

NORTH PARK STREET ROUNDABOUTS DESIGN PLAN: ARCHAEOLOGICAL RESOURCE IMPACT ASSESSMENT

Geotechnical Monitoring

Heritage Research Permit A2013NS055



August 2013

NORTH PARK STREET ROUNDABOUTS DESIGN PLAN:
ARCHAEOLOGICAL RESOURCE IMPACT ASSESSMENT

Geotechnical Monitoring

Heritage Research Permit A2013NS055
Category C

Davis MacIntyre & Associates Limited
Project No.: 13-027.2GVR

Principal Investigator: April MacIntyre (on behalf of Courtney L. Glen)
Report Compiled by: April MacIntyre, Courtney L. Glen, Travis Crowell, and Laura A.
de Boer

Submitted to:

GENIVAR INC.
1 Spectacle Lake Drive
Dartmouth, NS B3B 1X7

-and-

Coordinator, Special Places
Communities, Culture and Heritage
1747 Summer Street
Halifax, NS B3H 3A6

Cover: TP-02 excavation, looking northeast. Doug Payton (UXO Risk Management, Gemtec) can be seen at left with a metal detector.

TABLE OF CONTENTS

LIST OF FIGURES.....	ii
LIST OF PLATES.....	ii
EXECUTIVE SUMMARY.....	iii
1.0 INTRODUCTION	1
2.0 STUDY AREA.....	1
3.0 METHODOLOGY	4
3.1 Summary of Desktop Study and Field Reconnaissance	4
3.2 Geotechnical Monitoring	5
3.2.1 The Geotechnical Test Pits	7
4.0 RESULTS AND DISCUSSION	8
5.0 RECOMMENDATIONS AND CONCLUSIONS	9
6.0 REFERENCES CITED	10
PLATES	11
APPENDIX A: HERITAGE RESEARCH PERMIT	17

LIST OF FIGURES

Figure 2.0- 1: Plan of the potential North Park Street Roundabouts (Courtesy of HRM).....	2
Figure 2.0- 2: Map of the proposed upgrades to the North Commons park area (Courtesy HRM).....	3
Figure 3.0-1: A plan showing areas predicted to contain elevated archaeological potential. Base map courtesy HRM.	5

LIST OF PLATES

Plate 1: Looking west toward TP-01.....	12
Plate 2: Partial south wall profile, TP-01.....	12
Plate 3: Looking northwest at TP-02.....	13
Plate 4: Partial north wall profile of TP-02.....	13
Plate 5: Partial south wall profile of TP-02.....	14
Plate 6: Looking east southeast toward location of TP-03.	14
Plate 7: Partial north wall profile of TP-03.....	15
Plate 8: Modern copper alloy spoon found in fill of TP-03. Pen is for scale.	15
Plate 9: Looking south toward location of TP-04.	16
Plate 10: Partial east wall profile of TP-04 showing the dumped asphalt layer.	16

EXECUTIVE SUMMARY

Davis MacIntyre & Associates was contracted by GENIVAR Inc on behalf of the Halifax Regional Municipality as part of a project for the design of roundabout conversions in the intersections of North Park / Rainnie / Cogswell / Trollope / Ahern and North Park / Cunard / Agricola in Halifax. The archaeological component of this project includes mapping and a summary of potentially significant archaeological areas and features within the study area. A reconnaissance of the study area was also conducted and a previous report has been filed.

The previous archival research and field reconnaissance has revealed potential within the study area for archaeological resources related to civilian and military activities, primarily in the 19th and 20th centuries. The North Park Street area has experienced relatively little development since the 19th century and parts of the streetscape remain close to the original 19th century streetscape. It was determined that, because the archaeological resource potential in the area cannot generally be attached to a specific spatial area, archaeological testing strategies would be inefficient and impractical. Instead, it was recommended that archaeological monitoring be conducted by a qualified archaeology firm during early ground disturbance in order to establish the presence of archaeological deposits. Such ground disturbance would include, but is not limited to, geotechnical testing, removal of utility poles and mechanical excavation.

In response to that recommendation, in July 2013, Davis MacIntyre & Associates Limited conducted monitoring of geotechnical testing in four areas within the roundabouts' proposed footprints. At that time, no significant archaeological resources were encountered in any of the four test pits, although it was evident from soil profiles, as well as earlier archaeological assessments in the immediate and nearby area, that intact archaeological resources may be present within the footprint of the proposed development. Therefore, it is recommended that, as the project proceeds, an archaeologist be retained on an on-call basis to mitigate any potential archaeological finds. It is also recommended that an archaeologist be present should any additional geotechnical testing be conducted.

It is recommended that an archaeologist be consulted during planning prior to demolition in order to implement archaeological monitoring protocols from the beginning, which will ensure that last-minute archaeological salvage will not delay the demolition and reconstruction projects.

It is also recommended that a meeting be arranged with the Culture and Heritage Development Division of the Department of Communities, Culture and Heritage in order to firmly implement on-site protocols for all phases of work, particularly those involving significant ground disturbance.

1.0 INTRODUCTION

In June 2013, Davis MacIntyre & Associates (DM&A) Ltd. was contracted by GENIVAR Inc. on behalf of the Halifax Regional Municipality as part of a project to design roundabout conversions at the intersections of North Park / Rainnie / Cogswell / Trollope / Ahern and North Park / Cunard / Agricola in Halifax. The first phase of the archaeological component of this project included mapping and a summary of potentially significant archaeological areas and features within the study area, for which a previous report was submitted in July 2013.¹ In response to recommendations following the initial assessment, Davis MacIntyre & Associates Limited was again retained to conduct monitoring of geotechnical testing within the footprints of the proposed roundabouts. Four geotechnical test pits were excavated.

This assessment was conducted under Category C (Archaeological Resource Impact Assessment) Heritage Research Permit A2013NS055 issued by the Department of Communities, Culture and Heritage. This report conforms to the standards required by the Heritage Division under the Special Places Protection Act (*R.S., c. 438, s. 1*).

2.0 STUDY AREA

North Park Street is located in the City of Halifax. This small street runs along the east side of the North Commons area and connects with Rainnie, Cogswell, Trollope and Ahern at the south end and Cunard and Agricola at the north end. The proposed design plan will create a roundabout conversion at each end of North Park Street (Figure 2.0-1). The design plan will also include upgrades to the park facilities at the North Commons (Figure 2.0-2).

¹ Davis MacIntyre & Associates Limited. July 2013.

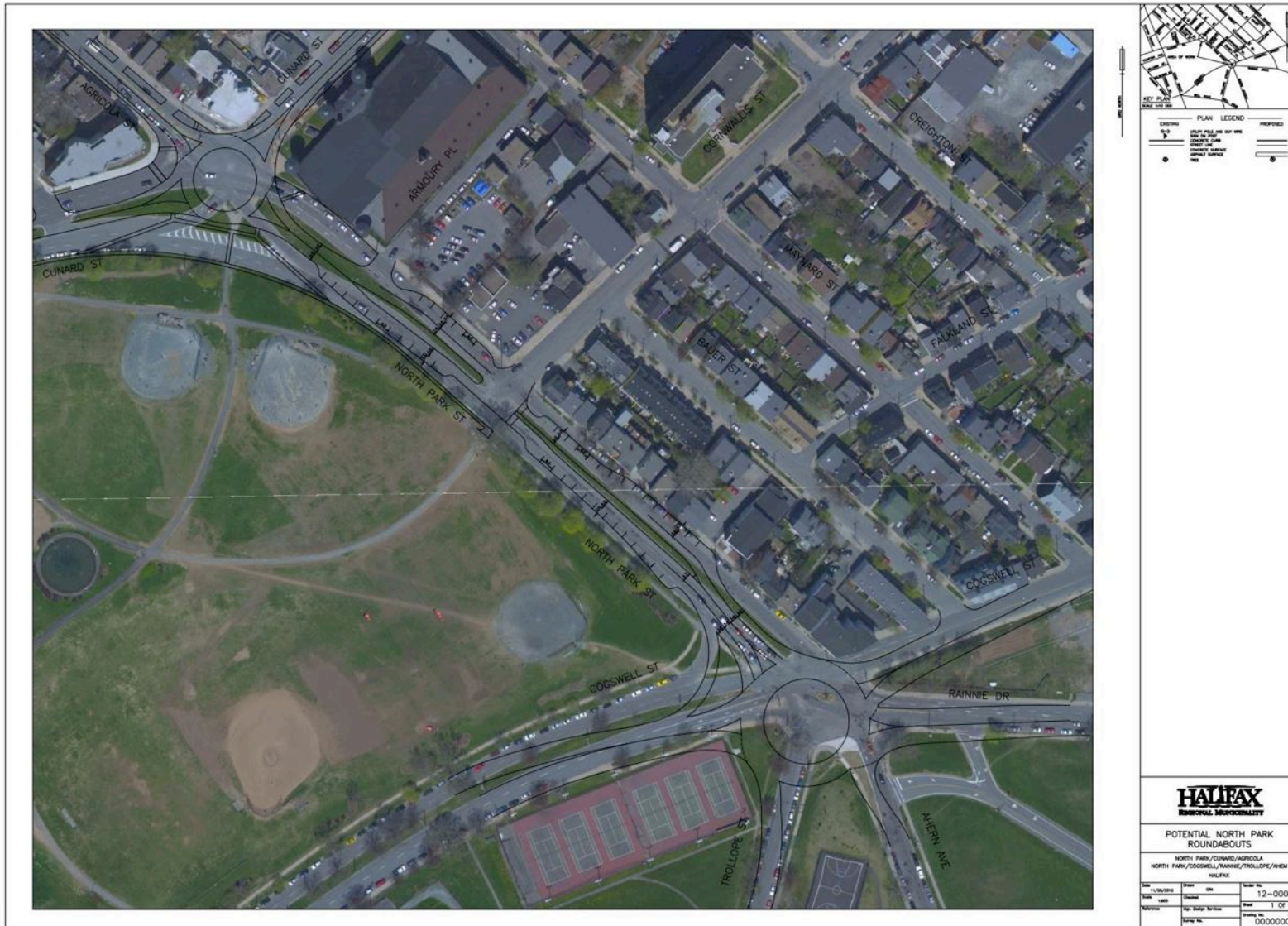


Figure 2.0- 1: Plan of the potential North Park Street Roundabouts (Courtesy of HRM).

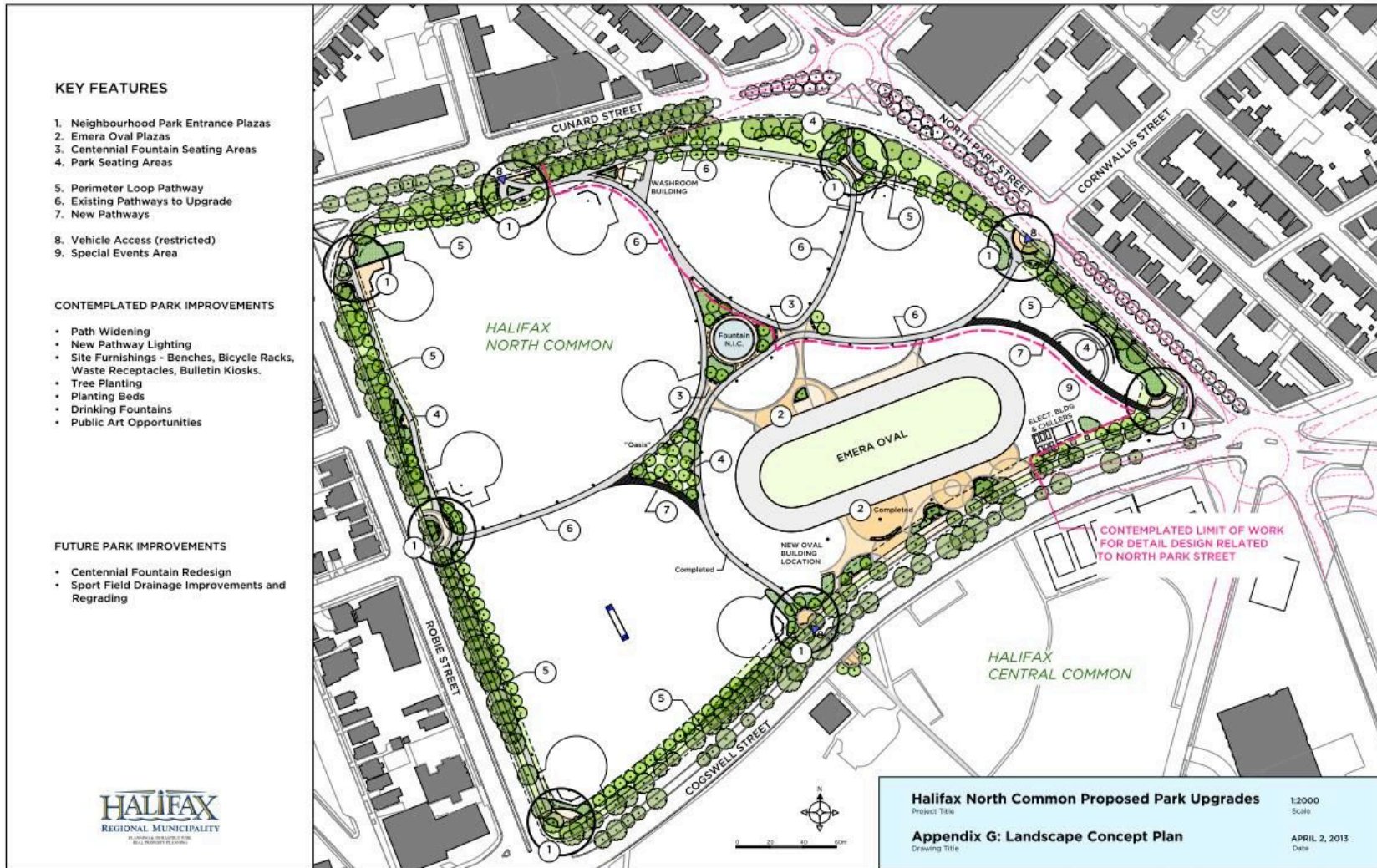


Figure 2.0- 2: Map of the proposed upgrades to the North Commons park area (Courtesy HRM).

3.0 METHODOLOGY

A historic background study was conducted by Davis MacIntyre & Associates Limited in June 2013. A detailed history of the study area was included in the initial assessment report of July 2013.² A field reconnaissance of the study area was conducted on 5 July 2013. The North Park / Rainnie / Cogswell / Ahern / Trollope intersection, the North Park / Cunard / Agricola intersection and North Park Street itself were visited.

3.1 Summary of Desktop Study and Field Reconnaissance

Based on the initial assessment, it was determined that 19th century archaeological resources related to domestic activity may exist along North Park Street and around the intersection of North Park Street / Cunard / and Agricola (Blue, Figure 3.0-1), although the greatest density of household refuse would likely have been deposited in backyards, rather than along the street itself. It was also determined that archaeological resources associated with a long-standing military presence may exist at the foot of Citadel Hill and near the intersection of North Park / Rainnie / Cogswell / Ahern / Trollope (Yellow, Figure 3.0-1) and at the northeast corner of the North Commons (Orange, Figure 3.0-1). Finally, the potential exists for buried military refuse around the Halifax Armouries building and the North Park / Cunard / Agricola intersection (Red, Figure 3.0-1).

Eighteenth through 20th century privies may exist near the present-day North Commons where the parade square was located, as well as at the proposed southern roundabout. Between Armoury Place and Cornwallis Street along North Park Street, there may also exist the remains of the late 19th to mid-20th century Park Street Presbyterian Church or other early 19th century buildings.

In 2011, repairs to the foundation of the Armouries building led archaeologist to discover four buried rifled muzzle-loaders (1860s - 1880s-era cannons) that had likely been discarded in an open trench when the Armouries was being constructed in the 1890s.³

² Davis MacIntyre & Associates Limited. July 2013:4-30.

³ Cultural Resource Management Group. March 2012.

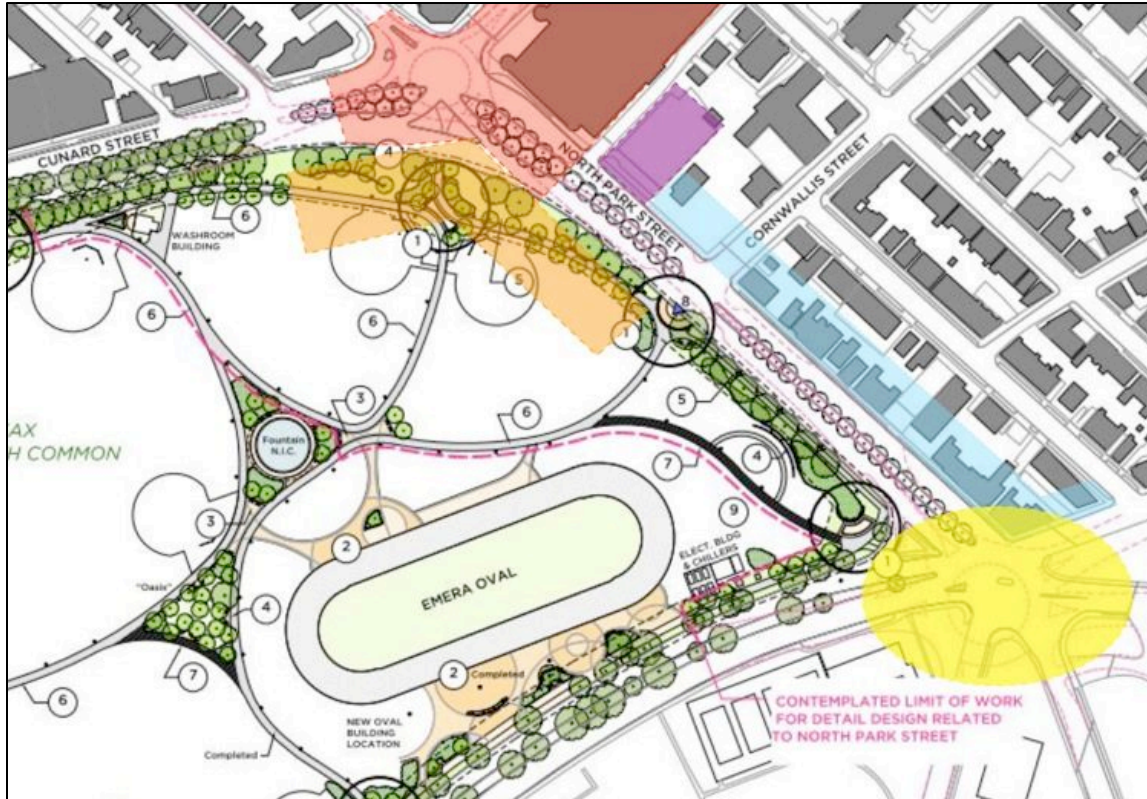


Figure 3.0-1: A plan showing areas predicted to contain elevated archaeological potential. Base map courtesy HRM.

3.2 Geotechnical Monitoring

Geotechnical testing was conducted on 30 July 2013 and was monitored by April MacIntyre. Four test pits were excavated – one on the east side of the proposed southern roundabout at the west end of the service dog park, a second on the west side of the same roundabout just outside the tennis courts, a third on the west side of the proposed northern roundabout in a grassed median and the fourth on the southeast side of the same roundabout in the grassed median in front of the Armouries (Figure 3.2-1). The test pits were approximately 1 meter in width and ranged from approximately 2.5 to 3.5 meters in length. Three of the test pits were excavated into till to a depth of between 11 and 12 feet (c. 3 to 3.5 meters) while the fourth reached bedrock at 8’6” (c. 2.5 meters). Each of the test pits was backfilled and the sod reinstated.

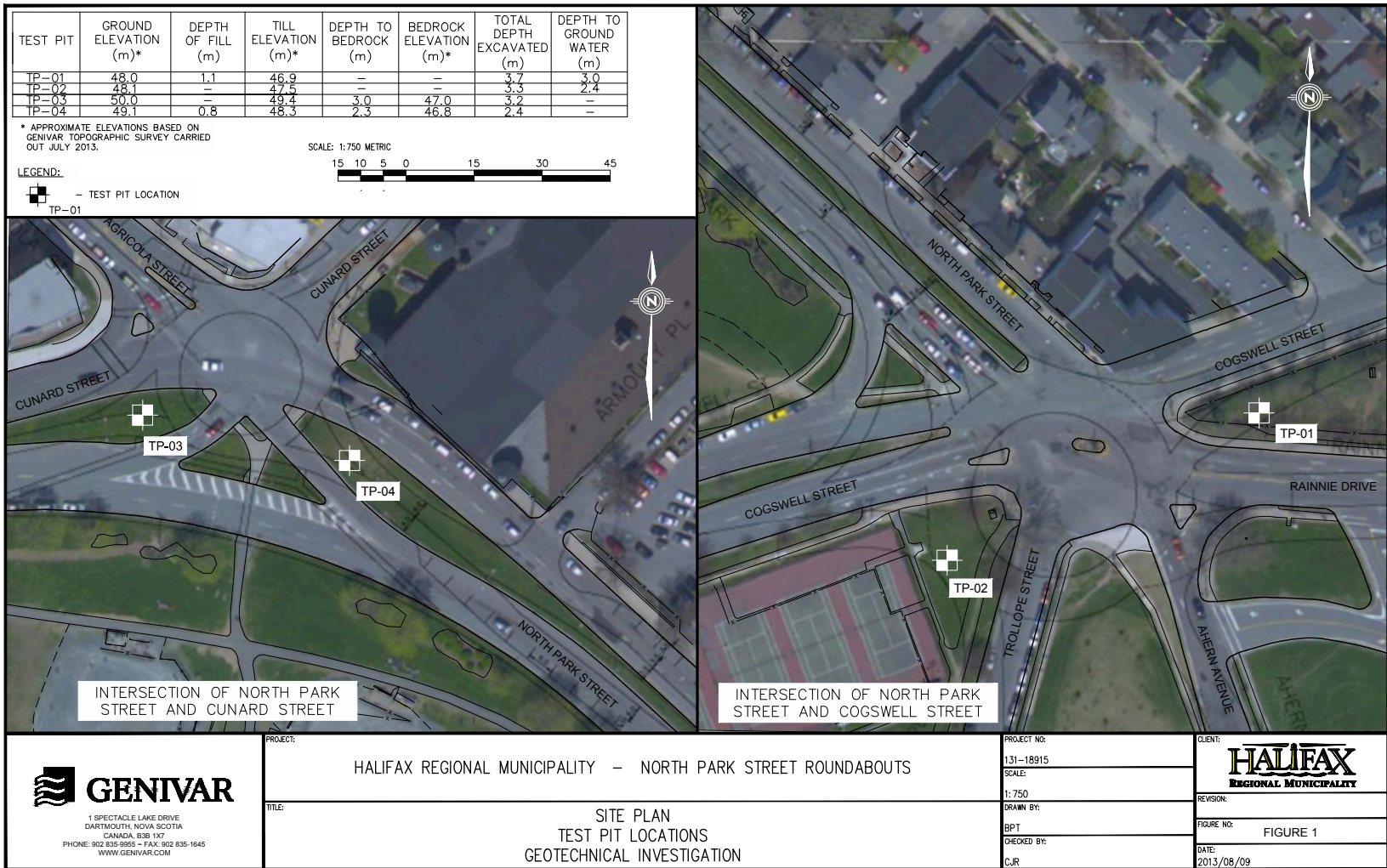


Figure 3.2-1: Plan map of the geotechnical test pits, courtesy Genivar Inc.

Based on the earlier discovery of discarded ordinance adjacent to the Armouries, as well as the long-standing military presence in this area, it was determined that the study area has a “medium to high potential”⁴ for UXOs (unexploded ordinance). As a result, a UXO risk management professional was on site to monitor excavation of the test pits as well. The test pits were excavated vertically 12 inches (30 cm) at a time, at which interval the pit was swept for UXOs using a metal detector. Although the sweep often gave positive results, discarded material, soil type/density, and rock often created interference. No UXOs or other inactive ordinance were encountered during testing.

3.2.1 The Geotechnical Test Pits

TP-01

TP-01 was located on the east side of the Cogswell / Trollope / Ahern / Rainnie / North Park Street intersection in a grassed area currently used as a public park for service dogs (Plate 1). The park is located at the northernmost corner of Citadel Hill. The material immediately beneath the sod and topsoil was comprised of ash with some clinkers (heat-fused glass, ash, metal and other materials) and brick. The ash deposit was approximately 17 cm thick and was underlain by a layer of mottled orange/brown loam fill to about 60 cm below the surface. Beneath the fill layer was grey clay and, subsequently, till (Plate 2). No cultural materials or archaeological features were encountered in the test unit, though the layer of ash and underlying fill does suggest past cultural activity of an unknown age in this area.

TP-02

TP-02 was located on the west side of the intersection of Cogswell / Trollope / Ahern / Rainnie / North Park Streets just outside the tennis courts (Frontispiece and Plate 3). The soil stratigraphy in this test pit indicated there has been previous disturbance here, likely associated with the construction and recent upgrades to the tennis courts. Immediately beneath the sod was crusher dust underlain by a mottled grey/brown loam. There was an intrusive layer of dark brown soil on the north side of the test pit (Plate 4). This was subsequently underlain by a mottle orange/brown loam with an intrusive deposit of light brown/tan clay loam near the south wall (Plate 5). Beneath this, at approximately 33 cm below the surface, was till. A piece of flat glass and a terra cotta potsherd was found in the backdirt from the upper lots as well as a rim sherd of 20th century white vitrified earthenware with blue banding. These artifacts were not considered to be archaeologically significant and, therefore, were not collected.

⁴ Doug Payton, pers. comm.

TP-03

TP-03 was excavated in the grassed median on Cunard Street at the intersection with North Park / Agricola Streets (Plate 6). The soil here was comprised of medium brown topsoil with gravel directly beneath the sod. Underlying that was a layer of dark brown silty clay loam with rock. Till was reached at approximately 42 cm below the surface (Plate 7). A modern copper alloy spoon was found in the topsoil (Plate 8) as well as a sherd of non-diagnostic vitrified earthenware. In the silty clay loam layer, a sherd of 20th century green transfer printed white refined earthenware and an ironstone body sherd were encountered. None of these materials were considered to be archaeological significant and point to 20th century discard or disturbance. No archaeological materials were collected from TP-03, although the spoon was photographed on site and returned to the test pit.

TP-04

TP-04 was located in the median on North Park Street immediately in front of the Armouries (Plate 9). The stratigraphy here points to substantial disturbance throughout the 20th century. The sod was underlain by topsoil and gravel over top of a layer of broken asphalt (Plate 10). As there was no crusher dust or clear stone beneath the asphalt, it is assumed that the asphalt is intrusive. Beneath the asphalt is a layer of fill extending to approximately 50 cm below the surface. Cut granite blocks possibly associated with doorsteps or walls along North Park were encountered in the fill. Below this was till extending to 2.5 meters below the surface, at which point bedrock was reached.

4.0 RESULTS AND DISCUSSION

Four geotechnical test pits were excavated within the proposed footprints of the roundabouts. While no significant archaeological resources were encountered during test pit excavation, soils indicated that there may be intact archaeological features within the proposed project footprint, particularly near the base of Citadel Hill. While there has been significant disturbance as a result of road construction, landscaping, and recreational infrastructure there may remain localized areas of undisturbed archaeological deposits. The generalized area around the Commons has been used and occupied since at least the 18th century and the long-standing civilian and military presence in this area may have left a significant mark on the archaeological record.

5.0 RECOMMENDATIONS AND CONCLUSIONS

The archival research and field reconnaissance has revealed potential within the study area for archaeological resources related to civilian and military activities, primarily in the 19th and 20th centuries. The North Park Street area has experienced relatively little development since the 19th century and parts of the streetscape remain close to the original 19th century streetscape.

Because the archaeological resource potential in the area cannot generally be attached to a specific spatial area, archaeological testing strategies would be inefficient and impractical. Monitoring of geotechnical testing within the footprints of both proposed roundabouts indicates the potential remains for archaeological deposits within the project area. Although till was generally reached within the uppermost 50 cm of the geotechnical test pits, it is unfortunately not possible to estimate average depths of archaeological deposits due to possible infilling as well as the variable depths of footings and latrines. Therefore, as the project proceeds, it is recommended that an archaeologist be retained on an on-call basis to mitigate any potential archaeological finds. **Should any archaeological resources be encountered during ground disturbance, it is required that all activity cease and the Coordinator of Special Places (902-424-6475) be contacted immediately regarding a suitable method of mitigation.** Should any further geotechnical testing be conducted, it is recommended that an archaeologist be present to monitor that testing.

Depending on the scale of the ground disturbance activity, monitoring can usually be conducted by only a few archaeologists, with the team expanding as needed to mitigate archaeological material when it is encountered. When heavy equipment encounters archaeological resources, a complete halt in on-site machinery is not usually called for. Instead, other less sensitive areas can be worked by machinery while an archaeological team works to mitigate the encountered resources. Archaeological monitoring is recommended only for the duration of ground disturbance activities.

It is recommended that an archaeologist be consulted during planning prior to demolition in order to implement archaeological monitoring protocols from the beginning, which will ensure that last-minute archaeological salvage will not delay the demolition and reconstruction projects.

It is also recommended that a meeting be arranged with the Culture and Heritage Development Division of the Department of Communities, Culture and Heritage in order to firmly implement on-site protocols for all phases of work, particularly those involving significant ground disturbance.

Finally, in the event that development plans change so that areas not investigated as part of this assessment should be impacted, it is recommended that those areas be evaluated by a qualified archaeologist.

6.0 REFERENCES CITED

Cultural Resource Management Group Limited. 2012. Halifax Armoury Restoration, Archaeological Monitoring, Halifax Regional Municipality. Final Report. HRP A2011NS23. MS on file: Stantec and Nova Scotia Department of Communities, Culture and Heritage.

Davis MacIntyre & Associates Limited. July 2013. North Park Street Roundabouts Design Plan: Archaeological Resource Impact Assessment. HRP A2013NS055. MS on file: Genivar Inc., Halifax Regional Municipality, and Nova Scotia Department of Communities, Culture and Heritage.

Payton, Doug (Gemtec, UXO Risk Management), personal communication. 30 July 2013.

PLATES



Plate 1: Looking west toward TP-01.



Plate 2: Partial south wall profile, TP-01.



Plate 3: Looking northwest at TP-02.



Plate 4: Partial north wall profile of TP-02.



Plate 5: Partial south wall profile of TP-02.

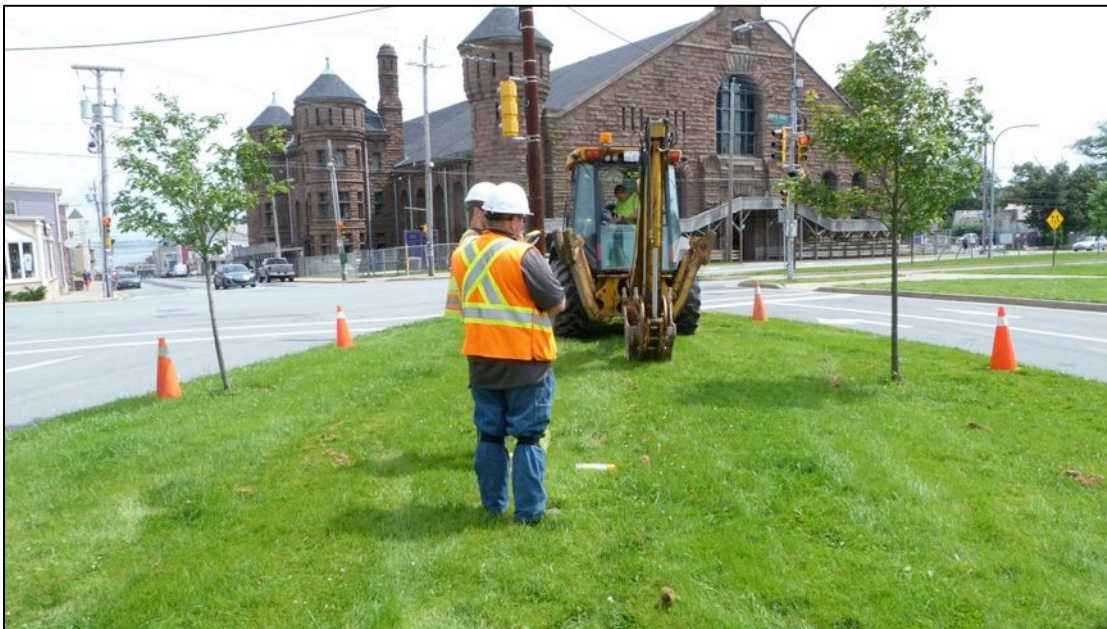


Plate 6: Looking east southeast toward location of TP-03.



Plate 7: Partial north wall profile of TP-03.



Plate 8: Modern copper alloy spoon found in fill of TP-03. Pen is for scale.



Plate 9: Looking south toward location of TP-04.



Plate 10: Partial east wall profile of TP-04 showing the dumped asphalt layer.

APPENDIX A: HERITAGE RESEARCH PERMIT



Heritage Research Permit (Archaeology)

Office Use Only
Permit Number:

Special Places Protection Act 1989

(Original becomes Permit when approved by
Communities, Culture and Heritage)

A2013NS055

Greyed out fields will be made publically available. Please choose your project name accordingly

Surname	Glen	First Name	Courtney
Project Name	North Park Street Roundabouts		
Name of Organization	Davis MacIntyre & Associates Limited		
Representing (if applicable)	GENIVAR INC.		
Permit Start Date	3 July 2013	Permit End Date	31 August 2013
General Location:	North Park Street, Halifax, Nova Scotia.		
<p>Specific Location: <i>(cite Borden numbers and UTM designations where appropriate and as described separately in accordance with the attached Project Description. Please refer to the appropriate Archaeological Heritage Research Permit Guidelines for the appropriate Project Description format)</i></p> <p>20 T 4944193 m N 453613 m E</p>			
<p>Permit Category: Please choose one</p> <p><input type="checkbox"/> Category A – Archaeological Reconnaissance</p> <p><input type="checkbox"/> Category B – Archaeological Research</p> <p><input checked="" type="checkbox"/> Category C – Archaeological Resource Impact Assessment</p> <p><input checked="" type="checkbox"/> I certify that I am familiar with the provisions of the <i>Special Places Protection Act</i> of Nova Scotia and that I have read, understand and will abide by the terms and conditions listed in the Heritage Research Permit Guidelines for the above noted category.</p>			
Signature of applicant	<i>Anita Ordine</i> for Courtney Glen		Date 19 June 2013
Approved by Executive Director	<i>Steve Geads</i>		Date <i>June 28, 2013</i>