

**Policy Title: Noise Attenuation Barriers on Major Roadways****Policy Number: 09-03-03**

Section:	<b>Environment And Conservation</b>	Subsection:	<b>Noise Pollution And Control</b>
Effective Date:	<b>April 13, 2011</b>	Last Review Date:	<b>March, 2015</b>
Approved by: <b>Council</b>		Owner Division/Contact: <b>Transportation and Works Department, Transportation and Infrastructure Planning Division</b>	

## Policy Statement

The City of Mississauga endeavours to ensure that noise attenuation barriers are constructed where necessary and that any such barriers are maintained in good condition, both in structure and appearance.

## Purpose

This policy identifies responsibilities for construction and maintenance of noise attenuation barriers and is divided into four categories:

- Noise attenuation barriers in existence at the time of approval of this policy that are to be replaced, as part of a replacement program
- Noise attenuation barriers to be constructed after approval of this policy, as part of new development
- New noise barriers to be constructed after approval of this policy, where none currently exist, as part of a retrofit program, and
- Noise attenuation barriers to be constructed after approval of this policy, as part of a capital works project

## Scope

This policy applies to noise attenuation barriers which are or will be installed adjacent to municipal highways which are under the jurisdiction of the City of Mississauga.

## Legislative Authority

This policy complies with *the Municipal Act, 2001*, Ontario Regulation 586/06, the Local Improvement Charges – Priority Lien Status and the City of Mississauga’s Property Standards By-law. Should any of these be amended so that this policy no longer complies, the particular Act, Regulation or By-law will take precedence.

### **Installation Criteria**

Installation of new noise attenuation barriers is subject to the following:

- The noise level must be greater than 60 dBA (LEQ daytime). (LEQ means “equivalent sound level” and daytime means 7:00 a.m. to 11:00 p.m. LEQ daytime means daytime average.)
- The residential area must be adjacent to arterial and major collector roads, as designated in the Official Plan. Retrofit or replacements will not be considered adjacent to freeways or railway tracks, as they are not under the jurisdiction of the City
- Barriers must be installed on a complete block to ensure their effectiveness

### **Replacement Program Category – Existing Barriers**

Should a noise attenuation barrier on private property require replacement, the City will construct a new noise attenuation barrier which will be situated, whenever possible, wholly on City property. The costs of construction of the new barrier will be 100 percent City funded. Ongoing maintenance and any future replacements of the noise attenuation barrier will be the responsibility of the City.

The replacement of deteriorated noise attenuation barriers will be determined based on priority, primarily according to the level of deterioration of the barriers. Priority listing will be reviewed annually and locations presented to Council for replacement approval.

Maintenance of noise existing attenuation barriers situated on private property will remain the responsibility of the property owner until such time as the City replaces the barrier and reinstalls it on City property. The Property Standards By-law establishes requirements of property owners with respect to the maintenance of their property. The City will ensure that noise attenuation barriers which are situated on private property are maintained to an acceptable level through enforcement of this by-law.

### **Retrofit Program Category – New Barriers**

The City may install noise barriers along major collector or arterial roads in areas where such barriers were not previously installed. These installations may be initiated by the City or requested by private property owners by means of a petition. Installations will be dependent on the installation criteria in this policy being met.

The noise attenuation barrier will be situated on City property whenever possible. The costs of construction of the barrier will be shared on a 50/50 basis with the abutting private property owner. The necessary barrier end returns will be included in the overall estimated cost and the landowners will be assessed on the basis of their rear lot frontage. There will be no adjustments for irregular lot sizes. Ongoing maintenance and any future replacements of the noise attenuation barrier will be the responsibility of the City.

### Petition Required

A petition supporting the installation of a noise barrier and signed by the number of landowners as required under Ontario Regulation 586/06, *Municipal Act, 2001*, must be filed with the City Clerk.

Property owners wishing to oppose the installation of a noise barrier which was initiated by the City must file a petition with the City Clerk.

### Capital Works Project Category

Noise barriers may be constructed by the City in conjunction with a road widening project if no noise attenuation barriers exist and the proposed additional lanes of traffic are found to adversely affect the daytime noise level beyond the established criteria (refer to the "Installation Criteria" section of this policy for the applicable criteria). If the installation criteria are satisfied, the City may elect to pre-install a noise attenuation barrier up to three years prior to the scheduled road widening.

Noise attenuation barriers may be constructed by the City at 100% City cost, on arterial roads as part of a significant capital improvement project, such as improvements at major intersections, transit priority and/or related infrastructure improvements and major asphalt resurfacing or reconstruction, where no road widening is being undertaken. The noise attenuation barriers must be installed where none currently exist and meet the criteria as outlined in the "Installation Criteria" section of this policy.

The cost of construction will be included in the project costs. The noise attenuation barriers will be situated on City property. Ongoing maintenance and future replacements will be the responsibility of the City.

### New Development Category

Servicing Agreements for new developments which require the construction of a noise attenuation barrier will specify that the noise attenuation barrier be situated on City property. Costs of construction will be the responsibility of the developer. Ongoing maintenance and any future replacements of the noise attenuation barrier will be the responsibility of the City.

### Revision History

Reference	Description
OW-192-88 – 1988 05 24	
OW-114-92 – 1992 04 27	

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GC-0169-2005 – 2005 03 30	
August 23, 2007	Housekeeping amendment– to update Ont. Regulation 119/03 to Ont. Regulation 586/06)
GC-0067-2009 – 2009 03 11	Construction of noise barriers without road widening
GC-0166-2011 – 2011 04 13	Change in cost sharing to 100% City for replacement of deteriorated barriers

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DATE: August 26, 2015

REPORT TITLE: **LOCAL IMPROVEMENT PROCESS FOR PRIVATELY OWNED NOISE ATTENUATION WALLS ALONG REGIONAL ROADS**

FROM: Dan Labrecque, Commissioner of Public Works

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### **RECOMMENDATION**

**That a program to rebuild private noise attenuation walls adjacent to Regional Roads and to relocate them onto the public side of the Regional Road be supported in principle;**

**And further, that staff be directed to amend the Region of Peel development approval process to permit the installation of noise attenuation walls adjacent to Regional Roads on the public side of the Regional Road right-of-way;**

**And further, that staff report back to Regional Council with a more detailed implementation plan so that funding requirements for Regional ownership of private noise attenuation walls can be included in future budgets for Council consideration;**

**And further, that a copy of the report of the Commissioner of Public Works titled “Local Improvement Process for Privately Owned Noise Attenuation Walls Along Regional Roads” be sent to the Cities of Brampton and Mississauga, and the Town of Caledon for information.**

### **REPORT HIGHLIGHTS**

- Currently, there are different processes among the Region of Peel and its area municipalities dealing with the Local Improvement Process for privately owned noise attenuation walls.
- There are advantages to re-constructing private noise attenuation walls and relocating them on the public right-of-way to better address matters of public safety, aesthetics through consistent specifications and re-construction methods, and improving customer service.
- Assuming ownership of privately owned noise attenuation walls adjacent to Regional Roads would cost the Region approximately \$55 million in replacement and maintenance costs over the next 30 years.

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## **LOCAL IMPROVEMENT PROCESS FOR PRIVATELY OWNED NOISE ATTENUATION WALLS ALONG REGIONAL ROADS**

### **DISCUSSION**

#### **a) Background**

Over the years staff has brought forward several reports on Regional noise attenuation wall levels of service, repair and replacement under the Local Improvement Process. Most recently, in 2011 staff brought forward a report highlighting that the Region does not fund the full cost of repair and replacement of private noise attenuation walls abutting Regional Roads (see Appendix I). Based on that report, Council's current direction is:

- That Corporate Policy W30-04 Noise Attenuation Barriers, which uses the local improvement process to provide for a special assessment to homeowners to cost share 50:50 with the Region (subject to available funding), be maintained.

Throughout Peel there are different approaches to applying the Local Improvement Program for privately owned noise attenuation walls. Through recent discussions with senior staff from the Cities of Brampton and Mississauga, and the Town of Caledon there is recognition to look at the issue universally from a customer service vantage point. In particular, one can view private noise attenuation walls adjacent to Regional Roads being designed to mitigate noise from inter-regional traffic well beyond the immediate neighbourhood. Therefore, a universal application of financial compensation across the Region would ensure equity among residents.

The development approval process governs the placement and material of noise attenuation walls. When a subdivision is planned along a Regional Road, developers are required to construct noise attenuation walls on private property. During the lifespan of the wall, any repair/replacement or upgrade is the responsibility of the property owner. In many instances, this is where the issue arises as the property owner views the fence as similar to all other public infrastructure, and the repair or replacement should be the responsibility of the Region.

To be proactive and prevent this situation from occurring it is recommended that the development approvals process be amended so that new walls are constructed on the public side of the Regional Road right-of-way. For existing situations, staff recommends the Region re-construct private noise attenuation walls on the public right-of-way once the walls are deemed to be at the end of their operational life. In both instances, these processes will help to ensure design specifications and construction methods are consistent.

#### **b) Current Situation – Policy Regime and Financial Models**

##### **1. Policy Regime - Local Improvement Process**

Under the *Municipal Act, 2001, Ontario Regulation 586/06*, allows the municipality to pass a by-law to undertake the work as a local improvement for the purpose of raising all or any part of the cost of work by imposing a special charge on the affected properties. The Region of Peel's Corporate Policy W30-04 provides for the replacement of private noise attenuation walls with a special assessment apportioning 50 percent of the final cost to the homeowner and 50 percent to the Region. Over the past decade, there have been five local improvement noise attenuation walls applications initiated of which only two have been approved in the City of Mississauga along Erin Mills Parkway between the Collegeway and South Millway. Many applications under the Local Improvement Process do not meet the initial requirements to proceed to the petition process. As there

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## LOCAL IMPROVEMENT PROCESS FOR PRIVATELY OWNED NOISE ATTENUATION WALLS ALONG REGIONAL ROADS

is no formal budget in the Region's Transportation Capital Program for approved local improvement noise attenuation wall replacement, the projects that have been approved were financially managed as one-off budget initiatives presented to Council.

### 2. Financial Models Across Peel

At the moment the Town of Caledon does not have a program for noise attenuation walls. However, in recent discussions with the Town, this issue is being pursued with the intention to develop a policy and program for the repair and replacement. Table 1 below shows the array of funding models between the Region and the Cities of Brampton and Mississauga. The major differences are those outside of capital projects, in particular the application and funding for projects under Local Improvement Process.

**Table 1: Current Funding Models**

Project Type and Program	Agency and Funding Source		
	Region of Peel	City of Brampton	City of Mississauga
Resident Requested - New Wall, Repair or Retrofit  Local Improvement (subject to Council approval).	50% - Tax  50% - Homeowner	75% - Development Charges  25% - Homeowner	50% - Tax  50 % - Homeowner
Replacement Program (subject to Council approval)	Local Improvement Process	Local Improvement Process	100% - Tax
Capital Project – Where need is identified through an Environmental Assessment (i.e. Road Widening)	100 % Development Charges	90-95% Development Charges  5-10% Tax	100 % Development Charges

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### c) Asset Management Overview – Condition Rating and Replacement Costs

Table 2 provides a desktop review of privately owned noise attenuation walls adjacent to Regional Roads revealing that the majority have a condition rating of “Good”. Appendix II shows the Region’s noise attenuation wall condition rating. Of note from Table 3, the majority of spending on replacements for private walls is projected to occur in the next 20 years. This translates to approximately \$50M being spent by 2035, which is 90 percent of the required amount for the 30 year projection. Appendix III shows the location of private walls within the first ten years of the 30 year forecast.

**Table 2: Privately Owned Noise Attenuation Walls Abutting Regional Roads**

Jurisdiction	Rating by Length (m)				Total
	Excellent	Good	Fair	Poor	
Mississauga	0	2,188	4,153	2,060	<b>8,401</b>
Brampton	481	12,369	6,561	2,553	<b>21,964</b>
Caledon	0	1,669	631	0	<b>2,300</b>
<b>Total</b>	<b>481</b>	<b>16,226</b>	<b>11,346</b>	<b>4,613</b>	<b>32,666</b>

**Table 3: Private Noise Attenuation Walls Abutting Regional Roads – Replacement Costs**

Municipality	2015 Replacement and Maintenance Costs (\$M)/Estimated Total	Replacement Dollars Expected		
		10 Yrs.	10-20 Yrs.	20-30 Yrs.
Mississauga	<b>\$14.1</b>	\$10.3	\$3.6	\$0.2
Brampton	<b>\$36.9</b>	\$8.9	\$23.9	\$4.1
Caledon	<b>\$3.9</b>	\$0.7	\$2.0	\$1.1
<b>Total</b>	<b>\$55.0</b>	<b>\$20.0</b>	<b>\$29.5</b>	<b>\$5.4</b>
<b>Percentage of inventory to be replaced</b>		<b>36%</b>	<b>54%</b>	<b>10%</b>

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## **LOCAL IMPROVEMENT PROCESS FOR PRIVATELY OWNED NOISE ATTENUATION WALLS ALONG REGIONAL ROADS**

### **FINANCIAL IMPLICATIONS**

Assuming the ownership of private noise attenuation walls adjacent to Regional Roads would be a new financial obligation for Peel, totalling \$55 million over the next 30 years. This equates to an average cost of approximately \$2 million per year, which is in addition to the \$500,000 per year the Region currently budgets for the replacement and repairs of Regionally owned noise attenuation walls. The additional \$2 million per year would allow for a linear annual program of approximately 1,200 metres (3,937 feet) to be repaired and replaced. Should Council decide to assume private noise attenuation walls, this new financial responsibility would result in additional pressure on the Region's capital reserves. Staff will include this pressure as part of its annual adequacy of reserves assessment to be reported to Council in October.

### **NEXT STEPS**

Subject to Council direction, it is proposed that staff initiate a work plan to program privately owned noise attenuation walls adjacent to Regional Roads in the 2017 capital plan. The work plan will be undertaken over the next 12 months and consist of activities listed below. At this time, no additional staff resources are anticipated to deliver the work plan.

1. Amending the development approvals process to construct noise attenuation walls on the public side of the Regional Road right-of-way.
2. Prioritization of high, medium, and low projects within the 30 year forecast for consideration in the 2017 Capital Budget.
3. Develop an inspection program for privately owned walls; including work required for utility impacts, easements, and additional resources.
4. Develop of a communication package to ensure residents are informed of the new program and what is eligible for 100 percent funding.

### **CONCLUSION**

Replacing private noise attenuation walls adjacent to Regional Roads and moving them onto the Regional Right-of-Way has several advantages, including: public safety, maintaining an aesthetically pleasing design and streetscape (which can be difficult if reconstruction is left to property owners), and alignment across the Region in terms of financial compensation. This policy shift adds a new financial obligation for Peel of approximately \$2M per year for the next 30 years. Staff is seeking Council direction on how to proceed.



Dan Labrecque, Commissioner of Public Works

### **Approved for Submission:**




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D. Szwarc, Chief Administrative Officer

August 26, 2015

**LOCAL IMPROVEMENT PROCESS FOR PRIVATELY OWNED NOISE ATTENUATION  
WALLS ALONG REGIONAL ROADS**

**APPENDICES**

Appendix I – Council Report, July 7, 2011: The Condition of Noise Attenuation Walls Along Regional Roads and the Effectiveness of the Local Improvement Process

Appendix II – Noise Attenuation Wall Rating System

Appendix III – 10 Years Private Noise Attenuation Wall Replacement Plan (2016-2025)

*For further information regarding this report, please contact Steve Ganesh, Manager, Infrastructure Programming and Studies, extension 7824, [steve.ganesh@peelregion.ca](mailto:steve.ganesh@peelregion.ca).*

*Authored By: Steve Ganesh*

*Reviewed in the workflow by:  
Financial Support Unit*

**APPROVED AT REGIONAL COUNCIL  
July 7, 2011**

**PW-C. TRANSPORTATION**

**PW-C3. The Condition of Noise Attenuation Walls Along Regional Roads and  
the Effectiveness of the Local Improvement Process**

Moved by Councillor McCallion;  
Seconded by Councillor Mahoney;

That the current levels of service for Region-owned noise  
attenuation walls be maintained;

And further, that Corporate Policy W30-04 Noise Attenuation  
Barriers, which uses the local improvement process to provide for a  
special assessment to homeowners to cost share 50:50 with the  
Region (subject to available funding), be maintained;

And further, that replacement of, or repair to private noise  
attenuation walls and/or fencing remain the responsibility of affected  
property owners.

Carried

2011-683



**REPORT**  
**Meeting Date: July 7, 2011**  
**Regional Council**

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DATE: June 1, 2011

REPORT TITLE: **THE CONDITION OF NOISE ATTENUATION WALLS ALONG REGIONAL ROADS AND THE EFFECTIVENESS OF THE LOCAL IMPROVEMENT PROCESS**

FROM: Dan Labrecque, Commissioner of Public Works

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### **RECOMMENDATION**

**That the current levels of service for Region-owned noise attenuation walls be maintained;**

**And further, that Corporate Policy W30-04 Noise Attenuation Barriers, which uses the local improvement process to provide for a special assessment to homeowners to cost share 50:50 with the Region (subject to available funding), be maintained;**

**And further, that replacement of, or repair to private noise attenuation walls and/or fencing remains the responsibility of affected property owners.**

### **REPORT HIGHLIGHTS**

- Council directed staff to report back on the condition of noise attenuation walls abutting Regional Roads and the effectiveness of the local improvement process. The assessment was to include information on the specific sections of Finch Avenue and Kennedy Road.
- Private fences located on both sides of Kennedy Road between Vodden Street East and Townsend Gate/Linkdale Road in the City of Brampton are in poor condition and visually unattractive. A local improvement petition was unsuccessful for replacing the fence with a noise attenuation wall.
- A private subdivision noise attenuation wall located along Finch Avenue between Darcel Avenue and Highway 427 in the City of Mississauga is in poor condition. A local improvement petition has not been initiated to replace the private noise attenuation wall.
- Corporate Policy W30-04 provides homeowners an opportunity to cost share 50:50 (based on actual final project costs) with the Region for replacement of noise attenuation walls using the local improvement process.
- At this time, the Region's Transportation Capital program is not fully funded. Staff suggests that the priority should be to focus on maintaining the Region's current assets and as such, staff would not recommend taking on any new financial liabilities associated with private noise walls or private fences.

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**THE CONDITION OF NOISE ATTENUATION WALLS ALONG REGIONAL ROADS AND THE EFFECTIVENESS OF THE LOCAL IMPROVEMENT PROCESS**

**DISCUSSION**

**1. Background**

Regional Council, at its meeting held on July 8, 2010, requested that the Commissioner of Public Works report back to a future meeting on the following items:

- a) an update on the condition of existing noise attenuation walls abutting Regional roads, and in particular Kennedy Road north of Vodden Street in the City of Brampton;
- b) information regarding noise attenuation along Finch Avenue between Darcel Avenue and Highway. 427 in the City of Mississauga; and,
- c) Information on the effectiveness of the local improvement program.

**2. Region Owned and Private Noise Attenuation Walls Condition Reports**

**a) Region Owned Noise Attenuation Walls**

A condition assessment of Regional noise attenuation walls was completed in 2010 and indicates that the walls are overall in good condition. They are evaluated, monitored and maintained on an ongoing basis. Following is a summary of information for the Region owned noise attenuation walls.

<b>Region Owned Noise Attenuation Walls</b>					
Location	Length (metres)	Today's Replacement Value (millions \$) (based on cost of \$1,350/metre)	Cost of walls requiring replacement within 10 yrs. (millions \$)	Cost of walls requiring replacement within 10-20 yrs. (millions \$)	Cost of walls requiring replacement within 20-30 yrs. (millions \$)
Mississauga	13,027	\$17.8	\$ 4.9	\$ 8.6	\$ 4.2
Brampton	9,807	\$13.2	\$ 1.1	\$ 6.0	\$ 6.0
Caledon	0	\$ -	\$ -	\$ -	\$ -
<b>Total</b>	<b>22,834</b>	<b>\$31.0</b>	<b>\$ 6.0</b>	<b>\$ 14.6</b>	<b>\$10.2</b>

**b) Private Noise Attenuation Walls Abutting Regional Roads**

Regional staff undertook a desktop data collection and condition assessment of private noise walls to evaluate their current condition. Following is a summary of information for the private noise attenuation walls.

<b>Private Noise Attenuation Walls Abutting Regional Roads</b>					
Location	Length (metres)	Today's Replacement Value (millions \$) (based on cost of \$1,350/metre)	Cost of walls requiring replacement within 10 yrs. (millions \$)	Cost of walls requiring replacement within 10-20 yrs. (millions \$)	Cost of walls requiring replacement within 20-30 yrs. (millions \$)
Mississauga	8,402	\$ 11.3	\$ 2.4	\$ 6.2	\$ 2.7
Brampton	21,964	\$ 29.7	\$ 3.0	\$ 7.7	\$ 18.9
Caledon	2,300	\$ 3.1	\$ -	\$ .6	\$ 2.5
<b>Total</b>	<b>32,666</b>	<b>\$ 44.1</b>	<b>\$ 5.4</b>	<b>\$14.5</b>	<b>\$ 24.1</b>

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## THE CONDITION OF NOISE ATTENUATION WALLS ALONG REGIONAL ROADS AND THE EFFECTIVENESS OF THE LOCAL IMPROVEMENT PROCESS

### c) Condition of Private Fences on Kennedy Road and Private Noise Attenuation Walls on Finch Avenue

#### i) Kennedy Road Fence

The homes in question have municipal addresses on Greene Drive and Kingswood Drive (streets that run parallel to Kennedy Road between Vodden Street East and Townsend Gate/Linkdale Road) and their rear yards abut Kennedy Road. The rear yards are fenced (not noise attenuation walls), many with gate access to Kennedy Road. The fences are either wood or chain link with ad hoc styles and maintenance.

Though residents were approached in 2007 about replacing the fence with a noise attenuation wall, there was little enthusiasm from the residents to move ahead with this solution for the following reasons:

- back gates give residents easy access to Kennedy Road transit, shopping, schools, etc. ;
- materials intended for backyard use can be delivered through gates and do not have to be taken through the house;
- limited financial ability of owners to afford local improvement cost sharing agreement.

The noise attenuation walls that were replaced in 2005 located north of Townsend Gate/Linkdale Road on Kennedy Road are Regionally-owned.

#### ii) Finch Avenue Private Noise Attenuation Walls

The concrete subdivision noise attenuation wall located along Finch Avenue between Darcel Avenue and Highway 427 in the City of Mississauga is in poor condition and continues to deteriorate. Residents could request replacement of the noise attenuation wall under the Region's local improvement process however to date, the Region has not received a request to initiate a local improvement for this portion of Finch Avenue.

Pictures are provided for both locations in Appendix I.

### 3. The Local Improvement Process

The Region of Peel's Corporate Policy W30-04 (Appendix III) provides for replacement of private noise attenuation walls with a special assessment which apportions 50 percent of the final cost to the homeowners with 50 percent paid by the Region. The local improvement process is described in detail in Appendix II.

Regional staff reviewed the success of the local improvement process over the past decade. There have been 84 enquiries from the public regarding deteriorating private noise walls and three applications for a local improvement noise attenuation wall initiated. Out of these applications one noise attenuation wall has been successfully constructed. One noise attenuation wall is pending for construction in 2011. Details of the projects are as follows:

- 2005 – A condominium corporation requested replacement of their noise attenuation wall which abuts Derry Road. The petition process was successful

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and the by-law for the construction of the noise attenuation wall was passed by Council. However, when the project was tendered by the Region, the condominium corporation requested that the project be cancelled.

- 2007 - A condominium corporation on Erin Mills Parkway successfully replaced a private subdivision noise attenuation wall using the local improvement process.
- 2010 - A condominium corporation on Erin Mills Parkway was successful in their noise wall petition and construction is scheduled for the fall of 2011.

There are many enquiries from the public regarding the local improvement process; however most do not meet the initial requirements to proceed to the petition process.

Condominium corporations are the most successful users of the local improvement policy since the noise attenuation wall is considered an element in common between all homeowners in the condominium, and the cost can be spread between all owners and/or covered through the condominium board's reserve funds.

**4. Local Municipal Funding Practices for Replacement of Private Noise Attenuation Walls**

Local municipalities have funding strategies that differ from the Region of Peel. These differences are summarized below.

**City of Mississauga**

City of Mississauga policy provides for 100 percent City funding for the replacement of deteriorated private noise attenuation walls. City funding is subject to Council approval.

**City of Brampton**

City of Brampton policy provides for a 75/25 split with 75 percent paid by the City and 25 percent paid by the property owners for replacement of deteriorated private noise attenuation walls. City funding is subject to Council approval and the availability of funding.

**Town of Caledon**

The Town of Caledon has not replaced any noise attenuation walls through the local improvement process.

**5. Region's Financial Exposure under Various Local Improvement Funding Options**

The following chart illustrates the financial implications of changes to the current 50/50 special assessment cost share for the replacement of private noise attenuation walls. (The figures are based on the current replacement value of private noise attenuation walls abutting Regional roads.)

	Funding Options		
	Current 50% Region - 50% Homeowners	75% Region - 25% Homeowners	100% Region
<b>Region's Current and Potential Financial Exposure (millions\$)</b>	<b>\$ 22.05</b>	<b>\$ 33.08</b>	<b>\$ 44.1</b>

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There is no formal budget allocation established for approved local improvement noise attenuation wall replacements. To date, the projects that have been approved are managed as one-off budget initiatives. A fundamental shift in policy such as changing the current funding ratio would require sustainable adjustments to the longer term "state of good repair" financing plan.

Given the underfunded status of the Region's Transportation Capital program, staff recommends that the current 50/50 cost sharing special assessment with homeowners be retained.

### 6. Private Fences and Development of Noise Attenuation Walls

Staff has not determined the length of existing private fences along Regional roads for this report. However, given the amount of potential fence replacement required within the Region, and the underfunded status of the Region's Transportation Capital program, staff recommends that replacement and/or repair of deteriorating fencing located on private property should remain the sole responsibility of the affected property owners. Funding for repair, replacement and/or long-term maintenance should not be provided for by the Region.

## CONCLUSION

1. Regional noise attenuation walls are in good condition and are maintained on an ongoing basis. Staff recommends maintaining the current level of service for Region-owned noise attenuation walls.

Some private noise attenuation walls are in very poor condition, visually unsightly and may pose a safety risk within the right-of-way. The maintenance of private noise attenuation walls remain problematic, but should rest with homeowners and be enforced at the local municipal level.

2. There is no current Regional solution for replacement of the fences along Kennedy Road since there is no desire by homeowners to replace with a noise attenuation wall.

The noise attenuation walls along Finch Avenue between Darcel Avenue and Highway 427 are private subdivision walls. Although the noise attenuation walls would qualify for replacement under the local improvement process, the Region has not received a request to initiate the local improvement process.

3. Use of the local improvement process for noise attenuation walls to replace deteriorating private walls has a low success rate. This lack of success may be related to the following factors.
  - Cost for some homeowners may be prohibitive, even with a 50/50 cost share.
  - The process is involved and collection of signatures is time-consuming for the initiator. Low chance of success for the petition can be a disincentive to start the process.
  - The public may be unaware of the local improvement process.

However at this point in time, the current local improvement policy special assessment for 50 percent of the final costs to homeowners is equitable, given the overall underfunded status of the Region's Transportation Capital program.

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4. Private noise attenuation walls continue to deteriorate along Regional roads creating both an aesthetic and functional liability in its rights-of-way. Residents with deteriorating walls are not using the local improvement process to replace the walls.
5. The local municipalities have replacement policies that are different to the Region's creating confusion and at times, a perception of unfairness.
6. Given the amount of potential fence replacement required within the Region, and the underfunded status of the Region's Transportation capital program, staff recommends that replacement and/or repair of deteriorating fencing located on private property should remain the sole responsibility of the affected property owners



Dan Labrecque  
Commissioner of Public Works

**Approved for Submission:**



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D. Szwarc, Chief Administrative Officer

*For further information regarding this report, please contact Liz Brock at extension 7902 or via email at [liz.brock@peelregion.ca](mailto:liz.brock@peelregion.ca)*

*gla* *L.B.* Authored By: Liz Brock

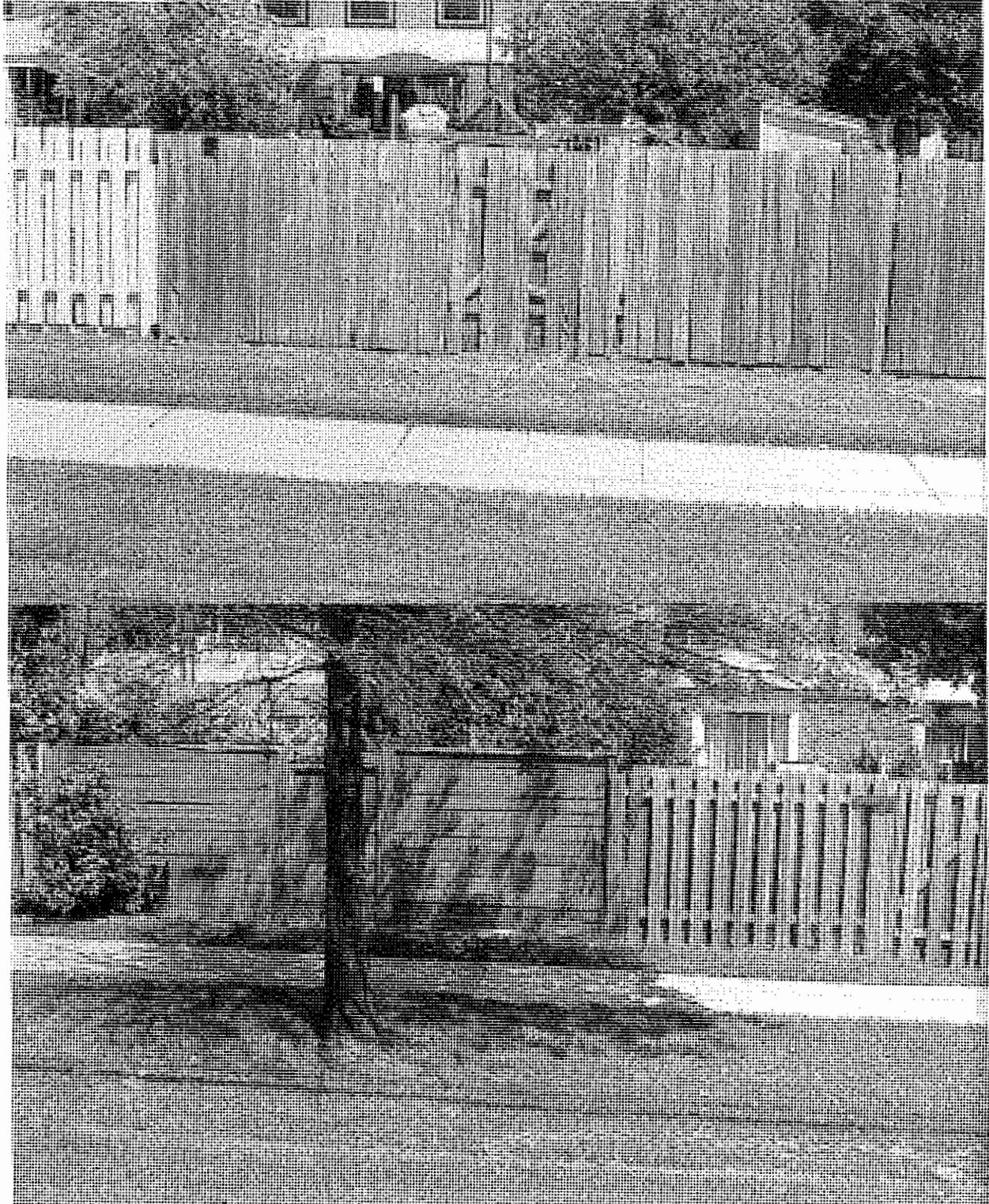
*ML* c. Legislative Services

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EFFECTIVENESS OF THE LOCAL IMPROVEMENT PROCESS**

**APPENDIX I**

**T Private fence along Kennedy Road between Vodden Street East and Townsend Gate/Linkdale  
Road**

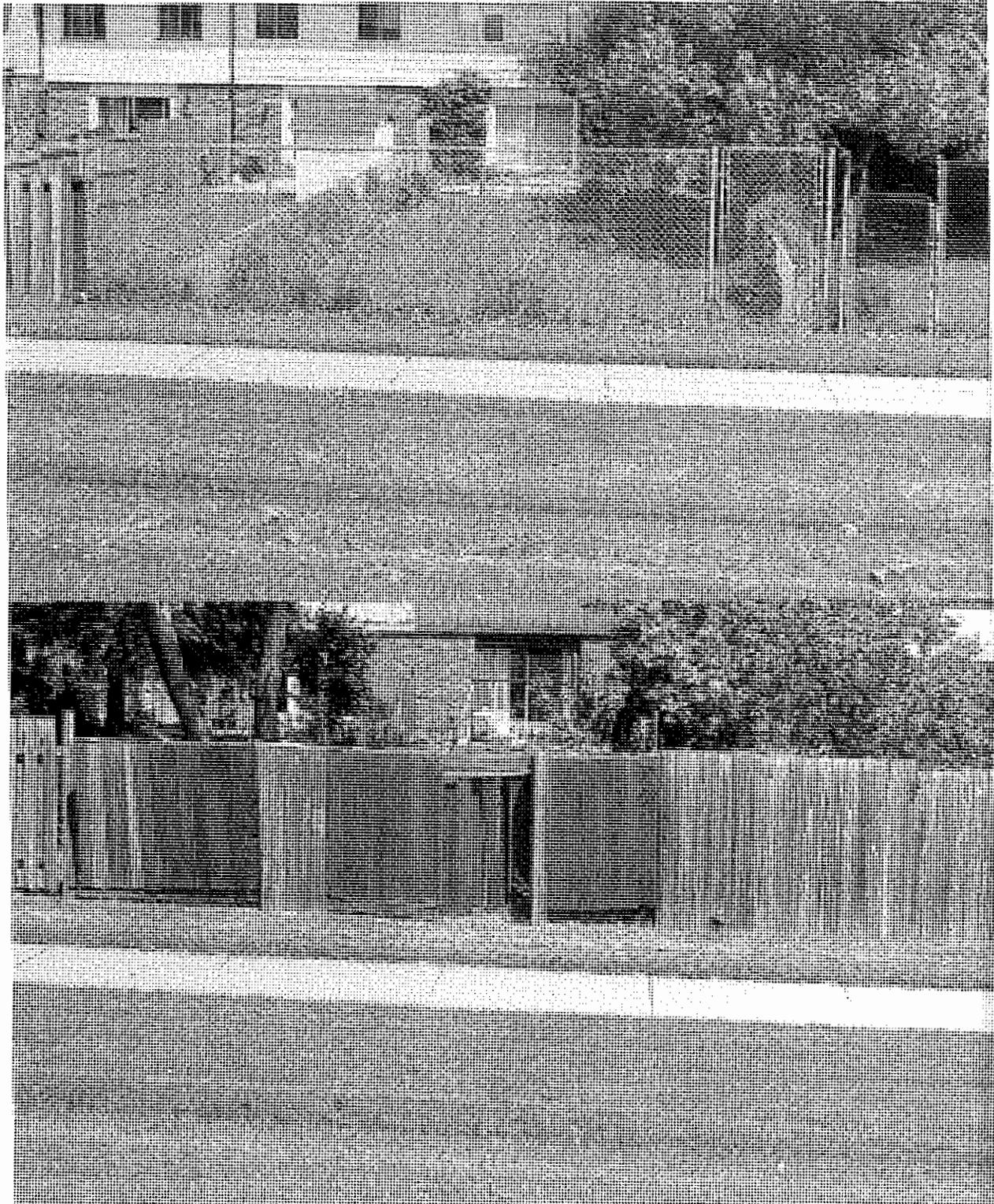


APPENDIX I

June 1, 2011

**THE CONDITION OF NOISE ATTENUATION WALLS ALONG REGIONAL ROADS AND THE  
EFFECTIVENESS OF THE LOCAL IMPROVEMENT PROCESS**

**Private fence along Kennedy Road between Vodden Street East and Townsend Gate/Linkdale  
Road**



APPENDIX I

June 1, 2011

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**Private subdivision noise attenuation wall Finch Avenue - between Darcel Avenue & Hwy 427**

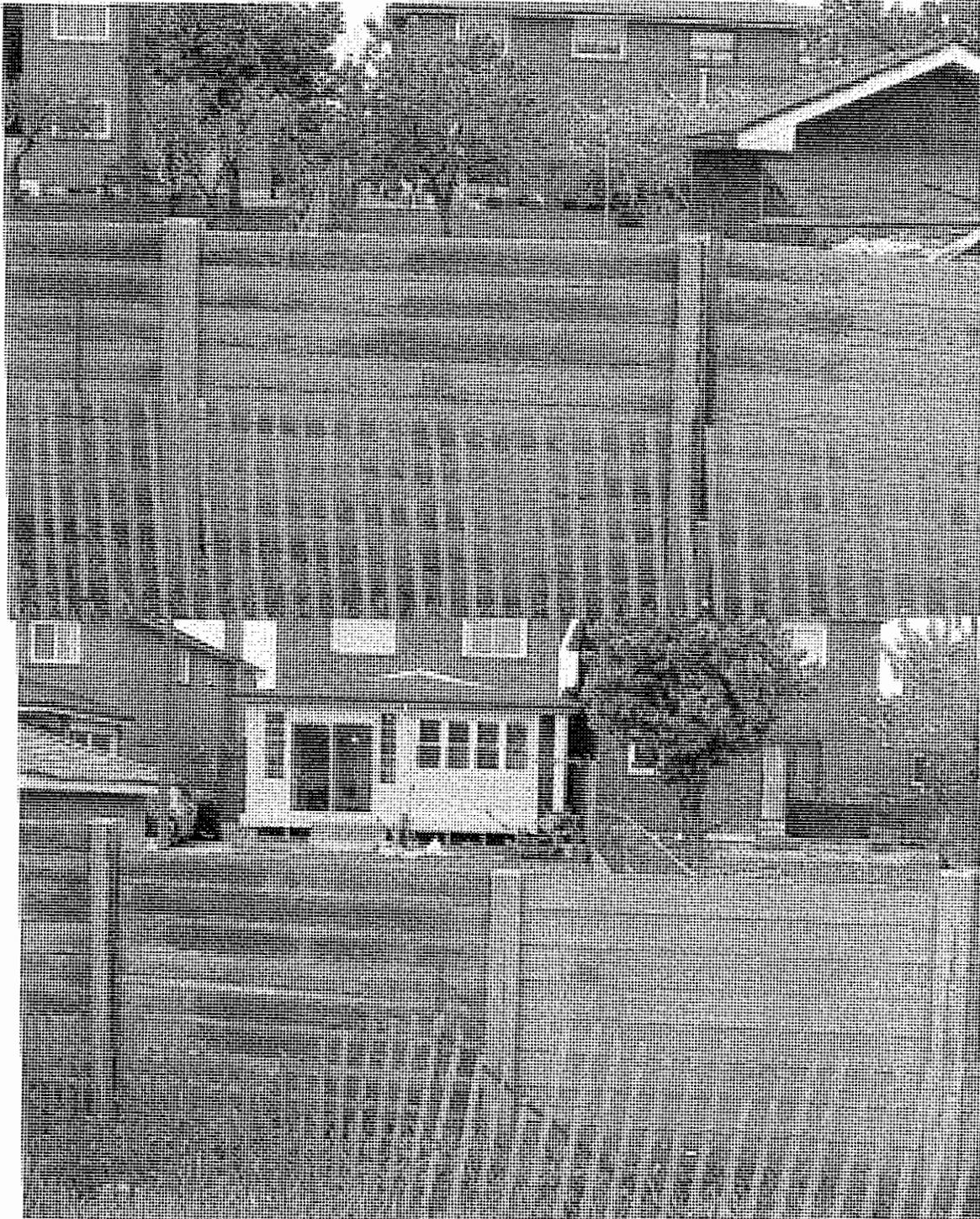


APPENDIX I

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Private subdivision noise attenuation wall Finch Avenue - between Darcel Avenue & Hwy 427



June 1, 2011

## THE CONDITION OF NOISE ATTENUATION WALLS ALONG REGIONAL ROADS AND THE EFFECTIVENESS OF THE LOCAL IMPROVEMENT PROCESS

### APPENDIX II

#### Local Improvements

Local improvements are owner-initiated requests for municipal services administered pursuant to the *Municipal Act, 2001, Ontario Regulation 586/06*. The Act offers communities a fair and impartial method of obtaining municipal services by sharing the costs with the municipality.

The Regulation allows the municipality to pass a by-law to undertake the work as a local improvement for the purpose of raising all or any part of the cost of the work by imposing a special charge on the affected properties. The Region's cost share agreement for a noise attenuation wall is 50/50 with property owners.

Residential properties with reverse frontage (a rear or side lot abutting a Regional road) and experiencing a daytime noise level of 60 decibels or higher during daytime hours (i.e. 7:00 a.m. – 11:00 p.m.) are eligible for a noise wall under the *Local Improvement Act*. As well, there must be at least three properties that would benefit from the wall to qualify and the proposed works are not dependent on whether the lot is occupied or vacant. There is no limitation on the length of assessable reverse frontage.

The local improvement process requires a proponent from the community for the noise wall petition. The Region prepares the petition and the proponent circulates within the community to determine the public interest in the proposal. The Region is a neutral party in the petition process. The petition has a time limit and must be returned on or before the closing date. The local improvement petition identifies the benefiting property owner's name, legal property description, and estimated cost share of each benefiting property for the improvement. The property owner(s) signature represents their understanding and acceptance of the conditions stated on the petition and therefore would be considered in the favour of the project.

The Office of the Regional Clerk verifies the petition for sufficiency. A sufficient petition requires at least two-thirds of the benefiting property owners, representing at least one-half of the assessed property value, to sign in favour of the works. Furthermore, there must be signatures representing a majority of the owners for each benefiting property (i.e., greater than one half) in order for it to be counted in favour of the works. The construction of the proposed project depends upon the final approval of Council.

The final cost of a noise wall ultimately depends on the height and type of material selected. Region staff will determine a price based on the approved wall type when the project has been tendered and will provide a breakdown of cost per affected property to the proponent and affected properties.

The *Municipal Act* gives Regional Council authority to set a by-law for collecting the owners' share of the project cost. The Region assesses the exact cost borne by each owner for the proposed works as per the *Municipal Act* and Regional 50/50 cost share policy.

Property owners may pay their share of the project cost through property taxes over fifteen years with imputed interest, or in a lump sum payment upon completion of the works.



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### General

1. (1) Noise walls abutting railways and freeways under Ministry of Transportation (MTO) jurisdiction shall be constructed using only precast concrete or brick, concrete block or approved composite materials.

(2) Local improvements or retrofit noise walls abutting arterial and collector roads shall be constructed of either masonry, wood or approved composite materials with due consideration to streetscape, and future maintenance requirements at the discretion of the municipality.

(3) Noise walls built on private property abutting arterial and collector roads as a condition of development shall be constructed of either wood or approved composite materials.

(4) Only existing residential sites with reversed frontage and experiencing a daytime noise level equivalent (leq. daytime from 7:00 a.m. to 11:00 p.m.) or 60dBA or higher shall be considered for retrofit noise attenuation barriers.

(5) Retrofit noise walls shall be constructed with the centreline a minimum of 300mm on the public side of the streetline and only where rear yards or side yards abut a municipal road.

(6) Noise walls constructed as a condition of development shall be constructed with the centreline a minimum of 300mm on the private side of the streetline and become the maintenance responsibility of the homeowner through appropriate clauses registered on the title of the lot.

(7) A petition must be signed by owners representing a minimum of 2/3 of the properties in the benefitting area representing a minimum of 50% of the assessed value in order to be considered for a retrofit noise wall under the *Local Improvement Act*.

(8) The resident's special assessment for local improvement noise walls shall be based on 50% of actual final project costs with the remaining 50% to be paid by the municipality.

### Guidelines for Installation

2. The following guidelines are to initiate special assessment rolls for charges to be levied as a result of noise barrier construction under the *Local Improvement Act*. This policy is intended to supplement, and not replace, the Noise Barrier Policy, as adopted by Council in April, 1983 under Resolution 83-173-5.

1. In general, projects will be initiated by rate-payers submitting petitions to Regional staff. In cases where the work is considered to be essential, Council may be approached to initiate same. Projects may also be advanced for Council initiative in cases where works should be coordinated with road projects.



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2. The Region will participate only in noise barriers designed in accordance with current technology to give a minimum anticipated noise attenuation of 5 dBA.
3. Wall height generally will be determined as per the sketch approved by Regional Council.
4. In order to achieve the required minimum attenuation the barrier wall should meet or intercept the line of sight between the assumed locations of noise source and receiver.
5. Also the Region will participate only if the road in question is at least four (4) lanes wide and the residential reverse frontage is continuous between intersecting streets. If, as can be the case, the corner lot has direct frontage on the Region road the wall may be terminated with a return, if feasible, along the side lot line prior to the frontage of the corner lot.
6. Mid-block pedestrian right-of-ways may be accommodated by staggering the noise barrier as shown in the sketch approved by Regional Council.
7. The approval of the local Municipality, as to the height and type of wall proposed, will be mandatory, prior to construction, bearing in mind the general aesthetics and the probable contravention of local by-laws, regarding the permissible height of fence.
8. Assessments will be prepared on Special Assessment Rolls on a form to be approved by the Commissioner of Public Works.
9. The total chargeable cost will be the construction cost, i.e. final contract cost including pre-engineering, design, supervision, administration but excluding future maintenance for the total length of the wall including end returns.
10. The portion of the total chargeable cost to be paid by each owner will be based on a modified frontage measurement, (to the nearest one hundredth of a metre) which will be the property width at mid lot in order to compensate for inequities arising from irregularly shaped lots.
11. The homeowner will be assessed 50% of the cost of the barrier under the *Local Improvement Act* with the remaining 50% being paid by the Municipality.

### Local Improvement Procedures

3. The following procedure for the construction and maintenance of noise abatement works on petition under the *Local Improvement Act* is adopted:

1. Petition signed by at least two-thirds of owners representing at least one-half of the lots liable to be specially assessed. (Section 11)



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2. Petition lodged with the Clerk and is deemed to be presented to the Council when lodged. (Section 16)
3. Clerk determines sufficiency of petition and endorses certificate to that effect (attached to petition). (Section 15)
4. By-law authorizing engineer's report. (May be general or specific and combined with step 11.) (Section 42)
5. Council receives engineer's report outlining lifetime of the work, reductions for special lot frontages, estimate of the cost of work, statement of the share or proportion of the cost to be borne by the land and by the municipal corporation respectively and the number of instalments by which the special assessment should be made payable. (Section 40)
6. By-law is passed for undertaking the work as a local improvement. (Section 7)
7. By-law is passed with a minimum vote of three-quarters of all members of council (17) assuming a portion of the cost of the works to be paid by the municipal corporation. (May be combined with by-law authorizing the undertaking under Section 7, step 6.) (Section 27)
8. By-law passed authorizing temporary loans or advances to meet the cost of the work pending completion of it. (May be combined with previous steps 6 and 7.) (Section 53(1))
9. By-law awards tender for the construction of the work and firm contract is entered into whereby the cost of completing the undertaking is established and construction of the work has commenced.
10. By-law authorizing borrowing on credit of corporation to repay temporary loans and to defray the cost of the work and issuing debentures if required. Can only be passed after firm contract for carrying out work has been entered into whereby the cost of completing the undertaking is established and construction has commenced. (May also impose special or general rate for repayment of municipal portion of debenture.) (Sections 53(2) to 57)
11. By-law authorizing preparation of the special assessment roll. (May be general or specific and combined with step 4.) (Section 42)
12. By-law establishing Court of Revision. (May be combined with step 4.) (Section 43)
13. Special assessment roll is prepared and kept open for inspection at the Office of the Clerk for ten days before the day appointed for sittings of the Court of Revision. (Section 45)
14. A statement showing under the appropriate heads the actual cost of the work verified by the Clerk or the Treasurer is delivered to the Chair of the Court of Revision. (May show an



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amount not to exceed 25 per cent of the total estimated cost for unfinished work and outstanding claims for land or injurious affection.) Actual cost includes:

- construction cost
- engineering expenses
- cost of advertising and service of notices
- interest on temporary loans
- compensation for land taken and injuriously affected and expenses incurred in connection with determining compensation
- estimated cost of the issue and sale of debentures and discounts allowed to the purchasers of them (Sections 46, 47, 20)

15. Court of Revision holds hearing and adjudicates upon:

- the actual cost of the work
- names of the owners
- frontage or other measurements
- reduction for irregular lots
- amounts assessed on exempt lots
- the lifetime of the work
- the frontage charge as a rate per metre (Court of Revision cannot alter the proportion of the cost to be borne by special assessment and the municipal corporation respectively) (Section 48)

16. Clerk makes correction to special assessment roll and certifies corrected roll. (Section 51)

17. Council or owner may appeal to the Ontario Municipal Board the decision of the Court of Revision within twenty-one days of mailing of decision. (OMB has same powers as Court of Revision.) (Section 52)

18. By-law enacted imposing special assessment payable in annual instalments as Council shall prescribe not to extend beyond the life time of the work. In fixing the amount of annual instalments, a sum sufficient to cover the interest on borrowed funds may be added. Council may also permit commutation of the payment in cash. (Section 65)

19. Each annual instalment becomes due and payable on date defined by by-law under Section 56. Where the payment is not made, the provisions of the *Municipal Act* with respect to penalties and interest on the collection and recovery of taxes apply. (Section 58)

4. Petitioners shall be advised of the estimated cost of the work and their estimated cost share by both notification on the petition form and through a public meeting to be held within one month following verification by the Regional Clerk that the petition meets requirements for sufficiency.



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5. The calculation of frontage lengths for noise abatement works constructed pursuant to the *Local Improvement Act* shall be based on the actual length of wall abutting the property owner's property boundary.

#### Technical Committee

6. A staff technical committee with members from the Region of Peel, City of Mississauga and City of Brampton appointed by their respective Commissioners shall meet as required with the following mandate:

- (a) to review, update and maintain a harmonized set of noise wall standards and specifications for applications in the Region of Peel, City of Mississauga and City of Brampton;
- (b) to review new products and to maintain and update a list of approved suppliers and products;
- (c) to liaise with suppliers in determining methods of reducing manufacturing costs or improving overall product quality;
- (d) to ensure a consistent application of the *Local Improvement Act* with respect to petition requirements, noise level standards, frontage measurements and special assessment allocation.

**SOURCE:** Resolutions 88-352-26, 94-55-21, 94-266-12, and 96-598.

**APPENDIX II  
LOCAL IMPROVEMENT PROCESS  
FOR PRIVATELY OWNED NOISE  
ATTENUATION WALLS ALONG REGIONAL ROADS**

**NOISE ATTENUATION WALL RATING SYSTEM**

Table 1 summarizes the rating mythology and performance rating criteria used by and developed by staff.

**Table 1**

Component Item	Peel Performance Rating			
	EXCELLENT	GOOD	FAIR	POOR
<b>Concrete Walls</b>	no observed defects	<ul style="list-style-type: none"> <li>light scaling</li> <li>narrow cracks</li> </ul>	<ul style="list-style-type: none"> <li>medium scaling</li> <li>rust stains</li> <li>medium cracks</li> <li>stable relative displacements of units</li> </ul>	<ul style="list-style-type: none"> <li>severe scaling or disintegration</li> <li>visible corrosion of exposed reinforcing steel</li> <li>wide cracks</li> <li>delamination and spalls</li> <li>failed components</li> </ul>
<b>Wood Walls</b>	no observed defects	<ul style="list-style-type: none"> <li>light weathering, checks, splits and shakes</li> <li>light rot or decay</li> <li>light abrasion and wear</li> </ul>	<ul style="list-style-type: none"> <li>medium weathering, checks, splits and shakes</li> <li>medium abrasion and wear</li> <li>medium cracking,</li> </ul>	<ul style="list-style-type: none"> <li>severe weathering, checks, splits and shakes</li> <li>severe rot or decay</li> <li>severe cracking, splintering, crushing and shattering</li> <li>severe connection deficiencies</li> <li>failed or missing components</li> </ul>
<b>Posts concrete</b>	few cracks < 2mm wide	<ul style="list-style-type: none"> <li>several cracks &lt; 2 mm wide</li> </ul>	<ul style="list-style-type: none"> <li>few cracks &gt; 2 mm wide</li> </ul>	<ul style="list-style-type: none"> <li>cracks with spalls or rust stains;</li> <li>failed post</li> </ul>
<b>Posts steel</b>	no observed defects	<ul style="list-style-type: none"> <li>light corrosion – no section loss</li> </ul>	<ul style="list-style-type: none"> <li>medium corrosion – up to 10% section loss</li> </ul>	<ul style="list-style-type: none"> <li>severe corrosion – more than 10% section loss</li> <li>cracked or broken posts</li> </ul>
<b>Footings / Foundations</b>	no observed defects	<ul style="list-style-type: none"> <li>narrow cracks</li> </ul>	<ul style="list-style-type: none"> <li>medium cracks</li> <li>minor settlement (&lt; 25 mm)</li> </ul>	<ul style="list-style-type: none"> <li>wide cracks</li> <li>settlement &gt; 25 mm</li> <li>severe erosion of ground around footing</li> </ul>
<b>Plumbness</b>	wall is plumb	<ul style="list-style-type: none"> <li>wall out of plumb by less than 1 horizontal to 25 vertical</li> </ul>	<ul style="list-style-type: none"> <li>wall out of plumb by more than 1 horizontal to 25 vertical</li> </ul>	<ul style="list-style-type: none"> <li>wall out of plumb by more than 1 horizontal to 25 vertical with failed connections to panels</li> </ul>

**APPENDIX II  
LOCAL IMPROVEMENT PROCESS  
FOR PRIVATELY OWNED NOISE  
ATTENUATION WALLS ALONG REGIONAL ROADS**

The methodology for completing the condition assessment is based on a panel by panel assessment. This produces a condition rating for each post, panel and foundation that rolls-up into an overall rating for the wall based on the sum of its components. An example of the condition rating categories is depicted below in Table 12 with some general comments.

**Table 2: Rating System**

<b><i>Rating</i></b>	<b><i>Description</i></b>
<b><i>Excellent</i></b>	<ul style="list-style-type: none"> <li>generally constructed within the last 10 years</li> </ul>
<b><i>Good</i></b>	<ul style="list-style-type: none"> <li>generally constructed within the last 10-20 years</li> </ul>
<b><i>Fair</i></b>	<ul style="list-style-type: none"> <li>generally constructed 20-30 years; may be of wooden material</li> </ul>
<b><i>Poor</i></b>	<ul style="list-style-type: none"> <li>generally constructed over 25 to 35 plus years and probably wood.</li> </ul>

13.1-26



10 years Private Noise Wall Replacement Plan (2016-2025)

- Mississauga Locations
- Brampton Locations
- Caledon Locations

Subject to Program Approval

**BRAMPTON**

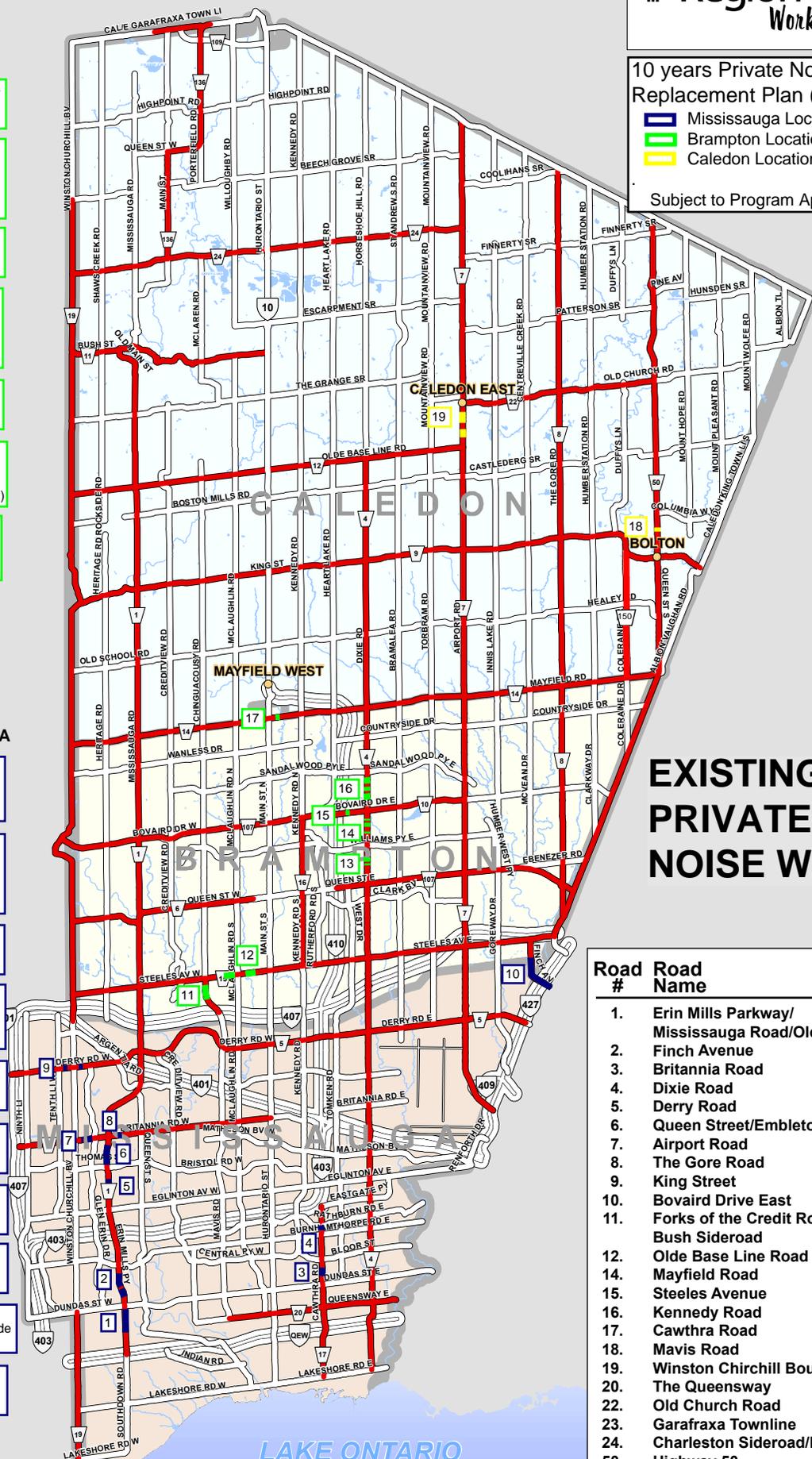
- 11. Abutting Mavis (Ray Lawson to Steeles)
- 12. Abutting Steeles (Windmill to College Plaza, McMurphy Ave. to Sheldrake Ct.)
- 13. Abutting Dixie (Crescent Hill to Williams Pkwy.)
- 14. Abutting Dixie (Mansion St. to North Park Dr., North Park to Bovaird Dr.)
- 15. Abutting Bovaird Dr. (Hwy 410 to Dixie)
- 16. Abutting Dixie (Peter Robertson Blvd. to Sandalwood Pkwy.)
- 17. Abutting Mayfield (Inder Heights to Hurontario)

**MISSISSAUGA**

- 1. Abutting Erin Mills (Sheridan Park Dr. to Dundas St.)
- 2. Abutting Erin Mills (Dundas to South Millway, Millway to College Way)
- 3. Abutting Cawthra (Silver Creek to Bloor)
- 4. Abutting Cawthra (Burnamthorpe to Rathburn)
- 5. Abutting Erin Mills (Banfield Rd to Thomas St.)
- 6. Abutting Erin Mills (Thomas St. to Vista Blvd.)
- 7. Abutting Britannia (Glen Erin to WCB)
- 8. Abutting Britannia (EMP to Queen St.)
- 9. Abutting Derry (Danton Promenade to WCB)
- 10. Abutting Finch Ave. (Hwy 427 to S. of Darcel Rd.)

**CALEDON**

- 18. Abutting Hwy 50 (NW of Centennial Dr.)
- 19. Abutting Airport Road (from Cranston to Old Baseline Rd.)



**EXISTING PRIVATE NOISE WALLS**

Road #	Road Name
1.	Erin Mills Parkway/ Mississauga Road/Old Main Street
2.	Finch Avenue
3.	Britannia Road
4.	Dixie Road
5.	Derry Road
6.	Queen Street/Embleton Road
7.	Airport Road
8.	The Gore Road
9.	King Street
10.	Bovaird Drive East
11.	Forks of the Credit Road/ Bush Sideroad
12.	Olde Base Line Road
14.	Mayfield Road
15.	Steeles Avenue
16.	Kennedy Road
17.	Cawthra Road
18.	Mavis Road
19.	Winston Churchill Boulevard
20.	The Queensway
22.	Old Church Road
23.	Garafraxa Townline
24.	Charleston Sideroad/Highway 24
50.	Highway 50
107.	Queen Street East/Bovaird Drive West
136.	Main Street/Queen Street East/ Porterfield Road
150.	Coleraine Drive

- The projects have yet to be prioritized.
- Some projects (i.e. 13-16) will be included in future road widening projects and therefore qualify for funding from Development Charges.

**Minutes  
City Council**

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- P&IS276-2015
1. That the report from R. Gasper, Director, Public Works, dated October 6, 2015, to the Planning and Infrastructure Services Committee Meeting of November 16, 2015, re: **Ice Storm and Emerald Ash Borer Tree Recovery Program Update and Forecasts – City Wide** (File HF.x) be received; and,
  2. That staff continue to follow the actions described in the report pertaining to the recovery from damages caused by the Ice Storm of 2013 and the Emerald Ash Borer (EAB).
- P&IS277-2015
1. That the report from report from C. Duyvestyn, Manager, Infrastructure Planning, dated October 28, 2015, to the Planning and Infrastructure Services Committee Meeting of November 16, 2015, re: **Noise Attenuation Wall Policy Amendment – Consistency of Retrofit Policy with Peel Municipalities** (File N0715-GENE-101 / HA.c).be received; and,
  2. That an amendment to the City’s Noise Attenuation Wall Policy be supported in principle to change the City’s cost share to 100% for the replacement and relocation of existing privately owned noise attenuation walls onto the City’s road right-of-way, subject to staff reporting back to Council with an implementation plan that will include a detailed assessment of the condition of existing privately owned noise attenuation walls and funding requirements for consideration in the 2017 Capital Budget; and,
  3. That the City’s Noise Attenuation Wall Policy be amended to change the City’s cost share to 50% for new noise attenuation walls constructed under the Local Improvement process with the remaining 50% shared by homeowners; and,
  4. That staff be directed to amend the City’s development approval process to have developers install noise attenuation walls adjacent to City roads within the road right-of-way; and,
  5. That homeowners continue to be responsible for the maintenance of any existing noise attenuation walls on their properties until such time as the City replaces the noise attenuation wall, except for concrete noise walls where

**Minutes  
City Council**

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imminent attention is required due to safety reasons in which case the City will repair or stabilize the damaged noise attenuation wall after notification from the homeowner; and,

6. That ownership of noise attenuation walls located on City-owned buffers adjacent to Regional Roads be the responsibility of the Region of Peel as part of the Arterial Roads Review Ad Hoc Steering Committee (ARRASC); and,
7. That the City Clerk be directed to forward a copy of the report and Council Resolution to the Region of Peel, City of Mississauga and the Town of Caledon for their information.

P&IS278-2015

1. That the report from N. Cadete, Supervisor, Traffic Operations, dated October 21, 2015, to the Planning and Infrastructure Services Committee Meeting of November 16, 2015, re: **Ontario Traffic Manual, Book 15: Pedestrian Crossing Treatments – Curb Depressions at Uncontrolled Crossings** (File IA.b) be received; and,
2. That staff report to a future Planning and Infrastructure Services Committee meeting seeking Council endorsement of new pedestrian crossovers for low volume roads in the City, once the Ministry of Transportation Ontario releases the regulations that govern their location and design; and,
3. That the City policy respecting curb depressions at uncontrolled crossings be revised to allow barrier free access to school crosswalks and at parkland/street-to-street paths where they intersect low volume local roadways under the conditions outlined within the report.

P&IS279-2015

1. That the report from N. Cadete, Supervisor, Traffic Operations, dated October 16, 2015, to the Planning and Infrastructure Services Committee Meeting of November 16, 2015, re: **Traffic Related Issues – “U-turns” on James Potter Road – Ward 5** (File IA.b) be received; and,
2. That Traffic By-law 93-93, as amended, be further amended to implement a u-turn restriction on James Potter Road between a point 10 metres south of Bonavista Drive/Chudleigh Avenue and a point 10 metres north of Williams Parkway.

**Date:** 2017-10-24

**Subject:** **Information Report – Replacement and Relocation of Private Noise Walls onto City Right-of-Way**

**Contact:** Bishnu Parajuli, Manager Infrastructure Planning, Public Works and Engineering (905 874 3644)  
bishnu.parajuli@brampton.ca

**Recommendation:**

1. **THAT** the report from Bishnu Parajuli, Manager, Infrastructure Planning, Public Works and Engineering, dated October 24, 2017, to the Committee of Council Meeting of November 15, 2017, re: **Information Report – Replacement and Relocation of Private Noise Walls onto City Right-of-Way** be received;

**Overview:**

- **On November 25, 2015, City Council supported in principle changing the City's Noise Wall Policy to increase the City's cost share to 100% for the replacement and relocation of existing private noise walls adjacent to City roads onto the City's right-of-way. Staff was directed to develop an Implementation Plan that will include a detailed assessment of existing private noise walls and funding requirements for consideration.**
- **Currently, replacement and relocation of private noise walls is implemented through Local Improvement process driven by homeowners with cost sharing split of 75% by the City and 25% by the homeowners. Only four projects (two replacement of existing and two new) have been implemented in the past 10 years through this process.**
- **In summer 2016, the City hired a consultant to complete the condition assessment of existing private noise walls adjacent to City roads and prepare a Noise Wall Implementation Plan.**
- **Private noise wall inventory was updated in Spring 2017. There are approximately 64 km of private noise walls adjacent to City roads in different states of repair.**
- **The estimated annual cost to replace and relocate these noise walls is approximately \$4.27 million for a period of 30 years and beyond. Additional**

## 9.2.1-2

**funding of \$4.27 million per year would be required to fund this initiative, which is equivalent to a 1% tax levy increase.**

- **The City currently owns approximately 5 km of noise walls. The funding required to inspect, maintain and replace this City asset is part of the annual budget consideration and amounts to \$300,000 per year.**

### **Background:**

#### Local Improvement Process for Noise Wall Replacement

Noise walls adjacent to City roads are generally located on private properties and homeowners are responsible to maintain and replace them at the end of service life. Currently, replacement of private noise walls is implemented through Local Improvement process where City shares 75% of the cost of replacement and benefitting homeowners share 25%.

Despite substantial subsidy provided by the City, only four Local Improvement projects (two replacement of existing and two new constructions) have been successfully implemented in the past 10 years. The low uptake is due to high cost to the homeowners. Noise walls continue to deteriorate and inability of homeowners to replace them will worsen the aesthetic of street corridors, create safety issues for pedestrians/cyclists and tarnish the overall image of the City.

#### City of Mississauga and Region of Peel Policies

The City of Mississauga and the Region of Peel both cover the full cost of replacing and relocating private noise walls under their jurisdictions. The City of Mississauga had 58 km of private noise walls to be replaced when the City started the program in 2009. Likewise, the Region of Peel started the program in 2015 and had 33 km of noise walls to be replaced when the Region started the program.

The City assuming responsibility to replace and relocate private noise walls onto City right-of-way will maintain a consistent policy across municipalities across the Region of Peel.

#### Council Direction

On November 25, 2015 (Resolution P&IS 277-2015), City Council supported in principle to amend the City's Noise Wall Policy and the City's cost share to 100% for the replacement and relocation of existing private noise walls along City roads onto the City right-of-way including their future maintenance based on the condition assessment. Some of the other key resolutions from this Council report included:

- Reporting back to Council with an Implementation Plan that will include a detailed assessment of the condition of existing private noise walls, funding requirements and sources of funding for consideration in the 2017 Capital Budget;
- Amending the City's cost share for new noise walls under the Local Improvement process to 50% with homeowners sharing the remaining 50%;
- Placing new noise walls through the development approval process on public right-of-way;

## 9.2.1-3

- Homeowners be responsible for maintaining any existing noise walls on their properties until such a time that the City replaces the noise wall, unless immediate attention is required due to safety reasons in which case the City will repair and stabilize the damaged noise wall after notification from the property owner

This report summarizes the assessment of both private and City owned noise walls adjacent to City roads and associated cost for keeping them in a state of good repair.

### **Current Situation:**

#### Condition Based Assessment of Private Noise Walls

In summer 2016, the City hired a consultant to prepare an inventory of existing private noise walls adjacent to City roads and an implementation plan including condition assessment, funding requirements and sources of funding. The consultant conducted a condition-based assessment of existing private noise walls and prepared a noise wall inventory.

#### Asset Risk Based Assessment for Private Noise Walls

In spring 2017, staff updated the private noise wall inventory. There are approximately 64 kilometres of private noise walls adjacent to City roads. These noise walls are evaluated in accordance with the corporate asset management principles using an asset risk model to identify those assets that are high risk and need to be prioritized for replacement in the future years.

To calculate a risk score for each noise wall, staff estimated its likelihood of failure and the consequence of failure based on its condition, height, material (wood, vinyl, masonry, concrete) and location (residential area, sidewalk, commercial, railway, boulevard).

In this asset risk-based approach, noise walls with higher risk get higher priority for replacement. As a prioritization example, a tall noise wall that is located near a sidewalk and is in very poor condition would be replaced before a shorter wall that is located far from vehicular or pedestrian travel routes and is in fair condition.

Table 1: Summary of Risk Levels and Replacement Cost of Private Noise Walls

Priority	Length (metres)	Percentage	Replacement Cost	Replacement Time Horizon	Annual Replacement Cost
Urgent Action	3,512	5.6%	\$6,763,996	2019	\$6,763,996
High Risk	11,794	17.7%	\$22,714,772	2020-2024	\$4,542,954
Medium Risk	36,490	57.9%	\$70,280,217	2025-2039	\$4,685,348
Low Risk	11,953	18.7%	\$23,020,909	2040-2044	\$4,604,182
Insignificant Risk	117	0.2%	\$226,159	2045-2048	\$56,540
<b>Total</b>	<b>63,866</b>	<b>100.0%</b>	<b>\$123,006,052</b>	<b>2019-2048</b>	<b>\$4,100,202</b>

Results of risk analysis of private noise walls are summarized in Table 1. As shown, immediate attention is required to replace and relocate 3,512 metres of private noise walls with an estimated cost of \$6.8 million. These noise walls are recommended to be replaced starting in 2019.

## 9.2.1-4

Similarly, other risk levels have been evaluated. The cost is based on \$1800 per metre plus 7% for contract administration, which is reflective of the current wall replacement cost. In order to achieve a uniform annual budget, the annual cost shown in Table 1 can be averaged to \$4.1 million for a period of 30 years though actual replacement will depend on urgency and other City priorities. The additional costs include staff cost to implement noise wall program and inspection cost that is estimated to be \$170,000 per year.

Therefore, the overall annual cost to assume responsibility to replace and relocate private noise walls is estimated to be \$4.27 million. For a period of 30 years, the total cost will be approximately \$128 million (\$123 million for replacement plus \$ 5 million for staff/inspection) that will have to be paid from the tax base.

### Asset Risk Based Assessment for City Owned Noise Walls:

The City currently owns approximately 5 km of noise walls. Most of these noise walls are in a good state of repair. Similar to private noise walls, an identical asset risk model is used to assess risk levels of City-owned noise walls and replacement timeline.

Table 2: Summary of Risk Levels and Replacement Cost of City-owned Noise Walls

Priority	Replacement Cost	Percentage	Length (metres)	Replacement Time Horizon	Annual Replacement Cost
Urgent Action	\$0	0.0%	0	2018-2019	\$0
High Risk	\$1,871,310	21.7%	972	2020-2024	\$374,262
Medium Risk	\$2,862,839	33.2%	1,486	2025-2039	\$190,856
Low Risk	\$1,371,435	15.9%	712	2040-2044	\$274,287
Insignificant Risk	\$2,521,535	29.2%	1,309	2045-2047	\$840,511
<b>Total</b>	<b>\$8,627,118</b>	<b>100.0%</b>	<b>4,479</b>	<b>2018-2047</b>	<b>\$287,571</b>

Results of risk analysis of City-owned noise walls are summarized in Table 2. Based on this analysis, there is no immediate need to replace any of the City-owned noise walls at this time. However, a long-term inspection and replacement program is required to be in place. As shown in Table 2, the annual replacement cost of City-owned noise walls varies significantly over the years. In order to achieve a uniform annual budget over the next 30 years, the annual cost can be estimated as \$300,000, which is part of the annual budget consideration in 2018.

### Total Cost of Noise Wall Program:

Based on discussions above on private and City-owned noise walls, the annual cost for noise wall program is estimated to be \$4.57 million that has to be paid from the tax base. As such, it is recognized that this new program will need to be examined with all the other City priorities as our existing infrastructure ages and requires increased investment to maintain service levels.

## 9.2.1-5

### **Corporate Implications:**

#### Financial Implications:

The annual estimated cost to replace and relocate private noise walls is \$4.27 million for a period of 30 years. \$4.27M is equivalent to a 1% tax levy increase in 2017 dollars. It should be noted that the noise wall program, if adopted, will lend itself to grant funding opportunities for short term shovel ready projects, should that funding become available.

The funding required to inspect, maintain and replace the City owned noise walls is part of the annual budget consideration and typically amounts to \$300,000 per year.

To ensure sustainable infrastructure management by maintaining current levels of service in the most cost-effective manner, the City has developed a comprehensive asset management plan and demonstrated leadership in municipal asset management planning by adopting the ISO 55000 international standard for asset management.

The City currently manages approximately \$5.3 billion in infrastructure assets excluding land with a funding shortfall of approximately \$200 million to keep all assets in a state of good repair. At existing funding levels with 2% infrastructure levy, the cumulative infrastructure gap is projected to grow to approximately \$650 million over the next 10 years

It is important to note that assuming responsibility to replace and relocate private noise walls without budgeting the additional required funds will negatively affect the City's infrastructure funding gap and the existing levels of service provided to the residents.

### **Strategic Plan:**

This report achieves the Strategic Plan priority "Move and Connect" by keeping people and goods moving efficiently by investing in new infrastructure and maintaining a state of good repair. Implementation of noise wall program will ensure reliability, improve safety of the residents, and uphold reputation of the City.

### **Conclusions:**

This report presents an assessment of both City-owned and private noise walls adjacent to City roads and implementation plan to keep noise walls in a state of good repair. By assuming responsibility, the City would incur approximately \$4.27 million annually for a period of 30 years, which is equivalent to a 1% tax levy increase to replace and relocate private noise walls adjacent to City roads, subject to prioritization with other corporate priorities and Council approval of annual budgets. This will provide relief to homeowners who are struggling to maintain and replace the noise walls on their properties, improve safety, aesthetic of street corridors and the image of the City.

## 9.2.1-6

Approved by:

Approved by:

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Bishnu Parajuli, P. Eng.  
Manager, Infrastructure Planning  
Public Works and Engineering

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Jayne Holmes, P. Eng.  
Director, Capital Works  
Public Works and Engineering

Report authored by: Bishnu Parajuli (Infrastructure Planning) and Salman Zafar (Corporate Asset Management)

**ACKNOWLEDGEMENT**

**TO:** CITY OF BRAMPTON  
**AND TO:** FRAM CONSTRUCTION LIMITED  
**RE:** Notonville West Subdivision  
Lot 170, Plan 43M-820  
City of Brampton (the "Property")

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WE HEREBY acknowledge that the Subdivision Agreement for this Subdivision includes a requirement that an acoustical wall or barrier be constructed at the property as part of the noise control features required for this Subdivision.

WE FURTHER acknowledge, on behalf of ourselves, our heirs, administrators, successors and assigns, that the acoustical barrier, as installed, shall be retained, repaired or replaced by us, and that any maintenance, repair or replacement shall be with the same material, to the same standards, and having the same colour and appearance of the original, all to the requirements of the City of Brampton.

DATED this 22<sup>nd</sup> day of August, 1989.

*of Priban*

*Brigette Sayers*  
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Brigette Sayers

*Stephen Sayers*  
\_\_\_\_\_  
Stephen Sayers

DHS-ACKFRAM:VWRE