Background

On June 12, 2018 Council passed the motion CC2018-164, which states:

"WHEREAS the Maley Drive Extension had been a priority for the City of Greater Sudbury since 1973;

AND WHEREAS funding sources for the Maley Drive Extension were realized with one-third shares provided by each of the municipal, provincial and federal levels of government;

AND WHEREAS the noise studies conducted formed part of the Environmental Assessments which date back to 1995 and 2006;

AND WHEREAS residents in close proximity to the new Maley Drive Extension, through a Petition, have raised their concerns regarding the excessive traffic noise that will occur on this new roadway, which will be "beyond what is acceptable for the adjacent, and already established neighbourhoods" and have requested "mitigation elements within the Maley Drive extension project";

THEREFORE BE IT RESOLVED that the City Of Greater Sudbury directs staff to bring a report to Council for consideration at its August 14th, 2018 meeting, with options for noise abatement measures to be implemented within the Maley Drive Extension project, to ensure the continued livability of the adjacent neighbourhoods."

For major road projects, such as Maley Drive, municipalities in Ontario are required to follow the Class Environmental Assessment (EA) process. The Class EA process requires the municipality to consider the environmental impacts, which include potential impacts to "the social, economic and cultural conditions that influence the life of humans, or a community." A Class EA was completed in 1995 and an Addendum was issued in 2008. A noise study was completed as part of each of these Class EAs. Both of these studies concluded that noise mitigation measures are not required for the proposed Maley Drive project.

The noise studies model future traffic conditions and compare the future effects to either a MTO/MOE protocol or a MOE noise guideline. These guidelines state that if the expected impact (change in noise level above ambient) of implementing roadway improvements is expected to be within 0-5 dB, no mitigation effort is required. However, if the change in noise level above the ambient is expected to be greater than 5 dB, investigation of mitigation effort is required. The objective sound level is specified as the greater of the predicted future ambient or 55 dBA.

Since the detailed design of Maley Drive began in 2009 two technical memorandums (both dated in 2010) have been completed to study potential noise impacts at specific

locations. These studies focused on Turner Avenue and the future development of Montrose Avenue. Both studies concluded that noise mitigation measures are not required for the proposed Maley Drive project.

Several questions regarding noise were raised at the recent Maley Drive Public Consultation Session, and a memorandum was completed in June, 2018, to directly answer these questions. This memorandum updated the noise model with detailed design road grades and current traffic counts. The memorandum was posted on the City's Over To You website for all residents to access. This study concluded that noise mitigation measures are not required for the proposed Maley Drive project.

Noise Mitigation Alternatives

Noise abatement option and costs were developed for the Agincourt Avenue and Shelley Drive areas. These two areas represent the locations that will be in the closest proximity to the new four lane portion of Maley Drive. The noise abatement options investigated as part of this study consists of using a rock berm and a noise wall barrier.

The rock berm is only feasible in the area where the available right-of-way will accommodate the required minimum sloping, a noise wall barrier is used for the remaining required distance. Refer to the attached figure for the location and extent of each barrier type.

Three scenarios were modeled:

Modeled Scenario	Mitigated Sound Level (dBA)		Change in Sound Level (dB)	
	Agincourt	Shelley	Agincourt	Shelley
1) Rock berm and Noise Wall 5 m above road elevation	47	49	4	6
2) Rock berm 12 m above road elevation and noise wall 4.2 m above road elevation	46	50	5	5
3) Rock berm only	48	53	3	2

The following budgetary cost estimates were developed for each of the three scenarios:

Modeled Scenario 1: $4.8M

Modeled Scenario 2: $4.6M

Modeled Scenario 3: $2.6M

The above budgetary cost estimates assume that there is no surplus rock available from the current construction, and that rock to construct the berm will be required to be imported to the site. The rock berm construction represents $2.5M of the estimates. Should surplus rock be available on the current construction contract, then the cost of the rock berm can be reduced accordingly. Staff will monitor the rock surplus and identify the construction of this rock berm as one of the priority areas for surplus disposal.

Summary

There have been numerous noise models analyzed for Maley Drive over the years, and each model has increased in accuracy, with the latest model including the final design grade of the road and the latest traffic projects. Each noise study indicated that noise mitigation measures are not required and noise mitigation measures have not been included in the scope or the budget of the Maley Drive project.