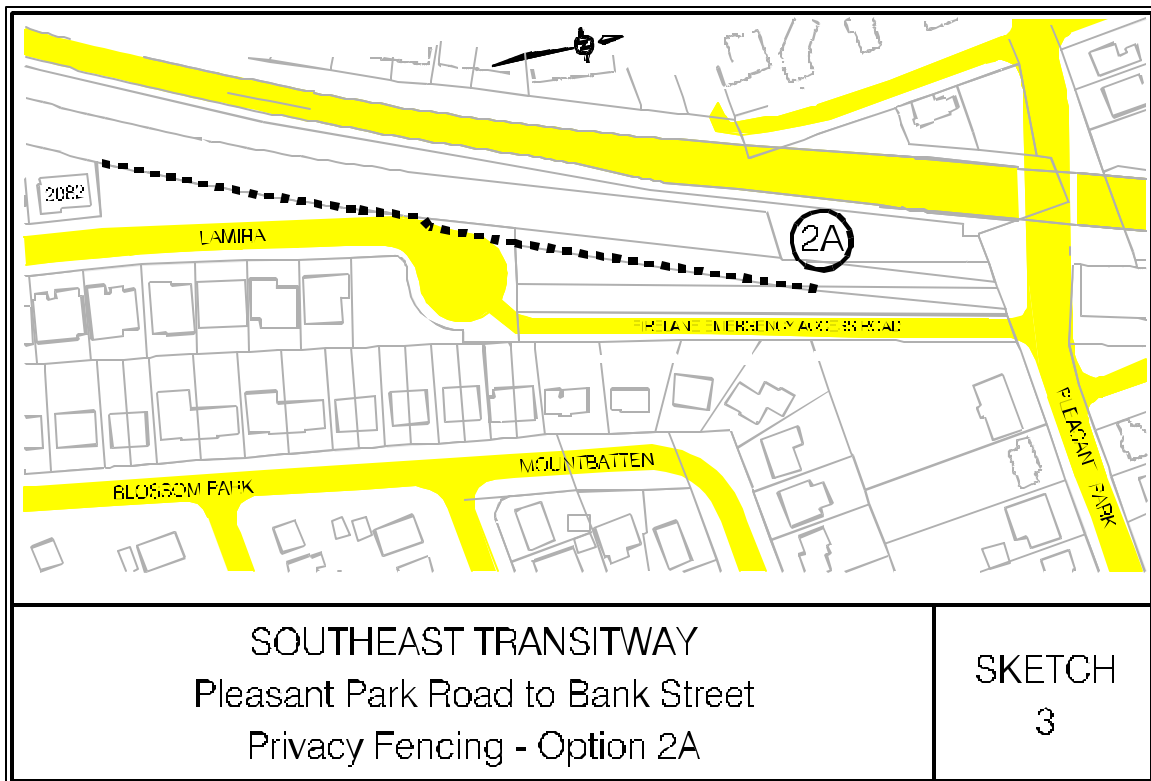
In accordance with the second Committee motion to investigate a potential noise abatement solution for the residents on Lamira Street, the investigation considered a 4 m. high fence located on, and at the rear of, their private properties (Option 3, Sketch 2). The estimated costs are shown in the summary table.



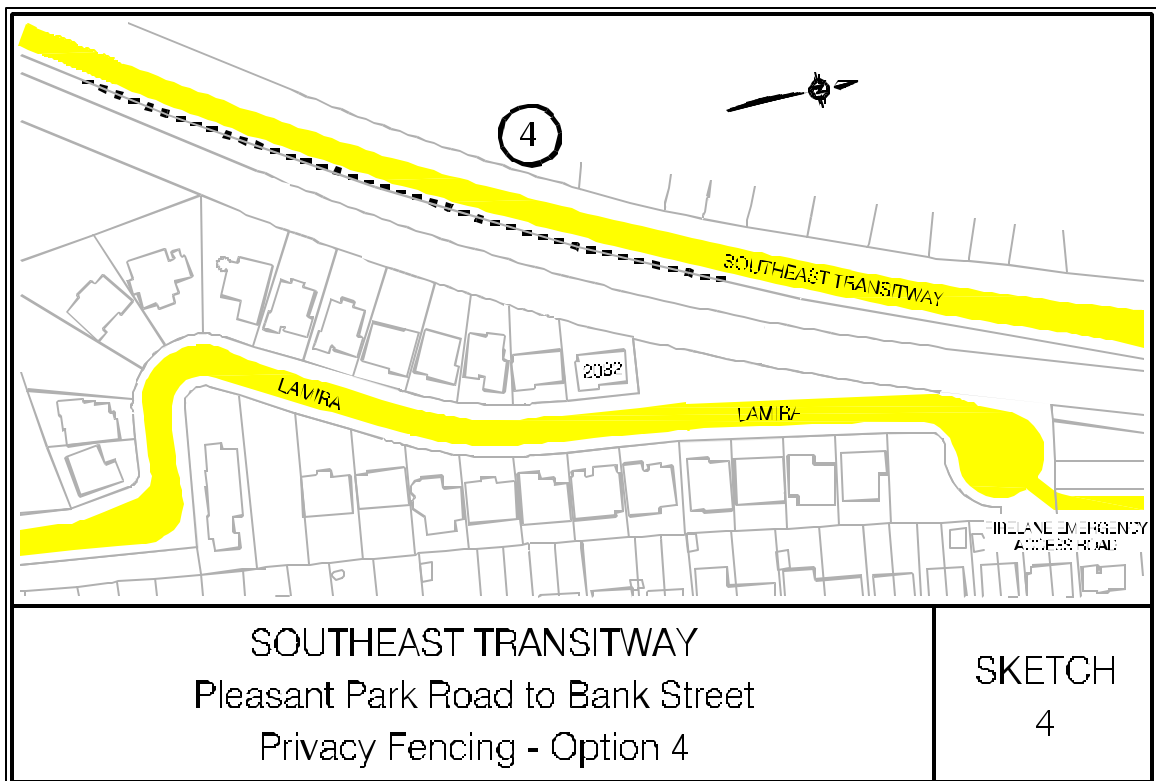
There was no resident support whatsoever for Option 1 from the Pleasant Park and Mountbatten residents.

After discussion, the residents asked staff to investigate 2 further options:

- a) A variation of Option 2 except the fence would begin approximately 65 m. from Pleasant Park Road and carry through the Lamira cul-de-sac area to the north property line of 2082 Lamira (Option 2A, Sketch 3).



- b) A fence located directly adjacent to the Transitway (Option 4, Sketch 4).



Costs for Option 2A were pro-rated from Option 2. Staff investigated Option 4 in sufficient detail to determine order of magnitude costs and reported back to the residents with both options on 19 April 2000. The presentation to the residents provided graphical images of the 4 m high fence at various locations, design assumptions and tables summarizing the conceptual costs for the alternative options.

Additional presentations were made to other individuals who were unable to attend the 19 April 2000 meeting.

To date, there has been no consensus on any of the investigated options.

In total, a series of five fence options were investigated to try and reach an alternative which was acceptable to everyone in the neighbourhood. A brief description of each option, including conceptual costs is outlined below.

### SUMMARY TABLE

- Option 1      A 4 m. high fence, 200 m. long, located at the rear of the Pleasant Park and Mountbatten properties.  
Conceptual estimate - \$216,000.  
This option was totally unacceptable to the residents.
- Option 2      A 4 m. high fence, 200 m. long, located adjacent to the CN right-of-way between Pleasant Park and the Lamira cul-de-sac.  
Conceptual estimate - \$380,000.  
This option was acceptable to some residents conditional on some modifications and prompted the investigation of Option 2A.
- Option 3      A 4 m. high fence, 330 m. long, located at the rear of the Lamira properties which back onto the Transitway/CN right-of-way. This fence would need to be 5 m. high at 2098 Lamira. This option would be installed on private property and would be extremely disruptive to each property.  
Conceptual estimate - \$441,000.  
This option was considered to be too intrusive by some residents who would be affected and prompted the investigation of Option 4.
- Supplementary options:
- Option 2A      A 4 m. high fence, 270 m. long, located adjacent to the CN right-of-way, starting 65 m. south of Pleasant Park and extending to the north property line of 2082 Lamira.  
Conceptual estimate - \$463,000.  
This option was only acceptable to some of the residents who would be affected. With this option, the original length of Option 3 is reduced. This will result in an associated reduction in the original cost of Option 3 by \$60,000.
- Option 4      A 4 m. high fence, 350 m. long, located directly adjacent to the Transitway. Considering the potential for salt damage, this barrier would need to be concrete and as such would require a new structural support wall.  
Conceptual estimate - \$935,000.

### CONCLUSIONS

In accordance with current Regional policy criteria, increased noise levels as a result of Transitway operations in this corridor are insufficient to warrant the installation of any mitigation measures.



Two meetings were held with the residents who live adjacent to the Transitway and who are affected by the increased noise levels and this potential undertaking. Although there are 30+ houses which face the Transitway corridor and are directly affected by the bus noise, eight households were represented at the initial meeting on 29 March 2000, and six households at the second meeting on 19 April 2000.

Bearing in mind the original motions carried at the 07 July 1999 Transportation Committee meeting, only Option 2A and a 'reduced length' Option 3, or Option 2A and Option 4, will meet the objectives of both motions of Transportation Committee.

Options 2A and 3 represent a 4 m. high noise barrier wall from 65 m. short of Pleasant Park Road to the Archdiocese property (500 m±). The installation of this wall would have a significant environmental impact on the area, both public and private, with costs of construction estimated at \$850,000.

Options 2A and 4 will have less of an environmental impact since Option 4 is located at Transitway level. However, combined estimated costs are \$1,400,000.

The remaining funds in the Southeast Transitway, Riverside Station to Billings Bridge Station Account (Order No. 900268) are approximately \$700,000. Therefore, to install a noise barrier wall in accordance with the two motions as carried by the Transportation Committee meeting of 07 July 1999, additional funds will need to be approved by Council as well as the Transition Board.

Given that there was a lack of consensus from the residents on this issue, staff recommend no further action.

A synopsis of this report was delivered to each residence affected by this potential work during the week commencing 05 June 2000, together with a covering letter advising that this matter would be brought before Regional Transportation Committee on 21 June 2000.

*Approved by*  
*J. Miller, P.Eng.*