

HALIFAX

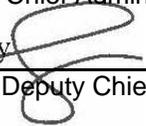
P.O. Box 1749
Halifax, Nova Scotia
B3J 3A5 Canada

Item No. 14.1.16
Halifax Regional Council
September 6, 2016

TO: Mayor Savage and Members of Halifax Regional Council

Original Signed by 

SUBMITTED BY: _____
John Traves, Acting Chief Administrative Officer

Original Signed by 

Jane Fraser, Acting Deputy Chief Administrative Officer

DATE: August 11, 2016

SUBJECT: Request for Installation and Transfer of Ownership of Public Art - Barrington Benches

ORIGIN

- October 14, 2015: Downtown Halifax Business Commission request submitted to HRM for consideration under the Municipal Public Art Policy.
- July 4, 2016: Downtown Halifax Business Commission request submitted to HRM to consider accepting the interactive ceramic mosaic installed in 2014 entitled "Barrington Blocks" under the Public Art Policy.

LEGISLATIVE AUTHORITY

Halifax Regional Municipality Charter, Section 70(1) The Municipality may (a) beautify, improve and maintain property owned or leased by the Municipality; (b) pay grants to a body corporate for the purpose of promoting or beautifying a business district and for airport, wharf or waterfront development; (c) identify and promote a business district as a place for retail and commercial activity.

Halifax Regional Municipality Business Improvement District (BID) Contributions Fund, Section 20.2

HRM Public Art Policy Section 1.3 Policy 1.3: Notwithstanding Policy 1.2, HRM will accept public art as a donation where: it satisfies the acquisition criteria, as set out in the HRM Public Art Procedures; an acceptance agreement transferring ownership to HRM is provided; a funding donation for the maintenance, conservation and restoration of the work being donated is provided.

RECOMMENDATION

It is recommended that Halifax Regional Council:

1. Approve the request of the Downtown Halifax Business Commission (DHBC) to install a sculpture in the Barrington Street right-of-way, south of George Street, as generally shown on the certified professional engineer drawings in Attachment 1;
2. Approve the installation of the sculpture as described in Attachment 1, subject to staff approval of the following requirements:

Recommendation continued on Page 2

- a) the final schedule for installation of the sculpture;
 - b) the inspection and approval of the sculpture's installation by a certified professional engineer in accordance with standard practices; and
 - c) the issuance of any necessary permits;
3. Upon satisfactory compliance with the terms and conditions listed herein, authorize the Mayor and Municipal Clerk to execute a Deed of Gift (Attachment 2) to transfer the ownership of the sculpture from the DHBC to the Municipality; and
 4. Authorize the Mayor and Municipal Clerk to execute a Deed of Gift (Attachment 4) to accept the interactive ceramic mosaic "Barrington Blocks" situated on the property of 1741 Barrington Street (PID 40594764) as a work of public art under the Municipal Public Art Policy.

BACKGROUND

Under the *Halifax Regional Municipality Charter*, Section 70(2) permits an area rate on all properties assessed as Commercial located within a designated Business Improvement District (BID) for the purpose of promoting or beautifying the district. Historically, HRM has partnered with local BIDs through the provision of discretionary funding for specific projects conditional upon matching non-municipal funding provided by the BID. These matching contributions of cash, not in-kind, may be derived from the annual tax levy, grants from government or foundations, corporate sponsorship etc. On September 22, 2015, Regional Council approved the 2015-2016 BID Contributions Fund Award report which included \$15,000 for the Downtown Halifax Business Commission (DHBC) to be allocated toward public art as part of their beautification mandate, specifically:

"Enhanced Maintenance and Beautification Project (\$15,000): Working with individuals and businesses in the District seeking to improve downtown Halifax through the installation of public art throughout the area for the purpose of attracting new pedestrian traffic, increased duration of visit, and expanding the district's support for the arts."

Subsequently, in October 2015, correspondence was sent to HRM on behalf of the DHBC (Attachment 1) requesting permission for the placement of a sculpture by Miro Davis in front of 1741 Barrington Street. The proposed installation is part of Phase 2 of the 2014 'Barrington Benches' project, a restoration initiative to the site that had fallen into disrepair.

The bench was originally installed in 2014. At that time, the process for installing the bench was implemented exclusively through the Municipality's Right of Way Services (ROW) division and approved as 'maintenance', specifically, a repair of previous bench infrastructure on that site. Based on the past process for the bench, the sculpture request was initially processed by the ROW division. However, ROW determined that the request was outside the approval process previously applied to Phase 1. Subsequently, the request was forwarded to Parks and Recreation staff for consideration as a work of public art under the Public Art Policy.

During the consideration of the Davis sculpture request, it was noted that another artistic element that had been incorporated into the initial 'Barrington Benches' construction should also be considered under the Public Art Policy. The element, referred to as the 'Barrington Blocks' sculpture, is an interactive ceramics wall. As part of the correspondence regarding the proposed municipal ownership of the elements, the relationship between the two elements was characterized by the Executive Director of the Downtown Halifax Business Commission as follows (Attachment 3):

"The benches had originally been placed there, using private infrastructure, as a temporary beautification project, following the G7 conference in 1995. Subsequently, it had fallen into disrepair. In the meantime, the property behind the benches had been transferred from HRM to the Province, with the property line running somewhere underneath the benches. All three parties agreed a beautification of that area would be in the public good, so an agreement was entered into, whereby the province would continue to

maintain the fence, and DHBC would undertake the re-do the benches, after which HRM would assume ownership and maintenance responsibilities. Part of the reconstruction of the bench involved an art piece – a moveable mosaic, which was designed by Professor Rory MacDonald, of NSCAD, and student Catherine LeRoche”.

DHBC's most recent request has provided an opportunity to formalize acceptance of the existing artwork appropriately, under the terms and conditions as set forth in the Public Art Policy. Though both requests represent components of the 'Barrington Benches' Phase 2 project, the consideration of each is slightly different under the Public Art Policy. Therefore, there are two separate Deeds of Gift attached to this report.

DISCUSSION

HRM's Public Art Policy, approved in 2008, outlines the process by which the Municipality may accept donations of public art (Section 1.3). Through that process HRM may accept donations which have been, or will be funded and installed by others. In addition to the installation, the donation must also include funding for the ongoing maintenance of the public art. Both DHBC requests have been considered using that process.

1. Miro Davis “Untitled” Sculpture

In order to ensure compliance with the Public Art Policy, consideration of the donation of the proposed Miro Davis sculpture to HRM required review in the following areas:

- Policy Consideration
- Acquisition Rationale
- Technical Consideration of Site
- Technical Consideration of Proposed Sculpture
- Project Funding
- Ongoing Maintenance Requirements
- Deed of Gift

Policy Consideration

Consideration of the DHBC proposal has application to the public art policy under three principle sections: (1) Strategic Acquisition, (2) Site Approval and (3) Maintenance.

Acquisition Rationale

The proposal of the DHBC is to install the sculpture that complements the functional (seating) use and aesthetic properties of the 'Barrington Benches' Project, installed on that site in July 2014. The September 22, 2015 BID Contributions Award Report approved allocation of funds toward the commissioning of public art for the purposes of beautification.

Technical Consideration of Site

The proposed site meets the requirements of Policy 2.6 of the Public Art Policy under the “major parks and public places” and the “regional streetscapes” categories. ROW has confirmed that since the sculpture will be owned by HRM, an encroachment license is not necessary. A Streets and Services permit will be issued to the contractor who installs the structure.

Technical Consideration of Sculpture

Attachment 1 provides engineered drawings of the sculpture, as well as material information and treatment specification pertaining to the ongoing maintenance of the artwork. It is therefore recommended that any direction to approve the installation of the sculpture at this site be conditional upon the staff approval of the following requirements:

- a) the final schedule for production and installation of the monument; and
- b) the issuance of any necessary permits.

Project Funding

The cost of commissioning the artwork by the DHBC was \$5,000. These costs were supplemented by in-kind sponsorship of materials and services, therefore, it is difficult to predict a total cost of construction. As such, it is recommended that the 'real cost' to the DHBC be treated as the effective 'total cost of construction' for the sculpture, for the purposes of calculating the required 10% allocation toward ongoing maintenance.

Ongoing Maintenance Requirements

The artwork is proposed to be constructed out of a single piece of Nova Scotia granite with the attachment of black granite sphere. Based upon the simplicity of construction and the durability of the materials involved, the ongoing maintenance of the artwork is seen as relatively minimal. The DHBC has committed to providing \$500 (one time) to the Municipality (based upon the 10% of total construction costs set out in Section 1.3 of the Public Art Policy in relation to the \$5,000 effective true cost of construction determined above).

Deed of Gift

Pending satisfactory construction in compliance with the terms and conditions listed above, the DHBC has requested the transfer of the Miro sculpture's ownership from the DHBC to HRM. Therefore, upon satisfactory construction, it is recommended that Council authorize the Mayor and Municipal Clerk to execute a Deed of Gift, formally transferring the ownership of the artwork from the DHBC to the Municipality (Attachment 2)

2. 'Barrington Blocks' Interactive Ceramic Mosaic

In order to ensure compliance with the Public Art Policy, consideration of the donation of the 'Barrington Blocks' takes into consideration that the artwork is already installed. Therefore, accepting the work required review in the following areas:

- Policy Consideration
- Acquisition Rationale
- Project Funding
- Ongoing Maintenance Requirements
- Deed of Gift

Policy Consideration

Consideration of the DHBC request has application to the public art policy under two principle sections: (1) Strategic Acquisition and (2) Maintenance.

Acquisition Rationale

Phase 1 of the 'Barrington Benches' Project, installed on that site in July 2014, replaced existing (and failing) infrastructure and included the interactive element of the ceramic blocks. As such the 'Barrington Blocks' falls under the category of "Expressive Art Works" stated in the Public Art Policy: *"These works integrate objects into public spaces with the primary purpose of animating those spaces and engaging the interest of citizens"*.

Project Funding

The stated cost of commissioning the artwork by the DHBC was \$3,000. It is similarly recommended that the 'real cost' to the DHBC be treated as the effective 'total cost of construction' for the 'Barrington Blocks', for the purposes of calculating the required 10% allocation toward ongoing maintenance.

Ongoing Maintenance Requirements

The artwork is comprised of multi-coloured ceramic blocks mounted along a series of vertical aluminum poles. The blocks can be rotated to create simple images or to spell out messages. Each block measures 3.5" by 3.5" and there are 384 altogether. The blocks are in good condition and do not require any significant maintenance or rehabilitation in the short term.

Deed of Gift

DHBC has requested that the municipality accept the work under the Public Art Policy through a formal Deed of Gift (Attachment 4). The DHBC has agreed to a maintenance fee of \$300 (one time) which is 10% of original project budget. It is recommended that Council authorize the Mayor and Municipal Clerk to execute the Deed of Gift formally accepting ownership of the artwork (Attachment 4).

As stipulated in Attachments 2 and 4, HRM is not obligated to retain either artwork in their current location and may elect to relocate them to other locations if circumstances warrant. This may be necessary depending on any future redevelopment of the abutting property.

FINANCIAL IMPLICATIONS

This report recommends that the Municipality assume ownership of a proposed sculpture as well as a previously-installed ceramic artwork as outlined in this report and under the conditions set out in the attached Deeds of Gift. The Municipality would therefore assume the ongoing operational costs of maintaining both artworks.

The maintenance requirement for both public art pieces (10% of project budget), as set out in the Public Art Policy, and agreed to in the Deeds of Gift, will be allocated to C764 for ongoing maintenance of the artwork.

RISK CONSIDERATION

There are no significant risks associated with the recommendations in this Report. The risks considered rate Low.

In reaching this conclusion, consideration was given to operational, financial and public safety risks.

COMMUNITY ENGAGEMENT

The Downtown Halifax Business Commission has undertaken community and stakeholder engagement in the development of the Barrington Benches project, of which the 'Barrington Blocks' as well as the proposed Miro Davis sculpture are considered Phase 1 and 2 components, respectively. On October 19, 2013 over 1200 members of the public participated in an on-site engagement during the Nocturne: Art and Night festival.

ENVIRONMENTAL IMPLICATIONS

There are no environmental implications to this recommendation.

ALTERNATIVES

- Alternative 1: Regional Council may choose to not approve the proposed sculpture location and direct staff to engage the DHBC to consider alternate sites or take no further action.
- Alternative 2: Regional Council may choose to approve the proposed sculpture location but direct that HRM not accept the Deed of Gift and require that DHBC retain responsibility for the artwork.
- Alternative 3: Regional Council may choose to direct staff not to accept Barrington Blocks as a work of public art and continue its classification as a restoration element.

ATTACHMENTS

- Attachment 1: Consolidated information submitted by the Downtown Halifax Business Commission, dated October 14, 2015
- Attachment 2: Proposed Deed of Gift - Miro Davis sculpture
- Attachment 3: Consolidated information submitted by the Downtown Halifax Business Commission dated July 6, 2016.
- Attachment 4: Proposed Deed of Gift - "Barrington Blocks" Interactive Ceramic Mosaic

A copy of this report can be obtained online at <http://www.halifax.ca/council/agendasc/cagenda.php> then choose the appropriate meeting date, or by contacting the Office of the Municipal Clerk at 902.490.4210, or Fax 902.490.4208.

Report Prepared by: Elizabeth Taylor, Manager, Culture and Events, 490.4387

Report Approved by: _____
Denise Schofield, Manager, Program Support Services, 490.6252

Financial Approved by: _____
Amanda Whitewood, Director of Finance & ICT/CFO, 490.6308

Report Approved by: _____
Brad Anguish, Director, Parks & Recreation, 490.4933

Original Signed

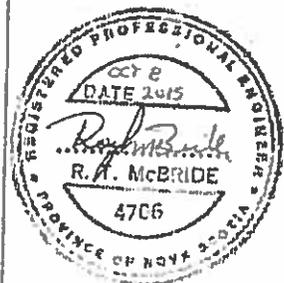
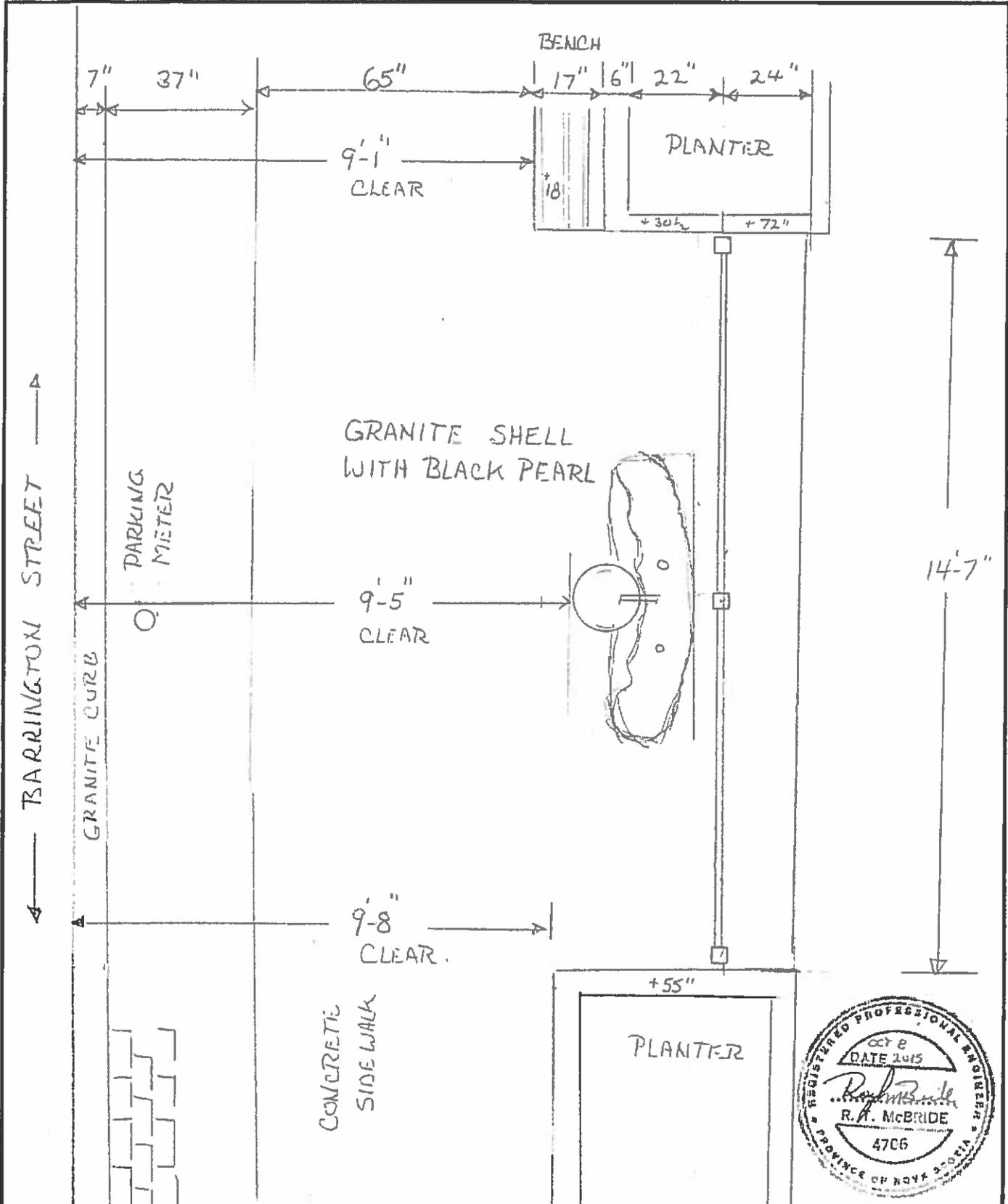
From: Kimberly Dossett [<mailto:kimberly@downtownhalifax.ca>]
Sent: October-14-15 9:30 AM
To: Davis, Christopher
Cc: paul@downtownhalifax.ca
Subject: Barrington Street resting site
Importance: High

Hi Chris,

As the next step in the Barrington Benches project, we have partnered with Sculpture Nova Scotia to create an art piece. I have attached the engineering drawings for your approval. The granite piece will require anchoring into the sidewalk.

Please let me know if you have any questions and the next steps required to allow up to proceed with this project.

Kimberly Dossett
Director of Operations
Downtown Halifax Business Commission
1546 Barrington Street, Suite 104
Halifax, NS B3J 3X7
Tel: [REDACTED] Fax: (902) 429-0865
Email: kimberly@downtownhalifax.ca
Website: www.downtownhalifax.ca



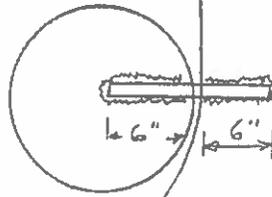
BMR
Structural Engineering

5413 DOYLE ST.
HALIFAX, N.S.
B3J 1H9
PH 428-3321
FAX 422-8850

PROJECT	sculpture nova scotia	DRAWN	RMcB	DATE	Oct. 8, 2015
TITLE	Sculpture Foundation	PROJ. No.	SNS	DRAWING No.	SSK-3

STAINLESS STEEL DOWEL
 1 1/4" DIAMETER ROD
 WITH 6" INCH EMBEDMENT
 INTO EACH PIECE

BLACK GRANITE
 SPHERE



TWO ANCHORS INTO SIDE WALK
 4" EMBEDMENT - 1" Ø ROD
 IN SIDE WALK

EXISTING
 FENCE

NOTES

- STAINLESS STEEL: TYPE 304 THREAD ROD
- ANCHORING RESIN: EPCON CERAMIC 6
- NON SHRINK GROUT USED FOR LEVELING UNDER STONE: SIKA SIKAGROUT 212



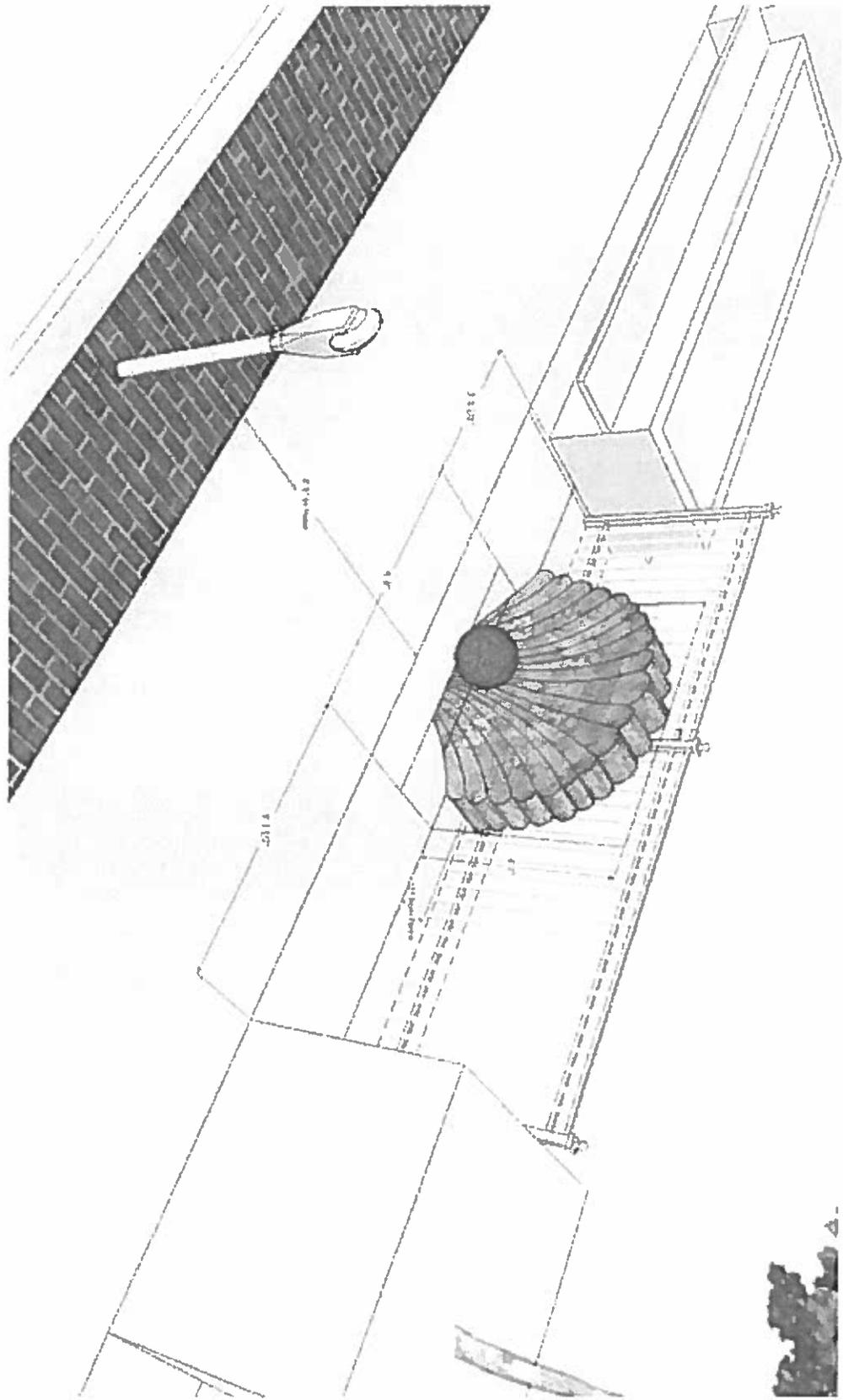
BMR
 Structural Engineering
 5413 DOYLE ST.
 HALIFAX, N.S.
 B3J 1H9
 PH. 429-3321
 FAX 422-8650

PROJECT sculpture nova scotia

DRAWN RMcB DATE Oct. 8, 2015

TITLE Sculpture Foundation

PROJ. No. SWS DRAWING No. SSK-4



How to Use

Surface Preparation

Remove all dirt, oil, grease, and other bond-inhibiting materials by mechanical means. Anchor bolts to be grouted must be de-greased with suitable solvent. Concrete must be sound and roughened to a CSP 4 or higher to promote mechanical adhesion. Prior to pouring, surface should be brought to a saturated surface-dry condition. Steel should be cleaned and prepared thoroughly by blastcleaning to a white metal finish. Follow standard industry and Sika guidelines for use as an anchoring epoxy.

For pourable grout, construct forms to retain grout without leakage. Forms should be lined or coated with bond-breaker for easy removal. Forms should be sufficiently high to accommodate head of grout. Where grout-tight form is difficult to achieve, use SikaGrout® 212 in dry pack consistency.

Mixing

Mix manually or mechanically. Mechanically mix with low-speed drill (400-600 rpm) and Sika mixing paddle or in appropriately sized mortar mixer.

Make sure all forming, mixing, placing, and clean-up materials are on hand. Add appropriate quantity of clean water to achieve desired flow. Add bag of powder to mixing vessel. Mix to a uniform consistency, minimum of 2 minutes. Ambient and material temperature should be as close as possible to 70°F. If higher, use cold water; if colder, use warm water.

Product Extension: For deeper applications, SikaGrout® 212 (plastic and flowable consistencies only) may be extended with 25 lbs. of 3/8" pea gravel. The aggregate must be nonreactive, clean, well-graded, saturated surface dry, have low absorption and high density, and comply with ASTM C33 size number 8 per Table 2. Add the pea gravel after the water and SikaGrout® 212.

Application

Within 15 minutes after mixing, place grout into forms in normal manner to avoid air entrapment. Vibrate, pump, or ram grout as necessary to achieve flow or compaction. SikaGrout® 212 must be confined in either the horizontal or vertical direction leaving minimum exposed surface. SikaGrout® 212 is an excellent grout for pumping, even at high flow. For pump recommendations, contact Technical Service. Wet cure for a minimum of 3 days or apply a curing compound which complies with ASTM C-309 on exposed surfaces.

Tooling & Finishing

After grout has achieved final set, remove forms, trim or shape exposed grout shoulders to designed profile

Limitations

- Minimum ambient and substrate temperature 45°F and rising at time of application.
- Minimum application thickness: 1/2 in.
- Maximum application thickness (neat): 2 in. However, thicker applications can be achieved. Contact Sika's Technical Services Department (800-933-7452) for further information.
- Do not use as a patching or overlay mortar or in unconfined areas.
- Material must be placed within 15 minutes of mixing.
- As with all cement based materials, avoid contact with aluminum to prevent adverse chemical reaction and possible product failure. Insulate potential areas of contact by coating aluminum bars, rails, posts etc. with an appropriate epoxy such as Sikadur® Hi-Mod 32.

PRIOR TO EACH USE OF ANY SIKA PRODUCT, THE USER MUST ALWAYS READ AND FOLLOW THE WARNINGS AND INSTRUCTIONS ON THE PRODUCT'S MOST CURRENT PRODUCT DATA SHEET, PRODUCT LABEL AND SAFETY DATA SHEET WHICH ARE AVAILABLE ONLINE AT [HTTP://USA.SIKA.COM/](http://usa.sika.com/) OR BY CALLING SIKA'S TECHNICAL SERVICE DEPARTMENT AT 800-933-7452. NOTHING CONTAINED IN ANY SIKA MATERIALS RELIEVES THE USER OF THE OBLIGATION TO READ AND FOLLOW THE WARNINGS AND INSTRUCTIONS FOR EACH SIKA PRODUCT AS SET FORTH IN THE CURRENT PRODUCT DATA SHEET, PRODUCT LABEL AND SAFETY DATA SHEET PRIOR TO PRODUCT USE.

KEEP CONTAINER TIGHTLY CLOSED. KEEP OUT OF REACH OF CHILDREN. NOT FOR INTERNAL CONSUMPTION. FOR INDUSTRIAL USE ONLY FOR PROFESSIONAL USE ONLY.

For further information and advice regarding transportation, handling, storage and disposal of chemical products, users should refer to the actual Safety Data Sheets containing physical, ecological, toxicological and other safety related data. Read the current actual Safety Data Sheet before using the product. In case of emergency, call CHEMTREC at 1-800-424-9300, International 703-527-3887.

Prior to each use of any Sika product, the user must always read and follow the warnings and instructions on the product's most current Product Data Sheet, product label and Safety Data Sheet which are available online at <http://usa.sika.com/> or by calling Sika's Technical Service Department at 800-933-7452. Nothing contained in any Sika materials relieves the user of the obligation to read and follow the warnings and instruction for each Sika product as set forth in the current Product Data Sheet, product label and Safety Data Sheet prior to product use.

SIKA warrants this product for one year from date of installation to be free from manufacturing defects and to meet the technical properties on the current Product Data Sheet if used as directed within shelf life. User determines suitability of product for intended use and assumes all risks. Buyer's sole remedy shall be limited to the purchase price or replacement of product exclusive of labor or cost of labor. NO OTHER WARRANTIES EXPRESS OR IMPLIED SHALL APPLY INCLUDING ANY WARRANTY OF MERCHANTABILITY OR FITNESS FOR A PARTICULAR PURPOSE. SIKA SHALL NOT BE LIABLE UNDER ANY LEGAL THEORY FOR SPECIAL OR CONSEQUENTIAL DAMAGES. SIKA SHALL NOT BE RESPONSIBLE FOR THE USE OF THIS PRODUCT IN A MANNER TO INFRINGE ON ANY PATENT OR ANY OTHER INTELLECTUAL PROPERTY RIGHTS HELD BY OTHERS. SALE OF SIKA PRODUCTS ARE SUBJECT SIKA'S TERMS AND CONDITIONS OF SALE AVAILABLE AT [HTTP://USA.SIKA.COM/](http://usa.sika.com/) OR BY CALLING 201-933-8800.

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Sika Corporation
201 Polio Avenue
Lyndhurst, NJ 07071
Phone: 800-933-7452
Fax: 201-933-6225

Sika Canada Inc.
601 Dalmar Avenue
Pointe Claire
Quebec H9R 4A9
Phone: 514-897-2610
Fax: 514-894-2782

Sika Mexicana S.A. de C.V.
Carretera Libre Celaya Km. 8.5
Fracc. Industrial Bahvanera
Corregidora, Queretaro
C.P. 76820
Phone: 52 442 2385800
Fax: 52 442 2250537



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SikaGrout® 212

High performance, cementitious grout

Construction

Description	SikaGrout® 212 is a non-shrink, cementitious grout with a unique 2-stage shrinkage compensating mechanism. It is non-metallic and contains no chloride. With a special blend of shrinkage-reducing and plasticizing/water-reducing agents, SikaGrout® 212 compensates for shrinkage in both the plastic and hardened states. A structural grout, SikaGrout® 212 provides the advantage of multiple fluidity with a single component. SikaGrout® 212 meets ASTM C-1107 (Grade C).
Where to Use	<ul style="list-style-type: none"> Use for structural grouting of column base plates, machine base plates, anchor rods, bearing plates, etc. Use on grade, above and below grade, indoors and out. Multiple fluidity allows ease of placement: ram in place as a dry pack, trowel-apply as a medium flow, pour or pump as high flow.
Advantages	<ul style="list-style-type: none"> Easy to use, just add water. Multiple fluidity with one material. Non-metallic, will not stain or rust. Low heat build-up. Excellent for pumping: Does not segregate, even at high flow. No build-up on equipment hopper Superior freeze/thaw resistance. Resistant to oil and water. Meets ASTM C-1107 (Grade C). Shows positive expansion when tested in accordance with ASTM C-827. SikaGrout® 212 is USDA-approved.
Coverage	Approximately 0.44 cu. ft./bag at high flow.
Packaging	50-lb. multi-wall bags; 36 bags/pallet

Typical Data (Material and curing conditions @ 73°F (23°C) and 50% R.H.)

RESULTS MAY DIFFER BASED UPON STATISTICAL VARIATIONS DEPENDING UPON MIXING METHODS AND EQUIPMENT, TEMPERATURE, APPLICATION METHODS, TEST METHODS, ACTUAL SITE CONDITIONS AND CURING CONDITIONS.

Shelf Life	One year in original, unopened bags.		
Storage Conditions	Store dry at 40°-95°F (4°-35°C). Condition material to 65°-75°F before using.		
Color	Concrete gray		
Flow Conditions (ASTM C-109, Plastic & Flowable; ASTM C-939, Fluid)	Plastic¹	Flowable¹	Fluid²
Typical Water Requirements:	6 pt.+	6.5 pt.	8.5 pt.
Set Time (ASTM C-266):			
Initial	3.5-4.5 hr.	4.0-5.0 hr.	4.5-6.5 hr.
Final	4.5-5.5 hr.	5.5-6.5 hr.	6.0-8.0 hr.
Tensile Splitting Strength, psi (ASTM C-496)			
28 day	600 (4.1 MPa)	575 (3.9 MPa)	500 (3.4 MPa)
Flexural Strength, psi (ASTM C-293)			
28 day	1,400 (9.6 MPa)	1,200 (8.2 MPa)	1,000 (6.8 MPa)
Bond Strength, psi (ASTM C-882 modified): Hardened concrete to plastic grout			
28 day	2,000 (13.7 MPa)	1,900 (13.1 MPa)	1,900 (13.1 MPa)
Expansion % (CRD C-621)			
28 day	+0.021%	+0.056%	+0.027%
Compressive Strength, psi (CRD C-621)			
1 day	4,500 (31 MPa)	3,500 (24.1 MPa)	2,700 (18.6 MPa)
7 day	6,100 (42 MPa)	5,700 (39.3 MPa)	5,500 (37.9 MPa)
28 day	7,500 (51.7 MPa)	6,200 (42.7 MPa)	5,800 (40 MPa)

¹CRD C-227: 100-124% (plastic), 124-145% (flowable)

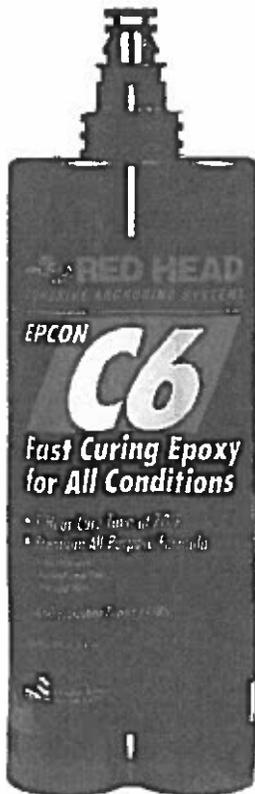
²CRD C-611: 10-30 sec efflux time.



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C6

**Reliable
Performance—
Even Under the
Most Severe
Installation
Conditions**



C6-18

NEW!
Base Material Temperature 15°F
(cartridge temperature must be ≥ 70°F)

DESCRIPTION/SUGGESTED SPECIFICATIONS*

*Suggested Specifications see page 34

Fast Curing Epoxy for All Conditions

The hardener and resin are completely mixed as they are dispensed from the dual cartridge through a static mixing nozzle. The pre-mixed adhesive is injected directly into the anchor hole. C6 can be used with threaded rod or rebar (for fastening to hollow base materials, see pages 43 and 46).

ADVANTAGES

- 1 hour cure time (see below)
- Works in damp holes and underwater applications
- Minimum shrinkage—can be used in oversized holes and diamond cored holes
- High heat deflection temperature: 139°F minimum
- One formula for both solid and hollow base materials
- NSF standard 61 certified for drinking water systems
- Extensively tested—earthquake, underwater, creep, freeze-thaw, radiation, fire, fatigue, electrical isolation, ozone and many more test programs have been conducted on C6
- Extensive use—C6 has been used on projects all over the world for almost 20 years

Easy to open,
snap-off tip, no
cutting required



Curing Times



BASE MATERIAL ¹ (F°/C°)	WORKING TIME ²	FULL CURE TIME
120°/ 49°	4 minutes	1 hour
110°/ 43°	4 minutes	1 hour
90°/ 32°	5 minutes	1 hour
80°/ 26°	6 minutes	1 hour
70°/ 21°	7 minutes	1 hour
60°/ 16°	7 minutes	2 hours
50°/ 10°	7 minutes	2 hours
40°/ 4°	7 minutes	24 hours
15°/ -9°	6 minutes	24 hours

¹ Cartridge must be ≥ 70°F.

² Working time is max time from the end of mixing to when the insertion of the anchor into the adhesive shall be completed.

Gel Time per ASTM D2471 = 10 minutes at 72° F

APPLICATIONS



Tunnel Construction

Over 40,000 anchors were installed overhead in damp holes with water seeping through using C6 and our "dosage control" screens.



Water Treatment Plant

Skimmers and brackets with chain plates fastened with C6, which is NSF approved for potable drinking water systems.



Underwater Installations

C6 was used to install four 1-1/4" eye bolts underwater to lift this 37 ton block of concrete out of the ocean.

FEATURES



ANCHORAGE TO SOLID CONCRETE

Threaded Rod (Carbon or Stainless Steel) or Rebar supplied by contractor; rod does not need to be chisel pointed

C6 adhesive completely fills area between rod and hole creating a stress-free, high load anchorage

Pre-drilled hole in concrete; see performance tables for suggested hole sizes

APPROVALS/LISTINGS

ICC Evaluation Service, Inc. – #ER4285

City of Los Angeles – RR#24975

City of Los Angeles – RR#24927

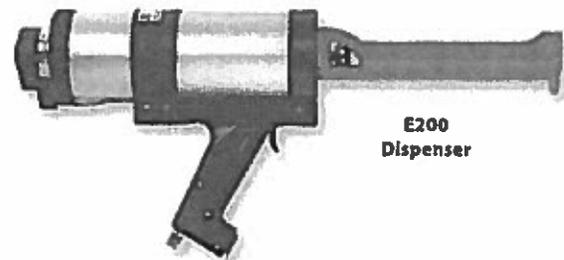
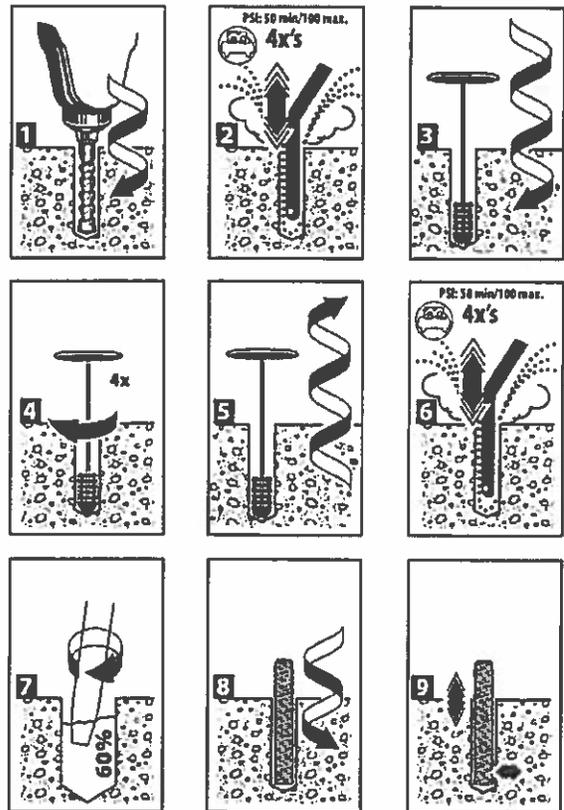
NSF Standard 61 Certified for Drinking Water Components

DOT Approvals



For the most current approvals/listings visit: www.itw-redhead.com

INSTALLATION STEPS



E200
Dispenser

PACKAGING

1. Disposable, self-contained cartridge system capable of dispensing both epoxy components in the proper mixing ratio
2. Epoxy components dispensed through a static mixing nozzle that thoroughly mixes the material, and places the epoxy at the base of the pre-drilled hole
3. Cartridge markings: Include manufacturer's name, batch number and best-used-by date, mix ratio by volume, ANSI hazard classification, and appropriate ANSI handling precautions

SUGGESTED SPECIFICATIONS

EPOXY ADHESIVE

High Strength EPOXY ADHESIVE: USA Made, ARRA Certified

1. Two component resin and hardener, 100% solids (containing no solvents or VOC's), non-sag paste, insensitive to moisture, grey in color, early working time and gel time appropriate for severe installation conditions, suitable for extreme temperature ranges, for all conditions or substrate materials.
2. Meets NSF Standard 61, certified for use in conjunction with drinking water systems.
3. Works in wet, damp, and submerged hole.
4. Heat deflection temperature: 139°F minimum.
5. Extended Shelf life: Best if used within 2 years.
6. Reliable performance in solid or hollow base materials.
7. Oversized and/or diamond cored holes permitted.
8. Suitable for Cold Base material installation using warmed cartridge.

PERFORMANCE TABLE

DRILL HOLE DIAMETERS
PROVIDED ON PAGE 33

C6 Average Ultimate Tension and Shear Loads^{1,2,3} for Epoxy Adhesive Threaded Rod Installed in Solid Concrete

THREADED ROD DIA. In. (mm)	MAX. CLAMPING FORCE AFTER PROPER CURE Ft.-Lbs. (Nm)	EMBEDMENT IN CONCRETE In. (mm)	2000 PSI (13.8 MPa) CONCRETE		4000 PSI (27.6 MPa) CONCRETE		6000 PSI (41.4 MPa) CONCRETE	
			ULTIMATE TENSION Lbs. (kN)	ULTIMATE SHEAR Lbs. (kN)	ULTIMATE TENSION Lbs. (kN)	ULTIMATE SHEAR Lbs. (kN)	ULTIMATE TENSION Lbs. (kN)	ULTIMATE SHEAR Lbs. (kN)
3/8 (9.5)	13 - 18 (17.6-24.4)	3-3/8 (85.7)	7,195 (32.0)	5,209 (23.2)	8,445 (37.6)	5,869 (26.1)	10,621 (47.2)	5,941 (26.4)
		4-1/2 (114.3)	8,317 (37.0)	5,209 (23.2)	10,021 (44.6)	5,869 (26.1)	10,603 (47.2)	5,941 (26.4)
1/2 (12.7)	22 - 25 (29.8-33.9)	4-1/2 (114.3)	13,271 (59.0)	11,427 (50.8)	17,684 (78.7)	12,585 (56.0)	17,684 (78.7)	12,585 (56.0)
		6 (152.4)	19,127 (85.1)	11,427 (50.8)	19,608 (87.2)	12,585 (56.0)	19,608 (87.2)	12,585 (56.0)
5/8 (15.9)	55 - 80 (74.6-108.5)	5-5/8 (142.9)	17,704 (78.8)	18,294 (81.4)	24,526 (109.1)	19,802 (88.1)	24,526 (109.1)	19,802 (88.1)
		7-1/2 (190.5)	22,642 (100.7)	18,294 (81.4)	28,766 (128.0)	19,802 (88.1)	29,456 (131.0)	19,802 (88.1)
3/4 (19.1)	106-160 (143.7-216.9)	6-3/4 (171.5)	28,779 (128.0)	25,723 (114.4)	31,521 (140.2)	25,723 (114.4)	33,759 (150.2)	25,723 (114.4)
		9 (228.6)	31,758 (141.3)	25,723 (114.4)	41,384 (184.0)	25,723 (114.4)	41,384 (184.0)	25,723 (114.4)
7/8 (22.2)	185-250 (250.8-338.9)	7-7/8 (200.0)	35,257 (156.8)	Consult Factory	37,714 (167.8)	30,295 (134.8)	41,023 (182.5)	32,573 (144.9)
		10-1/2 (266.7)	Consult Factory	Consult Factory	51,211 (227.8)	30,295 (134.8)	51,211 (227.8)	32,573 (144.9)
1 (25.4)	276-330 (374.2-447.4)	9 (228.6)	40,334 (179.4)	38,519 (171.3)	47,886 (213.0)	40,341 (179.5)	47,886 (213.0)	46,416 (206.5)
		12 (304.8)	48,719 (216.7)	38,519 (171.3)	62,194 (276.7)	40,341 (179.5)	63,053 (280.5)	46,416 (206.5)
1-1/4 (31.8)	370-660 (501.6-894.8)	11-1/4 (285.8)	55,654 (247.6)	65,085 (289.5)	56,981 (253.5)	65,085 (289.5)	Consult Factory	65,085 (289.5)
		15 (381.0)	65,728 (289.5)	65,085 (289.5)	79,726 (354.7)	65,085 (289.5)	Consult Factory	65,085 (289.5)

1 Allowable working loads for the single installations under static loading should not exceed 25% capacity or the allowable load of the anchor rod.

2 Ultimate load values in 2000, 4000, and 6000 psi stone aggregate concrete. Ultimate loads are indicated for the embedment shown in the Embedment in Concrete column. Performance values are based on the use of high strength threaded rod (ASTM A193 Gr. B7). The use of lower strength rods will result in lower ultimate tension and shear loads.

3 Linear interpolation may be used for intermediate spacing and edge distances (see page 35).

C6 Average Ultimate Tension Loads^{1,2,3} for Threaded Rod Epoxy Adhesive Installed in Solid Concrete, Shallow Embedment

ANCHOR DIAMETER In. (mm)	DRILL HOLE DIAMETER In. (mm)	EMBEDMENT IN CONCRETE In. (mm)	3500 PSI (24.2 MPa) ULTIMATE TENSION Lbs. (kN)
1/4 (6.4)	5/16 (7.9)	1 (25.4)	1,653 (7.4)
		2-1/4 (57.2)	2,818 (12.5)
		3 (76.2)	3,599 (16.0)
3/8 (9.5)	7/16 (11.1)	1-1/2 (38.1)	3,426 (15.2)
1/2 (12.7)	9/16 (14.3)	2 (50.8)	6,100 (27.1)
5/8 (15.9)	3/4 (19.1)	2-1/2 (63.5)	8,775 (39.0)
3/4 (19.1)	7/8 (22.2)	3 (76.2)	12,625 (56.2)
7/8 (22.2)	1 (25.4)	3-1/2 (88.9)	18,650 (83.0)
1 (25.4)	1-1/8 (28.6)	4 (101.6)	25,034 (111.4)
1-1/4 (31.8)	1-3/8 (34.9)	5 (127.0)	37,100 (165.0)

1 Allowable working loads for the single installations under static loading should not exceed 25% capacity or the allowable load of the anchor rod.

2 Ultimate load values in 2000, 4000, and 6000 psi stone aggregate concrete. Ultimate loads are indicated for the embedment shown in the Embedment in Concrete column. Performance values are based on the use of high strength threaded rod (ASTM A193 Gr. B7). The use of lower strength rods will result in lower ultimate tension and shear loads.

3 Linear interpolation may be used for intermediate spacing and edge distances (see page 35).

THIS DEED OF GIFT made the _____ day of _____, 2016

BETWEEN:

DOWNTOWN HALIFAX BUSINESS COMMISSION a Nova Scotia registered Society with head offices in
Halifax, County of Halifax, Province of Nova Scotia
(the "Donor")

- and -

HALIFAX REGIONAL MUNICIPALITY, a municipality pursuant to
the *Halifax Regional Municipality Charter, S.N.S. 2008, c. 39*
(the "Municipality")

WHEREAS the Donor is the absolute owner, free of encumbrances, of the property described in "Schedule A" attached hereto and forming part hereof (the "Property"), and is entitled to dispose of the Property;

AND WHEREAS the Municipality wishes to promote the Downtown Halifax Business Improvement District, including Barrington Street, as a place for retail and commercial activity;

AND WHEREAS, to promote the mandate of creating safe, attractive and interesting commercial places, and specifically to provide enhanced maintenance and beautification to enhance the street level experience of the Downtown Halifax Business Improvement District, the Donor desires to make an absolute gift to the Municipality of all of the Donor's right, title, and interest in and to the Property, subject only to the exceptions noted herein;

AND WHEREAS the Council of the Municipality, by resolution passed on _____, desires to accept a gift of the Property;

AND WHEREAS the Donor has provided to the Municipality funds in the amount of \$500.00 to support the future maintenance of the Property in accordance with the Municipality's Public Art Policy;

NOW THIS DEED WITNESSETH as follows:

Transfer of Title and Copyright

1. The Donor represents and warrants that:
 - a) the Donor has good and complete right, title, and interest in and to the Property;
 - b) the Donor has full authority to give, transfer and assign its right, title and interest in and to the Property; and
 - c) the subject of this gift is free and clear of all encumbrances and restrictions.

2. The Donor hereby gifts, assigns and transfers all of the Donor's right, title, and interest in and to the Property, to the Municipality, for its own use absolutely, subject only to the terms of this Deed.

3. The Property includes the items and things listed on the schedule(s) attached hereto at the time this Deed is executed.
4. The Property includes all subsisting copyright, except any exceptions noted on the corresponding schedule(s).
5. The Property is deemed to be gifted and transferred as of the date indicated on the corresponding schedule(s).
6. Except as provided for in this Deed of Gift, it is understood and agreed by the parties hereto that the Municipality shall at all times retain control and actual possession of the Property.
7. The Municipality hereby accepts the absolute gift of the Property from the Donor, subject only to the terms of this Deed.

Retention of the Property

8. It is the Municipality's intention to hold the Property in perpetuity. Notwithstanding, the Municipality shall not be obligated to retain the Property indefinitely, and the Municipality may transfer or dispose of the Property in accordance with standard museum principles. Such disposal may include the transfer of some or all of the Property to another institution which, in the opinion of the Municipality, is more appropriate to house the subject Property.
9. The Municipality will take reasonable care to protect the Property while it is in the possession of the Municipality.
10. The Municipality shall not be obligated to retain the Property in its current location, and may elect to relocate it to another location which is, in the opinion of the Municipality, more suitable for the Property.
11. The Donor consents to being publicly identified as the donor of the Property.

General Terms

12. Should any provision of this Deed be void or unenforceable, such provision shall be deemed severed and omitted, and this Deed, with such provision omitted, shall remain in full force and effect.
13. This Deed is binding on the parties hereto, and their respective heirs, executors, administrators, successors and assigns.
14. This Deed constitutes the entire agreement between the parties, and all previous agreements, proposals or communication relating to the subject of this Deed are hereby superseded and of no force or effect. There are no warranties, representations, terms, conditions or collateral agreements, express or implied, other than as set out herein.

- 15. The Donor will hold harmless and indemnify the Municipality for any and all claims related to the Donor's right, title, and interest in and to the Property, including, where applicable, all subsisting copyright, and particularly, the Donor's right or authority to gift the Property to the Municipality on the terms contained herein.
- 16. The Property will be at the risk of the Donor, until the date the Property is gifted and transferred, as indicated on the corresponding schedule(s).
- 17. This Deed is governed by the laws of the Province of Nova Scotia, and any dispute hereunder shall be referred to the exclusive jurisdiction of the Supreme Court of Nova Scotia.

IN WITNESS WHEREOF the parties have executed this Deed effective as of the day and year first above written.

	)		(seal)
Witness signature	)	Downtown Halifax Business Commission	
	)	Per:	
	)	I have authority to bind the Society	

	)		(seal)
Witness signature	)	Downtown Halifax Business Commission	
	)	Per:	
	)	I have authority to bind the Society	

HALIFAX REGIONAL MUNICIPALITY

Witness signature

Mayor

Witness signature

Municipal Clerk

SCHEDULE "A"
To a Deed of Gift

**From the Downtown Halifax Business Commission to
the Halifax Regional Municipality**

The following property is gifted to the Halifax Regional Municipality as of the _____ day of _____, 2016.

1. "Untitled", a public art sculpture and bench element by Miro Davis, located on Barrington Street in the Halifax Regional Municipality.



Location: in front of 1741 Barrington Street PID 40594764.

Description: The sculpture is a granite 'shell' form containing a black granite sphere element on the front (Barrington St.-facing) side which can be used as a seating element. The sphere/seating element is anchored into the granite shell 'backing' with a single 1¼" stainless steel rod (6" embedment on both ends). The sculpture is approximately 5'-4" in height, 5'-0" in width and 1'-6" in depth (at base), and is anchored into the sidewalk (4" embedment) with 2 x 1" diameter rods.

_____)	_____
Witness signature	)	Downtown Halifax Business Commission
	)	Per:
)	
_____)	_____
Witness signature	)	Downtown Halifax Business Commission
	)	Per:

RE: art piece in benches

Paul MacKinnon <paul@downtownhalifax.ca>

Sent: Wed 06/07/2016 9:33 AM

To: Taylor, Elizabeth

Cc: Kimberly Dossett; T.J. Maguire; MacLellan, Jamie

Elizabeth,

Two years ago, DHBC worked with HRM and the Province to re-skin the neglected bench infrastructure near the corner of Barrington and George Street. The benches had originally been placed there, using private infrastructure, as a temporary beautification project, following the G7 conference in 1995. Subsequently, it had fallen into disrepair. In the meantime, the property behind the benches had been transferred from HRM to the Province, with the property line running somewhere underneath the benches. All three parties agreed a beautification of that area would be in the public good, so an agreement was entered into, whereby the province would continue to maintain the fence, and DHBC would undertake the re-do the benches, after which HRM would assume ownership and maintenance responsibilities.

Part of the reconstruction of the bench involved an art piece – a moveable mosaic, which was designed by Professor Rory MacDonald, of NSCAD, and student Carherine LeRoche. At the time, DHBC did not make a formal application for HRM to assume ownership/maintenance of the art piece. It was a detail that was simply overlooked.

As the mosaic is an integral part of the structure, we would request that HRM assume ownership of this portion of the Barrington benches.

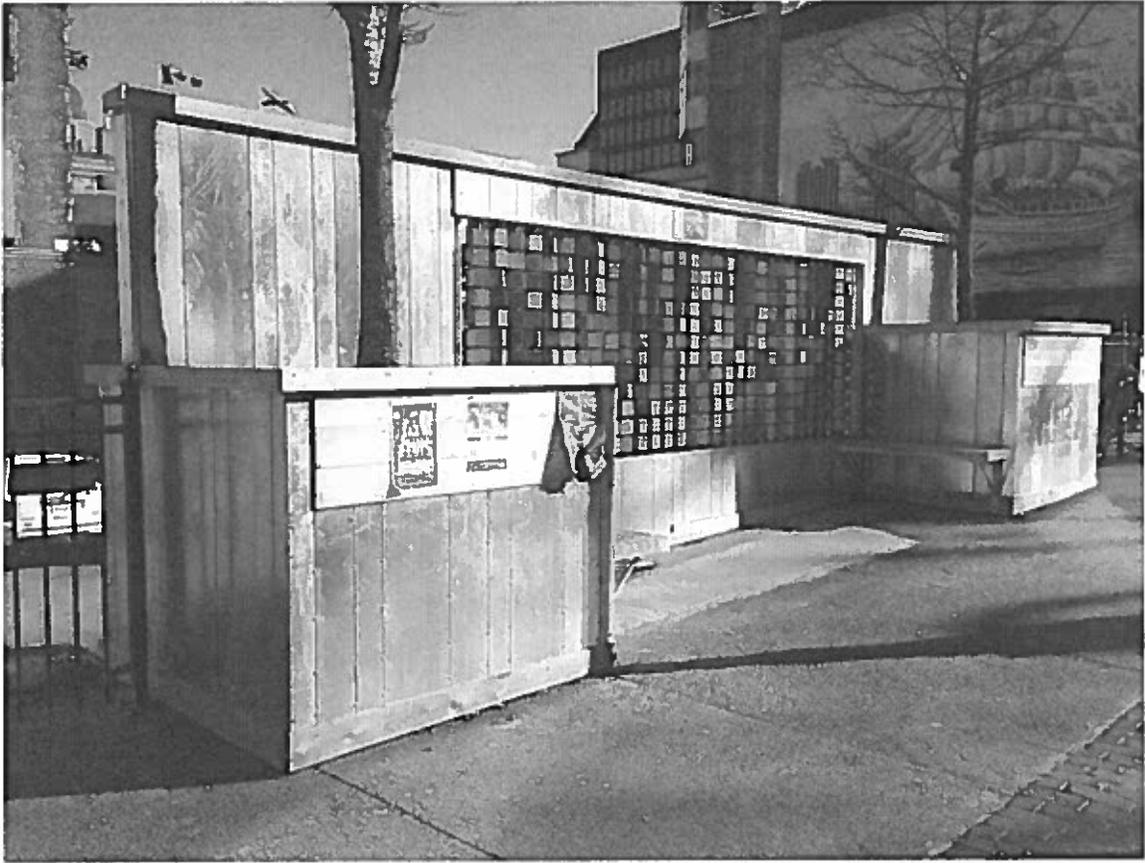
Sincerely,

Paul MacKinnon
Executive Director



www.downtownhalifax.ca

www.twitter.com/downtownpaul



THIS DEED OF GIFT made the _____ day of _____, 2016

BETWEEN:

DOWNTOWN HALIFAX BUSINESS COMMISSION a Nova Scotia registered Society with head offices in
Halifax, County of Halifax, Province of Nova Scotia
(the "Donor")

- and -

HALIFAX REGIONAL MUNICIPALITY, a municipality pursuant to
the *Halifax Regional Municipality Charter, S.N.S. 2008, c. 39*
(the "Municipality")

WHEREAS the Donor is the absolute owner, free of encumbrances, of the property described in "Schedule A" attached hereto and forming part hereof (the "Property"), and is entitled to dispose of the Property;

AND WHEREAS the Municipality wishes to promote the Downtown Halifax Business Improvement District, including Barrington Street, as a place for retail and commercial activity;

AND WHEREAS, to promote the mandate of creating safe, attractive and interesting commercial places, and specifically to provide enhanced maintenance and beautification to enhance the street level experience of the Downtown Halifax Business Improvement District, the Donor desires to make an absolute gift to the Municipality of all of the Donor's right, title, and interest in and to the Property, subject only to the exceptions noted herein;

AND WHEREAS the Council of the Municipality, by resolution passed on _____, desires to accept a gift of the Property;

AND WHEREAS the Donor has provided to the Municipality funds in the amount of \$300.00 to support the future maintenance of the Property in accordance with the Municipality's Public Art Policy;

NOW THIS DEED WITNESSETH as follows:

Transfer of Title and Copyright

1. The Donor represents and warrants that:
 - a) the Donor has good and complete right, title, and interest in and to the Property;
 - b) the Donor has full authority to give, transfer and assign its right, title and interest in and to the Property; and
 - c) the subject of this gift is free and clear of all encumbrances and restrictions.

2. The Donor hereby gifts, assigns and transfers all of the Donor's right, title, and interest in and to the Property, to the Municipality, for its own use absolutely, subject only to the terms of this Deed.

3. The Property includes the items and things listed on the schedule(s) attached hereto at the time this Deed is executed.
4. The Property includes all subsisting copyright, except any exceptions noted on the corresponding schedule(s).
5. The Property is deemed to be gifted and transferred as of the date indicated on the corresponding schedule(s).
6. Except as provided for in this Deed of Gift, it is understood and agreed by the parties hereto that the Municipality shall at all times retain control and actual possession of the Property.
7. The Municipality hereby accepts the absolute gift of the Property from the Donor, subject only to the terms of this Deed.

Retention of the Property

8. It is the Municipality's intention to hold the Property in perpetuity. Notwithstanding, the Municipality shall not be obligated to retain the Property indefinitely, and the Municipality may transfer or dispose of the Property in accordance with standard museum principles. Such disposal may include the transfer of some or all of the Property to another institution which, in the opinion of the Municipality, is more appropriate to house the subject Property.
9. The Municipality will take reasonable care to protect the Property while it is in the possession of the Municipality.
10. The Municipality shall not be obligated to retain the Property in its current location, and may elect to relocate it to another location which is, in the opinion of the Municipality, more suitable for the Property.
11. The Donor consents to being publicly identified as the donor of the Property.

General Terms

12. Should any provision of this Deed be void or unenforceable, such provision shall be deemed severed and omitted, and this Deed, with such provision omitted, shall remain in full force and effect.
13. This Deed is binding on the parties hereto, and their respective heirs, executors, administrators, successors and assigns.
14. This Deed constitutes the entire agreement between the parties, and all previous agreements, proposals or communication relating to the subject of this Deed are hereby superseded and of no force or effect. There are no warranties, representations, terms, conditions or collateral agreements, express or implied, other than as set out herein.

- 15. The Donor will hold harmless and indemnify the Municipality for any and all claims related to the Donor's right, title, and interest in and to the Property, including, where applicable, all subsisting copyright, and particularly, the Donor's right or authority to gift the Property to the Municipality on the terms contained herein.
- 16. The Property will be at the risk of the Donor, until the date the Property is gifted and transferred, as indicated on the corresponding schedule(s).
- 17. This Deed is governed by the laws of the Province of Nova Scotia, and any dispute hereunder shall be referred to the exclusive jurisdiction of the Supreme Court of Nova Scotia.

IN WITNESS WHEREOF the parties have executed this Deed effective as of the day and year first above written.

	)		(seal)
Witness signature	)	Downtown Halifax Business Commission	
	)	Per:	
	)	I have authority to bind the Society	

	)		(seal)
Witness signature	)	Downtown Halifax Business Commission	
	)	Per:	
	)	I have authority to bind the Society	

HALIFAX REGIONAL MUNICIPALITY

Witness signature	Mayor

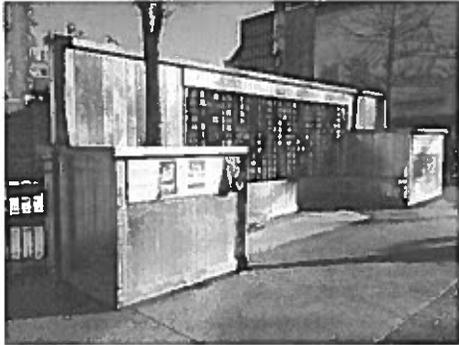
Witness signature	Municipal Clerk

SCHEDULE "A"
To a Deed of Gift

**From the Downtown Halifax Business Commission to
the Halifax Regional Municipality**

The following property is gifted to the Halifax Regional Municipality as of the _____ day of _____, 2016.

1. "Barrington Blocks", an interactive ceramic mosaic by Rory MacDonald and Catherine LeRoche, located on Barrington Street in the Halifax Regional Municipality.



Location: 1741 Barrington Street PID 40594764.

Description: The interactive ceramic mosaic consists of 360 individual ceramic block units with a different colour on each face. The blocks are installed on a series of 30 vertical metal rods, 12 blocks per rod. Each block measures 3.5"x 3.5" and can be individually rotated horizontally. Collectively the installation measures 13'x 8.63" in width and 4'x 4.88" in height.

_____)	_____
Witness signature	)	Downtown Halifax Business Commission
	)	Per:
)	
_____)	_____
Witness signature	)	Downtown Halifax Business Commission
	)	Per: