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<b>TO:</b>	<b>CHAIR AND MEMBERS CIVIC WORKS COMMITTEE MEETING ON JUNE 16, 2014</b>
<b>FROM:</b>	<b>JOHN BRAAM, P. ENG. MANAGING DIRECTOR, ENVIRONMENTAL &amp; ENGINEERING SERVICES &amp; CITY ENGINEER</b>
<b>SUBJECT:</b>	<b>CONTRACT AWARD: TENDER NO. T14-62 VMP NOISE ATTENUATION WALL</b>

<b>RECOMMENDATION</b>
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That on the recommendation of the Managing Director, Environmental and Engineering Services & City Engineer, the following actions be taken with respect to contract award of the VMP Noise Attenuation Wall:

- a) the bid submitted by Blue Sky Fence & Deck Inc., at the submitted tendered price of \$423,831.93 (including H.S.T.) for the construction of the VMP Wooden Noise Attenuation Wall **BE ACCEPTED**, it being noted that the bid submitted by Blue Sky Fence & Deck Inc., was the lowest of four (4) bids received and meets the City's specifications and requirements in all areas;
- b) the financing for this project **BE APPROVED** as set out in the Source of Financing Report attached hereto as Appendix 'A';
- c) the Civic Administration **BE AUTHORIZED** to undertake all the administrative acts that are necessary in connection with this project;
- d) the approval given herein **BE CONDITIONAL** upon the Corporation entering into a formal contract or issuing a purchase order for the material to be supplied and the work to be done relating to this project (Tender 14-62); and,
- e) the Mayor and City Clerk **BE AUTHORIZED** to execute any contract or other documents, required to give effect to these recommendations.

<b>PREVIOUS REPORTS PERTINENT TO THIS MATTER</b>
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- Environment and Transportation Committee, April 28, 2003 – Environmental Study Report Airport Road Widening – Highway 401 to Oxford Street East.
- Environment and Transportation Committee, January 15, 2007 – Veterans Memorial Parkway Noise Study
- Built and Natural Environment Committee, March 28, 2011 – Veterans Memorial Parkway Noise Study
- Built and Natural Environment Committee, May 16, 2011 – Public Participation Meeting - Veterans Memorial Parkway and Highbury Avenue Noise Study
- Built and Natural Environment Committee, September 26, 2011 – Veterans Memorial Parkway Noise Study
- Civic Works Committee, January 21, 2013 – Veterans Memorial Parkway Noise Study
- Civic Works Committee, April 22, 2013 – Veterans Memorial Parkway Noise Study
- Civic Works Committee, October 7, 2013 - Veterans Memorial Parkway Noise Study
- Civic Works Committee, January 6, 2014 - Veterans Memorial Parkway Noise Attenuation Wall

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<b>BACKGROUND</b>
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### Purpose

This report recommends the award of a tender for the construction of approximately 1000 m of noise attenuation wall on the west side of the Veterans Memorial Parkway (VMP) from Simpson Crescent to 120 m north of Trafalgar Street.

### Context

VMP is a four lane expressway with an average annual daily traffic volume of 25,000 vehicles per day. It is also a major corridor for traffic to access Highway 401. Due to the type of traffic, volume and speed, noise has become an issue to the residential property owners who live along the west side of VMP from Dundas Street southerly to Trafalgar Street in a combination of low rise condominiums and single family residential properties.

Currently within the west side of the VMP right-of-way, there is a 3 metre high noise protection berm. According to the previous noise study, the berm is marginally under performing in localized areas. On October 2013, Council requested additional noise abatement measures and set an upset limit of \$500,000. Council also requested that the civic administration undertake a review of the noise levels in the area to ensure that they are below 60 decibels after the completion of the works.

Municipal Council at its meeting of January 14, 2014 resolved that:

*"...the following actions be taken with respect to the Veterans Memorial Parkway Noise Attenuation Wall:*

- a) *A wooden noise wall **BE APPROVED** for the purpose of noise abatement from 151 Martinet Avenue to 272 Simpson Crescent, it being noted that the draft 2014 Capital Budget includes a \$500,000 item for the wall; and,*
- b) *The noise wall installation **BE SUBJECT TO** property owner execution of a consent-to-enter agreement at no charge to the City."*

<b>DISCUSSION</b>
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### Tender Process

Installation of a wooden noise attenuation wall along the VMP was tendered in accordance with Council direction. In response to communications from the noise wall industry and others, the tender did enable proponents to provide an additional tender for alternate noise wall products. Any alternate products were required to meet all tender requirements including surface density, foundation depth and wall height. Within the tenders received, one contractor offered an alternate material for consideration.

### Tender Summary

Tenders for the VMP Noise Attenuation Wall were opened on May 22, 2014 at 2:00 pm. Five (5) contractors submitted tenders for the wooden wall. One of the tenders was formally rejected by Purchasing Department due to failure to complete all requirements of the tender.

Only one bidder submitted an additional bid for an alternative material. The bidder for the alternative material was the low bidder of this tender. The tender prices are shown below (inclusive of H.S.T.):

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CONTRACTOR		TENDER PRICE Wooden Wall	TENDER PRICE Alternative Material	CORRECTED TENDER PRICE
1.	Blue Sky Fence & Deck Inc.	\$423,831.93	\$564,803.49	---
2.	Royal Fence Limited	\$426,303.80	---	---
3.	Peninsula Construction Inc.	\$448,819.05	---	---
4.	Maram Building Corp.	\$520,980.85	---	---

All of the tenders included a \$35,000 contingency and HST. They have been checked by the Engineering Services Department, and none of the tender bids contained mathematical errors as noted above.

The low bid of \$423,831.93 (including H.S.T.) for the wooden noise attenuation wall is within the funds available in the TS1036 capital project account. The source of financing is identified in Appendix A.

The City will be the contract administrator of the construction work and will not require additional funds for consultation and contract administration from a third party.

As directed by Council, staff will employ a specialist noise consultant to measure backyard noise levels to ensure that they are below 60 decibels after the installation of the noise attenuation wall.

**Alternative Material**

As noted in the above tender summary, the low tenderer did provide an alternative material submission for consideration by the City. Since the alternate product submission is from the low bidder, the City may consider entering an agreement for the alternate product installation if Council approves the alternative material and provides direction for its installation.

The alternate material proposed is a “SimTek Fence - EcoStone”. SimTek EcoStone is a plastic (polyethylene) fence. The product comes in hollow panels or alternatively can be filled with recycled rubber to meet the MOE density requirement for noise attenuation. The submitted technical specifications for this alternative product has been included in Appendix “B” along with a density certification, warranty and promotional brochure. The alternate material package was reviewed and verified by City staff to ensure it meets all the requirements of the noise attenuation wall tender.

Some features of the EcoStone Decorative Rock Walls by SimTek Fence as cited from product literature are listed below:

- An enhanced aesthetic stone texture fence;
- Meets the tender requirements including MOE surface density requirement of 20 kg/m<sup>2</sup>;
- Higher durability and a much longer warranty period of 30 years against material manufacturing defects and workmanship;
- Reduced maintenance; graffiti can be more easily removed than from wood; and,
- Large durable 1.2 x 2.4 m panels.

Staff’s assessment of the life cycle performance of this product is limited because the product does not have a long history and any installations are still relatively new. Therefore an accurate quantification and comparison of life cycle costs is not possible.

Initial performance of SimTek EcoStone installations appear to be satisfactory. Wood noise walls are constructed with 150 mm planks and have been observed to develop gaps as walls age. It is anticipated that the SimTek product would exhibit better durability, have a lower risk of gaps and require lower maintenance costs by virtue of its large panels.

Photos of typical installations of both wall types are below.



SimTek EcoStone



Wooden Noise Wall

The project costs to be funded out of the \$500,000 upset limit include the tendered construction cost plus the cost of a geotechnical engineering investigation, survey and subsequent noise testing. The following table summarizes the total project cost comparison of the wood noise wall submission and the alternate Sim Tek product.

Project Component	Wooden Noise Wall	Alternate Product SimTek EcoStone
Tender Submission (inc. HST)	\$423,831.93	\$564,803.49
Tender Submission (exc. HST)	\$375,072.50	\$499,826.10
Cost of Engineering, Survey and Noise Testing	\$24,000.00	\$24,000.00
Cost of municipal HST adjustment (1.0176%)	\$7,023.68	\$9,219.34
<b>Estimated Total Cost of Project (exc. HST)</b>	<b>\$406,096.18</b>	<b>\$533,045.44</b>

The total cost of the wooden noise wall is anticipated to be \$406,096.18. This cost is slightly below the previous wooden noise wall estimate developed during previous industry consultation and is within the approved \$500,000 budget.

The SimTek Fence EcoStone alternate product total cost is estimated to total \$533,045.44. This is significantly lower than the estimate developed during previous industry consultation and may be a competitive price to attempt to match the City's budget established for this project. With the inclusion of ancillary project costs, the total cost for the SimTek product will exceed the project budget by approximately \$33,000.

If Council deems that the anticipated aesthetic and durability advantages of the SimTek product are in the interest of the City and worth the cost in exceedance of the previously defined upset cost, it has the authority to award the contract for the alternate product. This would require staff to identify the additional financing from within the approved 2014 Roads Capital budget.

In order to provide for the attenuation wall to be constructed of material other than wood, the Municipal Council would need to reconsider its previous decision to have the attenuation wall constructed of wood. To enable this, the recommendation would need to be amended to read as follows:

"That notwithstanding the recommendation of the Managing Director, Environmental and Engineering Services & City Engineer, the following actions be taken with respect to contract award of the Veterans Memorial Parkway (VMP) Noise Attenuation Wall:

- a) pursuant to section 13.8 of the Council Procedure By-law, the actions of the Municipal Council taken at its meeting of January 14, 2014, with respect to part a) of clause 3 of the 2nd Report of the Civic Works Committee, related to the Veterans Memorial Parkway (VMP) noise attenuation wall BE RECONSIDERED to provide for a noise wall to be

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constructed of material other than wood; it being noted that part a) of clause 3 reads as follows:

- a) a wooden noise wall BE APPROVED for the purpose of noise abatement from 151 Martinet Avenue to 272 Simpson Crescent, it being noted that the draft 2014 Capital Budget includes a \$500,000 item for the wall; and,
- b) part a) of clause 3 of the 2nd Report of the Civic Works Committee BE RESCINDED;
- c) part a) of clause 3 of the 2nd Report of the Civic Works Committee BE AMENDED to read as follows:
  - “a) a noise wall BE APPROVED for the purpose of noise abatement from 151 Martinet Avenue to 272 Simpson Crescent; it being noted that the draft 2014 Capital Budget includes a \$500,000 item for the wall;”
- d) the alternate product tender bid submitted by Blue Sky Fence & Deck Inc., at its submitted tendered price of \$564,803.49 (including H.S.T.) for the construction of the VMP Noise Attenuation Wall with SimTek Fence EcoStone product BE ACCEPTED, it being noted that the bid submitted by Blue Sky Fence & Deck Inc., for the wooden noise wall was the lowest of four (4) bids received, it also being noted that the alternate product submission has been deemed to provide a net benefit over a wooden wall, and meets the City’s specifications and requirements in all areas;
- e) the financing for this project BE APPROVED as set out in the Source of Financing Report to be developed prior to the Council meeting;
- f) the Civic Administration BE AUTHORIZED to undertake all the administrative acts that are necessary in connection with this project;
- g) the approval given herein BE CONDITIONAL upon the Corporation entering into a formal contract or issuing a purchase order for the material to be supplied and the work to be done relating to this project (Tender 14-62); and,
- h) the Mayor and City Clerk BE AUTHORIZED to execute any contract or other documents, required to give effect to these recommendations.”

<b>CONCLUSION</b>
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Civic Administration has reviewed the tender bids and recommend Blue Sky Fence & Deck Inc. be awarded the contract for the construction of VMP Wooden Noise Attenuation Wall in the amount of \$423,831.93 (including H.S.T.). This is in accordance with Council’s approval of a wooden noise wall.

The proposed alternative product provided by Blue Sky Fence & Deck Inc., the SimTek Fence EcoStone, provides durability and perceived aesthetic advantages for the City and the property owners along the VMP. The benefits include aesthetic enhancements with a stone texture, better anticipated durability and a 30-year warranty. However, this product exceeds the budget provided. It is also not the noise wall type previously approved by Council and would require a Council reconsideration of its decision. Should Council deem a net benefit and wish to increase the budget for the project, alternate recommendations are provided in the report.

There are additional annual operating costs to the Environmental Engineering Services Department associated with the approval of this tender estimated at \$2,000 per year for general maintenance. Infrequent future minor capital expenditures are also expected as the wall progresses through its life cycle. If the alternate product is selected, the general maintenance additional annual operating costs are estimated at \$1,000 per year and future minor capital expenses are also expected to be less.

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**Acknowledgements:**

This report was prepared with assistance from Karl Grabowski, P.Eng., Transportation Design Engineer, Shaun Chen, Engineer In Training, and Craig Trento, Engineering Intern, all of the Transportation Planning and Design Division.

<b>PREPARED BY:</b>	<b>REVIEWED &amp; CONCURRED BY:</b>
<b>DOUG MACRAE, P. ENG. DIVISION MANAGER TRANSPORTATION PLANNING &amp; DESIGN</b>	<b>EDWARD SOLDI, P. ENG. DIRECTOR, ROADS AND TRANSPORTATION</b>
<b>RECOMMENDED BY:</b>	
<b>JOHN BRAAM, P. ENG. MANAGING DIRECTOR, ENVIRONMENTAL &amp; ENGINEERING SERVICES &amp; CITY ENGINEER</b>	

c: Pat Shack  
Marta Semeniuk  
Blue Sky Fence & Deck Inc., 3392 Wonderland Rd. S. Building 5, Unit 1, London ON,  
N6L 1A8

Attachments: Appendix 'A' – Source of Financing  
Appendix 'B' – SimTek EcoStone Information (Alternate Product)

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**Appendix 'B'**  
**SimTek EcoStone Information**  
**(Warranty Certification)**



**Commercial Warranty**

Warranty for SimTek Fence simulated rock wall fencing. The commercial warranty applies to all applications or installations where a living individual is not the titled property owner and the property on which the product is installed is owned by a non-living entity or organization.

SIMTEK FENCE WARRANTS THE PRODUCT LINE TO BE FREE FROM MANUFACTURING DEFECTS IN MATERIALS AND WORKMANSHIP FOR THIRTY (30) YEARS FROM THE DATE OF PURCHASE, OR UNTIL OWNERSHIP OF THE REAL ESTATE ON WHICH THE PRODUCT IS INSTALLED HAS CHANGED. THE WARRANTY MAY BE TRANSFERRED TO A NEW PARTY WHO PURCHASES THE REAL ESTATE WITHIN THE THIRTY YEAR WARRANTY FOR A PROCESSING COST OF \$250 IF IT IS DONE WITHIN THIRTY (30) DAYS OF THE RECORDED TITLE OWNERSHIP CHANGE.

MANUFACTURING DEFECTS ARE DEFINED AS ANY PROBLEM WITH THE CONSTRUCTION OF THE FENCE DURING THE WARRANTY PERIOD THAT CAUSES IT TO NOT MEET AESTHETIC OR PERFORMANCE STANDARDS AS DESCRIBED ON THE SIMTEK FENCE WEBSITE INCLUDING RESIN APPEARANCE AND DISTRIBUTION, IMPACT STRENGTH, SOUND ATTENUATION, WINDLOAD RESISTANCE WITHIN RECOMMENDED TEMPERATURE RANGES FROM -40° F TO 140° F.

THE MANUFACTURERS WARRANTY DOES NOT APPLY TO INSTALLATION. This warranty does not cover the cost of removal or install of warranty parts nor does it cover damage to SimTek product which has been caused by improper installation including but not limited to the cracking of plastic caused by fastening panels or gates to posts on both sides. Installation should be done by a certified SimTek Fence installer or by the owner of the property on which the product is installed. Fence should be installed in accordance with recommended procedures. A description of these procedures can be obtained by visiting the SimTek Fence web site at [www.simtekfence.com](http://www.simtekfence.com). In the case of a certified professional installer, certification requires the installer to provide the purchaser with a separate installation warranty. In the case of a do-it-yourself installation, the purchaser is responsible for all aspects of the installation including determining the structural requirements (soil stability, concrete post anchoring pier size, etc.) and assuring that proper installation procedures are followed.

These warranties will not include damages as a result of abuse, misuse, vandalism, unauthorized repairs or modifications, defacement, neglect, accident, improper installation, or improper use etc. SimTek Fence, at its sole discretion will repair or replace the product, or provide the customer a credit for the value of the product subject to the warranty within a reasonable time following the receipt by SimTek Fence of such notice of defect.

There are no warranties which extend beyond the description above, and SimTek Fence makes no other warranties, expressed or implied, regarding its products, their fitness for any particular purpose, their merchantability, or otherwise. SimTek Fence does not make and hereby expressly disclaims any other representation, affirmation, promise, description, sample or warranty of any kind with respect to the product.

The sole remedy against SimTek Fence and SimTek Fence's sole liability under this warranty shall be limited to the repair or replacement of the product, in SimTek Fence's sole discretion. In no event shall SimTek Fence be liable for the cost of procurement of substitute goods by the consumer, or any special, consequential or incidental damages for the breach of warranty even if SimTek Fence has been apprised as to the likelihood of such damages occurring. In no such event shall SimTek Fence's liability (whether based on an action or claim in contract, tort, or otherwise) to the customer or any part arising out of or relating to its products or the order or delivery of its products to exceed the purchase price charged by SimTek Fence for such products.

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## Appendix 'B' – con't (Proof of Density)



*SimTek Fence*  
 1330 West 400 North  
 Orem, UT 84057  
 Toll Free 1.866.648.9336  
 Tel. 1.801.655.5236  
 Fax 1.801.655.5240  
[www.simtekfence.com](http://www.simtekfence.com)

### SimTek Fence Density Certification

#### Rubber Filled Panels

#### EcoStone Product Overview

**EcoStone Decorative Rock Walls by SimTek Fence** offer aesthetic beauty, privacy and noise reduction for residential, commercial and institutional landscapes, providing the tasteful appeal and high-end appearance of stone walls at an affordable price. Ecostone walls are available in standard non-filled form, or with a variety of fill materials including foam, rubber, and aggregate. Each type of panel, hollow or filled, have a specific STC (Sound Transmission Class) ratings for noise reduction as well as density.

#### Density - Rubber Filled 4x8 Panel

EcoStone-R Decorative Rock Walls by SimTek Fence are filled with recycled rubber and meet Ministry of the Environment (MOE) density requirement of 20 kg/m<sup>2</sup>

Total Area = 1.22 Meters Width X 2.44 Meters Length (2.98 square meters)

Total Weight = 60 Kilograms

Weight per Square Meter = 20.16 Kilograms

We certify the above calculations to accurately represent the Area, Weight, and resulting Density as measured in kilograms per square meter of this product.

Sincerely,

Brad Wilson  
 CEO, SimTek Fence



### Appendix 'B' – con't (Detail Design)

