

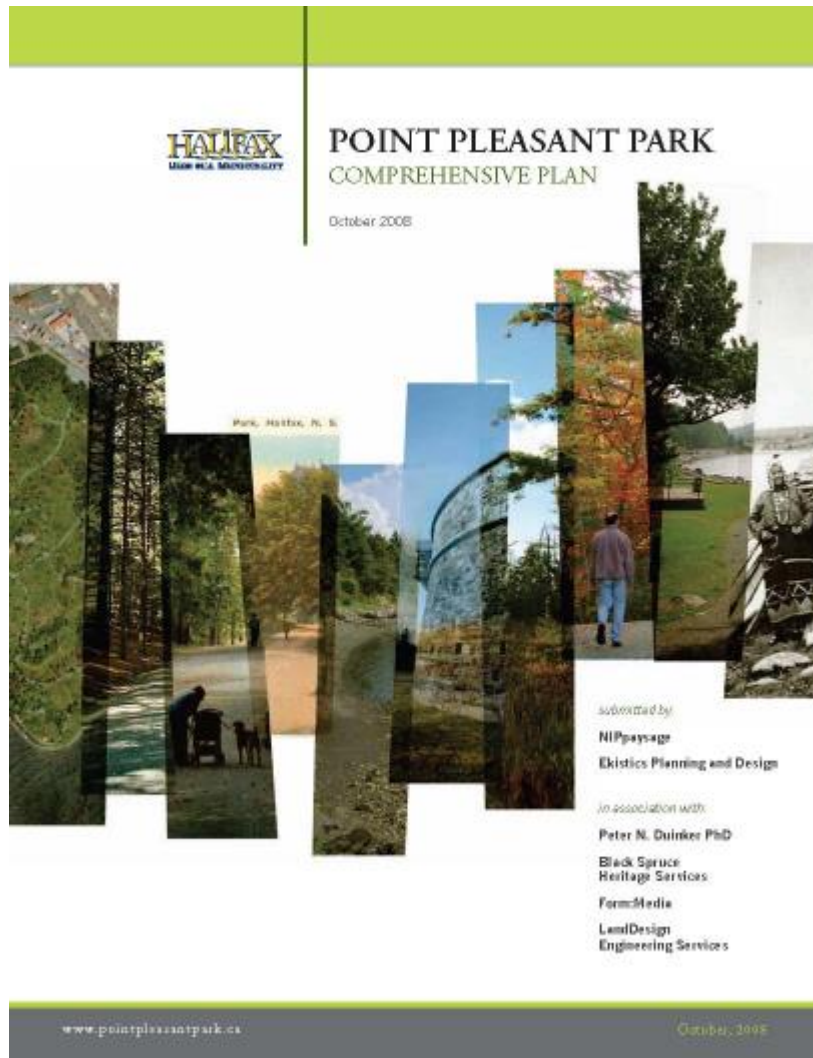
HALIFAX

Point Pleasant Park: Park Fortifications

Overview for the PPP Advisory Committee

June 20, 2019

Point Pleasant Park



Point Pleasant Park Comprehensive Plan

Completed in 2008

NIPpaysages
Ekistics Planning & Design

In association with

- LandDesign Engineering Services
- Peter N. Duinker PhD
- Black Spruce Heritage Services
- Form:Media

Point Pleasant Park Comprehensive Plan

- Guiding Principles
- Management Frameworks for forest, shoreline and cultural assets
- Park Development Plans

Point Pleasant Park

2010-11 Park Infrastructure Projects



Infrastructure Stimulus Fund Initiative

Total Project Value
\$2,000,000

Federal, Provincial and
HRM joint funding

Upgrades to parking lots,
roadways, and fortification
stabilization

Point Pleasant Park



2010-2011 ISF Projects

Fortification stabilization:

- Northwest Arm Battery
- Cambridge Battery
- Fort Ogilvie

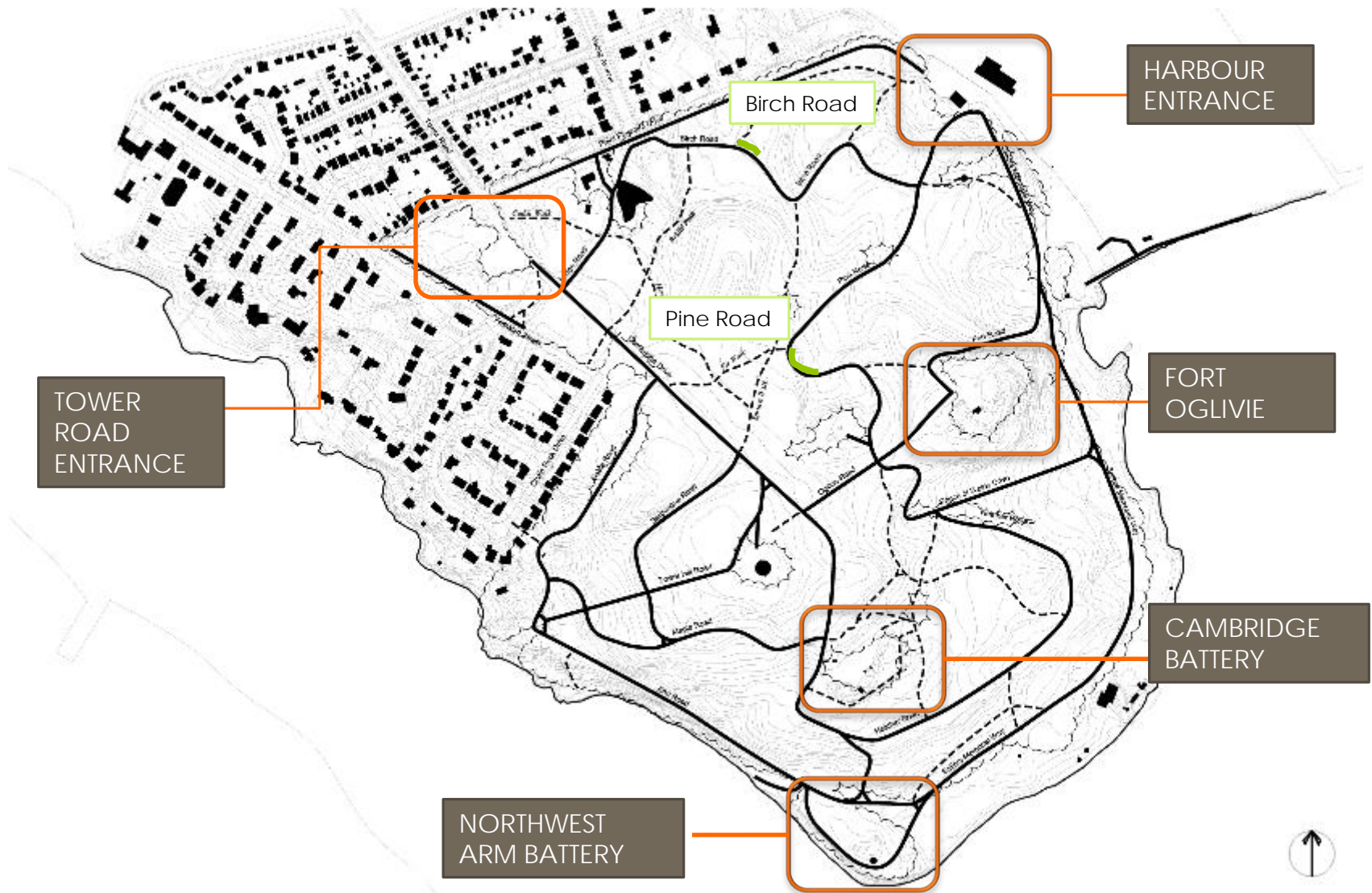
Parking Lot Upgrades:

- Tower Road Entrance
- Harbour Entrance

Road and pathways:

- Pine Road and Birch Road stonewall reconstruction

Point Pleasant Park



Smooth-Bore Armament: 1749-1860's



Smooth-bores at York Redoubt



Smooth-bore at Citadel Hill

Northwest Arm Battery



The Northwest Arm Battery as depicted in a military plan of 1778.

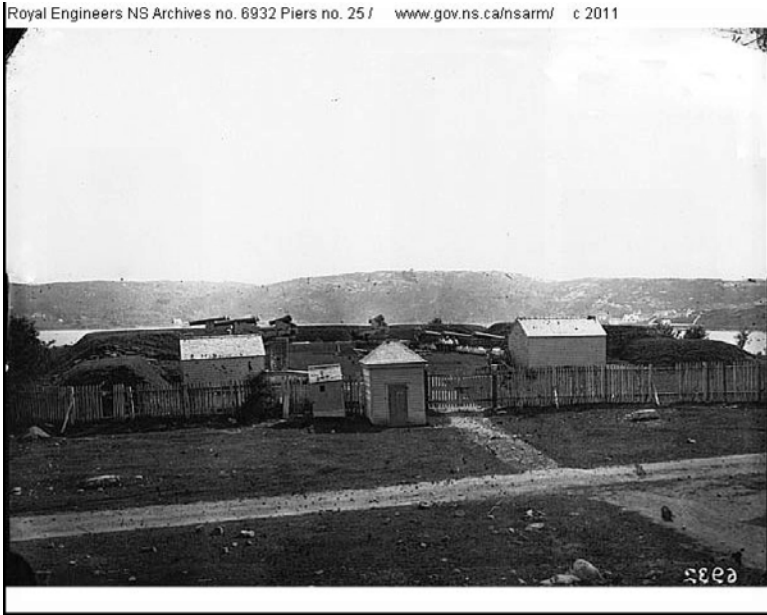


Northwest Arm Battery in 1858 with external barracks

First constructed in 1762; obsolete by 1860's with the construction of Cambridge Battery

Northwest Arm Battery

Royal Engineers NS Archives no. 6932 Piers no. 25 / www.gov.ns.ca/nsarm/ c 2011



Northwest Arm Battery in 1870



Rifled Muzzle Loader: 1861 - 1885

"The introduction of rifled ordnance in 1859 was followed almost immediately by a period of radical reconstruction of fortifications, characterized by extensive use of masonry and concrete substructures and easements."



RML at Citadel Hill

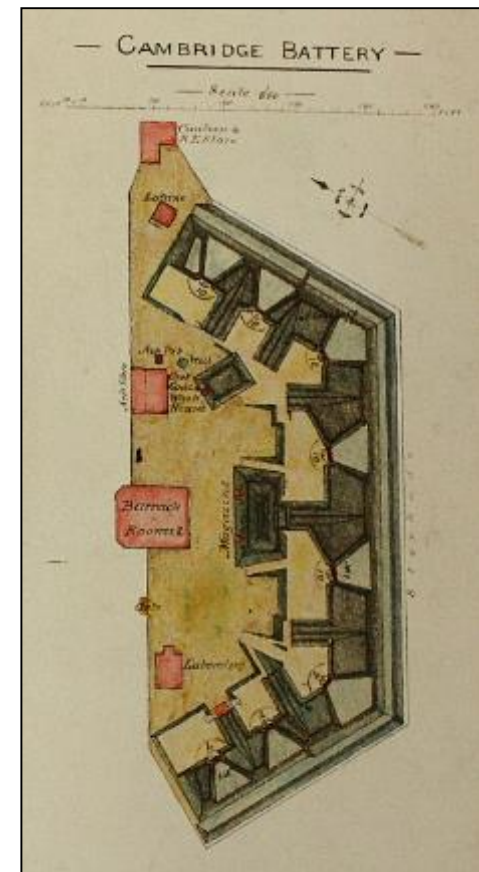


RML's at York Redoubt

Cambridge Battery

Original Construction 1862-1868
Six years to build
Total Cost 8,120 British Pounds

Remodeled in 1897-1904
Two new concrete gun emplacements
built for 6" BL's (Mark VII)



Cambridge Battery



Breech-Loaders & Quick-firing Breech Loaders: 1886 - 1906

Notman Studio NSARM accession no. 1983-310 number 54 www.gov.ns.ca/nsarm/ c 2011



Fort Ogilvie, early 1900's
"Gun Crew, 59th Company, Royal Canadian
Artillery, Fort Ogilvie, Major English."



Fort Ogilvie Mark VII; November, 2010

Cambridge Battery



Remodeled in 1897-1904

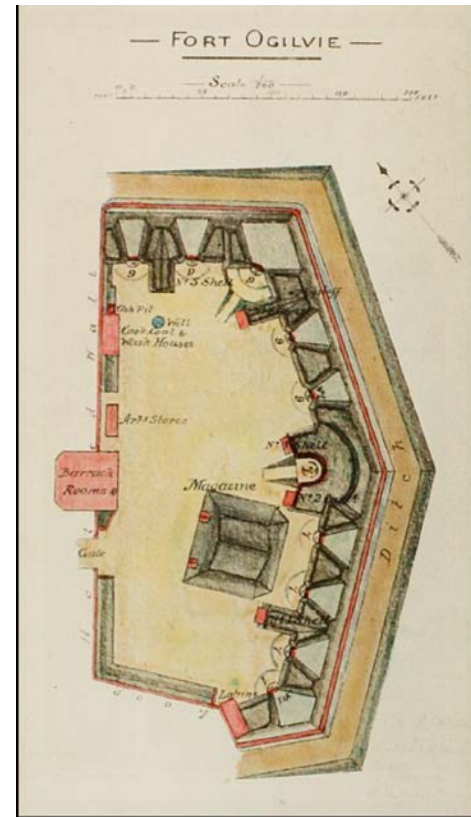
Two new concrete gun emplacements built for breech-loaders

Fort Ogilvie



Fort Ogilvie c. 1800. Detail from "Plans of Several of the Batteries at Point Pleasant n.d. 1800," NSARM REO v.1.

1793 – first construction
1862-1872 remodeled for RML's



Fort Ogilvie c.1878
Redesigned in response to the
American Civil War.
NSARM Photographs Army 1771-1772.

1890's – remodeled for Breech-loaders

1890's to WWII – submarine observation station

1946 – declared obsolete

1960's – buildings demolished, rear wall entombed

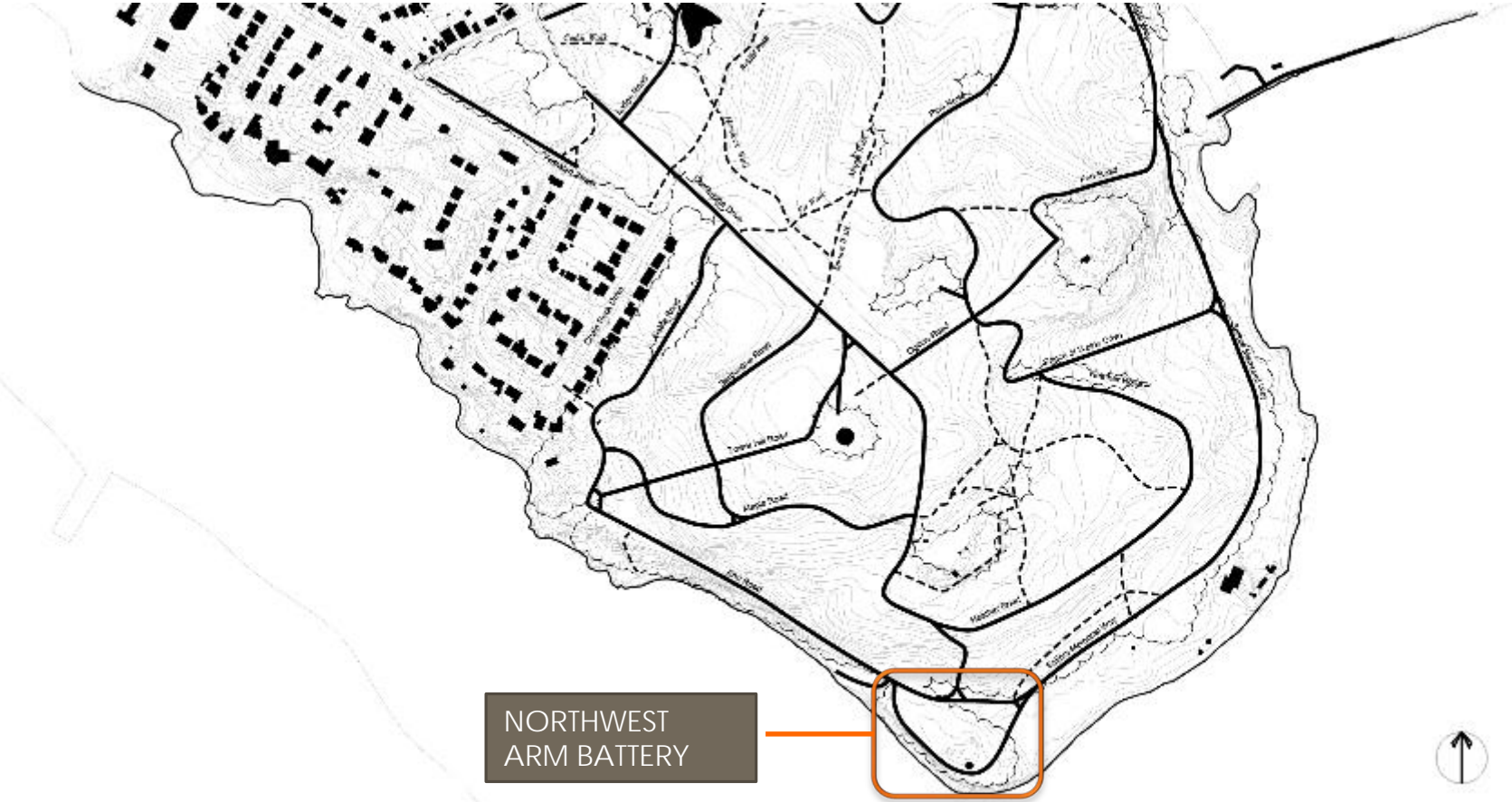


Fort Ogilvie



Fort Ogilvie as represented in a 1929 oblique aerial photograph

Northwest Arm Battery



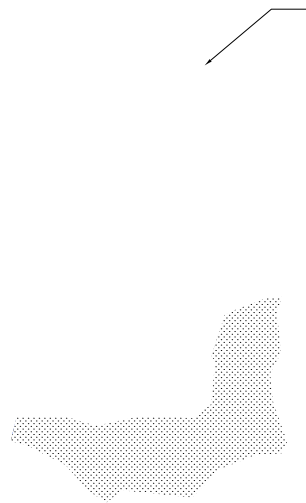
NORTHWEST
ARM BATTERY




Northwest Arm Battery



Northwest Arm Battery



 AREA TO BE GRUBBED
AND SODDED

 TEMPORARY
FENCING

Northwest Arm Battery



Northwest Arm Battery



Northwest Arm Battery



Cambridge Battery



Cambridge Battery

SCOPE OF WORK

- AREA 1 CASEMATE 1 - ENTOMBEMENT
- AREA 2 CASEMATE 2 - ENTOMBEMENT
- AREA 3 MASONRY WALLS ENTOMBEMENT
- AREA 4 CASEMATE 3 AND REAR WALL - MASONRY AND CONCRETE REPAIR
- AREA 5 CASEMATES 4 & 5 - MASONRY AND CONCRETE REPAIR
- AREA 6 FRONT WALL - ENTOMBEMENT AND MASONRY & CONCRETE REPAIR
- AREA 7 TELEGRAPH POST - MASONRY AND CONCRETE REPAIR; ENTOMBEMENT
- AREA 8 SOUTH GUN EMPLACEMENT - CONCRETE REPAIR; EARTHWORK INFILL
- AREA 9 NORTH GUN EMPLACEMENT - CONCRETE REPAIR; EARTHWORK INFILL

MAPLE ROAD

INSTALL SNOW FENCING AROUND SITE PERIMETER APPROX. 410 Lm.

PROVIDE ACCESS GATE DURING CONSTRUCTION

REPORT MASONRY LEFT EXPOSED AFTER ENTOMBEMENT

Survey Reference:
 Servot, Durbin, McGrade & MacDonald
 Plan No. 74-3562
 February 15, 2010

- Elevations are based on Geocoid Datum and are rounded to NODM (0.040).
- Fall line was derived out between December 28, 2009 and January 27, 2010.
- Contour Interval = 0.25m.

LEGEND

- Survey Control Point
- Wooded Tree with Trunk Diameter
- Shaded Tree with Trunk Diameter
- Object will Be Cut Broken
- Top of Stone
- Bottom of Block
- Existing Path

ISSUED FOR TENDER		SEPT. 20, 2010
No.	Revision	Date
1		

THE DRAWING MUST NOT BE SCALE.
 THE ORIGINAL CONTRACT DOCUMENTS SHALL BE REFERRED TO FOR ALL DIMENSIONS AND CONDITIONS. THIS DRAWING IS SUBJECT TO THE CONTRACT DOCUMENTS.
 CLAIMS WILL BE VALID ONLY IF THEY ARE IN ACCORDANCE WITH THE CONTRACT DOCUMENTS.
 ALL RIGHTS ARE RESERVED BY THE ENGINEER.

POINT PLEASANT PARK
 FORTIFICATIONS STABILIZATION
 Project Title
CAMBRIDGE BATTERY
 SITE PLAN
 Drawing Title

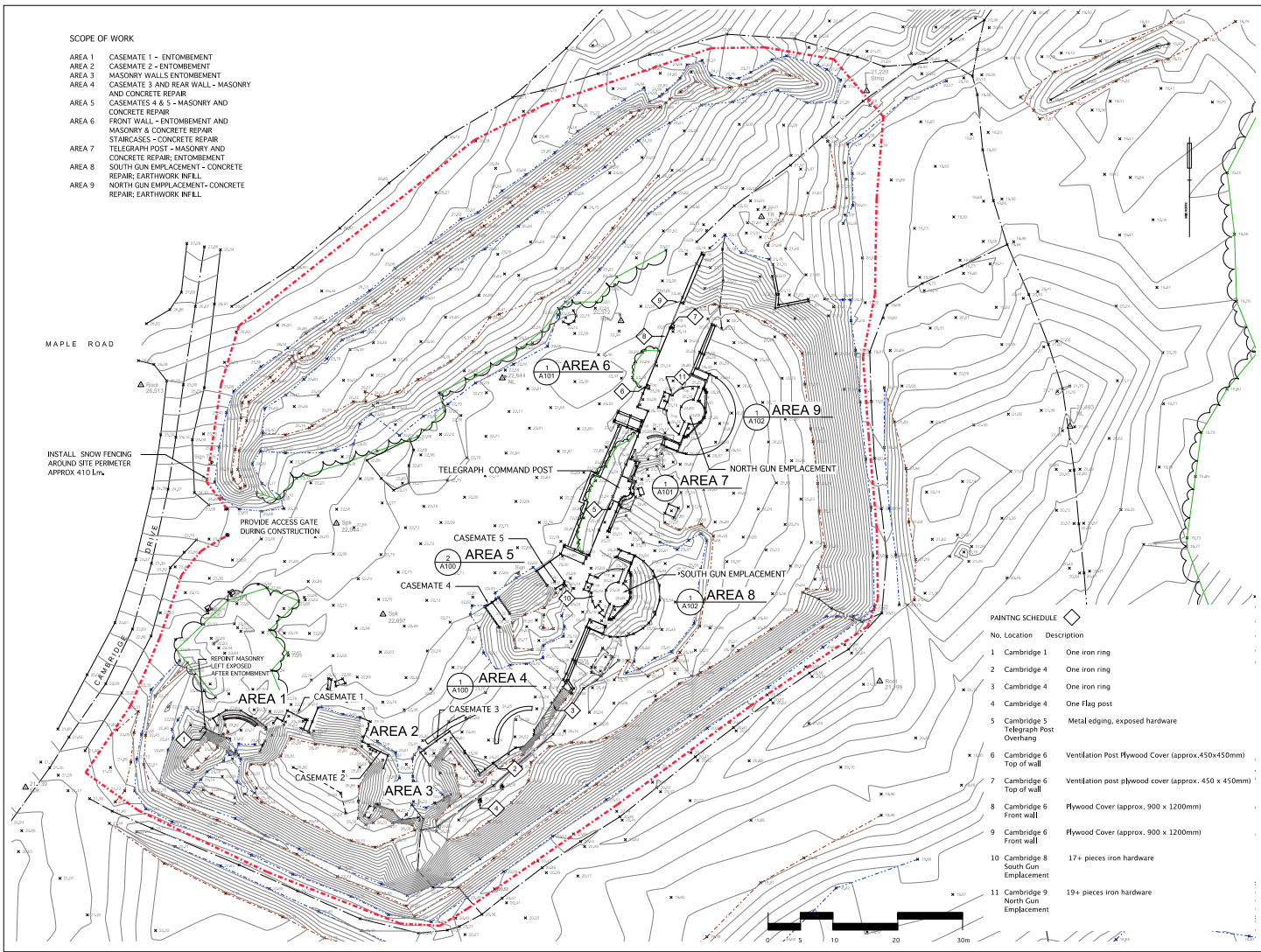


Drawn	CRK	Approved	PB
Scale	1:250	Date	9/20/10
Job	10 094	Drawing	L100

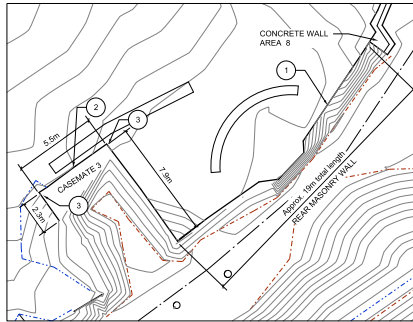
print: 9/20/10

PAINING SCHEDULE

No.	Location	Description
1	Cambridge 1	One iron ring
2	Cambridge 4	One iron ring
3	Cambridge 4	One iron ring
4	Cambridge 4	One flag post
5	Cambridge 5	Metal edging, exposed hardware
6	Cambridge 6	Ventilation Post Plywood Cover (approx. 450x450mm)
7	Cambridge 6	Top of wall
8	Cambridge 6	Ventilation post plywood cover (approx. 450 x 450mm)
9	Cambridge 6	Front wall
10	Cambridge 6	Plywood Cover (approx. 900 x 1200mm)
11	Cambridge 6	Front wall
12	Cambridge 8	17+ pieces iron hardware
13	Cambridge 8	South Gun Emplacement
14	Cambridge 9	19+ pieces iron hardware
15	Cambridge 9	North Gun Emplacement



Cambridge Battery



REAR WALL



CASEMATE 3 - South Corner

NOTES:

1. REAR WALL: REPOINT ALL MASONRY JOINTS AS PER SPECIFICATIONS. WALL DIMENSIONS APPROX. 15.0m LENGTH BY MAX. 1.5m HEIGHT
2. REBRICK ARCHWAY IN CASEMATE 3 USING REPLACEMENT BRICKS FROM HRM STOCKPILE OR APPROVED EQUIVALENT. NEW BRICKS TO MATCH ORIGINALS IN COLOUR AND TEXTURE.
3. REPLACE MISSING CORNER STONES ON CASEMATE 3. REPOINT ALL EXPOSED MASONRY JOINTS AS PER SPECIFICATIONS.

1 AREA 4 - CASEMATE 3 & REAR WALL
Scale 1:125



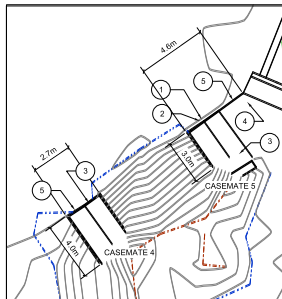
CASEMATE 3 - Front Elevation



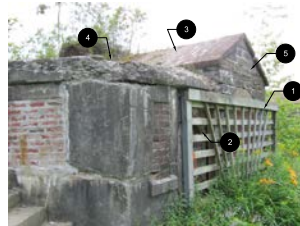
CASEMATE 3 - Side Elevation



CASEMATE 3 - North Corner



1 AREA 5 - CASEMATES 4 & 5
Scale 1:125

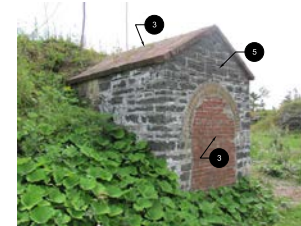


CASEMATE 5



CASEMATE 5

CASEMATE 4



CASEMATE 4

NOTES:

1. REMOVE WOODEN LATTICE FOR REUSE BY HRM. STORE IN PARK AS DIRECTED.
2. REPLACE WOODEN SUPPORTS BEHIND LATTICE WITH 4 X 4 PRESSURE TREATED TIMBER. SEAL WOOD WITH THOMPSON WATER SEAL OR EQUIVALENT AS PER MANUFACTURER'S INSTRUCTIONS.
3. REPAIR ALL DEGRADED BRICK WORK ON ROOF AND BRICKED DOORWAYS. USE REPLACEMENT BRICKS FROM HRM STOCKPILE OR APPROVED EQUIVALENT. NEW BRICKS TO MATCH ORIGINALS IN COLOUR AND TEXTURE.
4. REFORM EDGES OF CONCRETE ROOF SLAB.
5. REPOINT STONE MASONRY WALLS AS REQUIRED FOR STABILITY AND WATER PENETRATION.

1 ISSUED FOR TENDER | SEPT. 20, 2010
No. Revision | Date

THIS DRAWING IS NOT TO BE SCALED.
THE OFFICIAL CONTRACT DOCUMENTS, SPECIFICATIONS, DRAWINGS AND LISTINGS TO BE USED FOR THE PROJECT SHALL BE THE PROJECT DRAWINGS.
ANY CHANGES TO THE PROJECT DRAWINGS SHALL BE MADE BY THE PROJECT MANAGER.

POINT PLEASANT PARK
FORTIFICATIONS STABILIZATION

Project Title

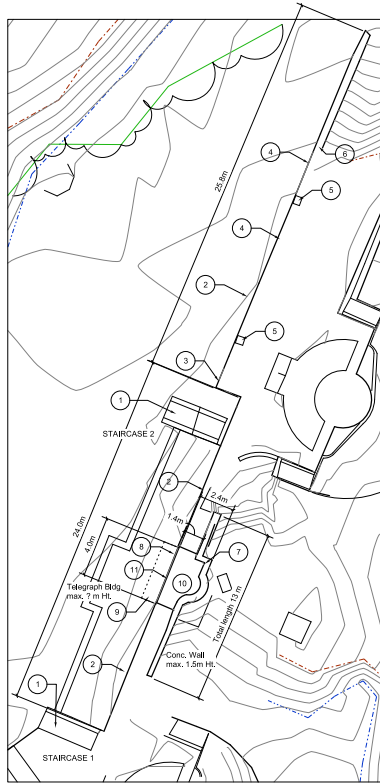
CAMBRIDGE BATTERY
MASONRY & CONCRETE REPAIR
AREAS 4 & 5

Drawing Title

HALIFAX
REGIONAL MUNICIPALITY
INFRASTRUCTURE AND ASSET MANAGEMENT
REAL PROPERTY PLANNING

Drawn	CHKR	Approved	PB
Scale	AS NOTED	Date	9/20/10
Job	10 094	Drawing	A100 Rev.

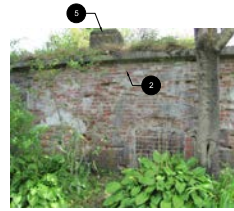
printed: 9/20/10



1 AREA 6 & 7 CONCRETE AND MASONRY REPAIRS
A101
Scale 1:125

AREA 6 - FRONT WALL AND CONCRETE STAIRCASES

1. CONCRETE STAIRCASES. REFORM EDGES OF STEPS WHERE VOIDS ARE GREATER THAN A 50mm LOSS TO EDGES.
2. REPAIR TOP FOUR (4) COURSES OF BRICKS ALONG FRONT WALL TO STABILIZE. THIS AREA WILL BE LEFT EXPOSED AFTER ENTOMBEMENT.
3. REFORM MISSING PORTIONS OF CONCRETE OVERHANG TO ORIGINAL, UNIFORM PROFILE.
4. REMOVE PLYWOOD ON TWO (2) WALL OPENINGS AND REPLACE WITH NEW MARINE GRADE PLYWOOD. INSTALL USING A MASONRY MORTAR TO SEAL EDGES. PAINT AS PER SPECIFICATIONS.
5. INSTALL COVERS OVER TWO (2) VENTILATION POSTS ON TOP OF WALL USING MARINE GRADE PLYWOOD. PAINT AS PER SPECIFICATIONS.
6. CUT IRON BOLT FLUSH WITH TOP OF WALL.



FRONT WALL - TOP EDGE TO REMAIN EXPOSED



FRONT WALL - CONCRETE CAP TO BE REFORMED



FRONT WALL - NORTH END

STAIRCASE 2



FRONT OF TELEGRAPH POST

STAIRCASE 1

AREA 7 - TELEGRAPH COMMAND POST

NOTE: REPAIRS OF WALL TO BE COMPLETED BEFORE ENTOMBEMENT

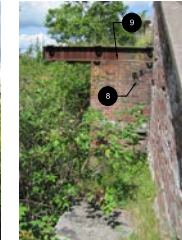
7. REPAIR ALL CONCRETE TO STABILIZE AS PER SPECIFICATIONS
8. REPAIR BRICKWORK TO STABILIZE.
9. IRON OVERHANG - ALL METAL EDGES TO BE REPAIRED AND PAINTED. STABILIZE WITH SMALL WELDED SCARF REPAIRS. CLEAN AND PAINT AS PER SPECIFICATIONS.
10. ALL EXPOSED IRON HARDWARE TO BE PAINTED
11. WOODEN DOORFRAME - REMOVE OUTER 1 X 4 FROM BACK TIMBER SUPPORTS. REPLACE SECTIONS OF ROTTED FRAME WITH NEW 4 X 4 PRESSURE TREATED TIMBER. CLEAN ALL WOOD SURFACES BY BRUSHING. APPLY THOMPSON WATER SEAL OR EQUIVALENT AS PER MANUFACTURER'S INSTRUCTIONS.



TELEGRAPH POST - NORTH SIDE BACK



TELEGRAPH POST - NORTH SIDE FRONT



TELEGRAPH POST OVERHANG



TELEGRAPH POST - FRONT OF WALL



TELEGRAPH POST - BACK OF WALL

1	ISSUED FOR TENDER	SEPT. 20, 2010
No.	Revision	Date

THIS DRAWING MUST NOT BE SCALED.
THE ORIGINAL CONTRACTOR SHALL VERIFY ALL DIMENSIONS, DISTANCES AND LEVELS PRIOR TO COMMENCING WORK. ALL DIMENSIONS AND DISTANCES SHALL BE VERIFIED BY THE CONTRACTOR.
WALL, DOOR & WINDOW FRAMES TO BE REPAIRED ON THE EXTERIOR. SHALL NOT BE COVERED UP BY ANY ENTOMBMENT STRUCTURE WALL.

POINT PLEASANT PARK
FORTIFICATIONS STABILIZATION

Project Title:

CAMBRIDGE BATTERY
MASONRY & CONCRETE REPAIR
AREAS 6 & 7

Drawing Title:

HALIFAX
REGIONAL MANAGEMENT
INFRASTRUCTURE AND ASSET MANAGEMENT
REAL PROPERTY PLANNING

Drawn	CKR	Approved	PG
Scale	AS NOTED	Date	8/20/10
NO	10 094	Quantity	A101 Rev.

Cambridge Battery

NORTH GUN EMPLACEMENT:

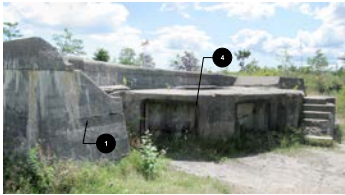


REAR WALL



STAIR

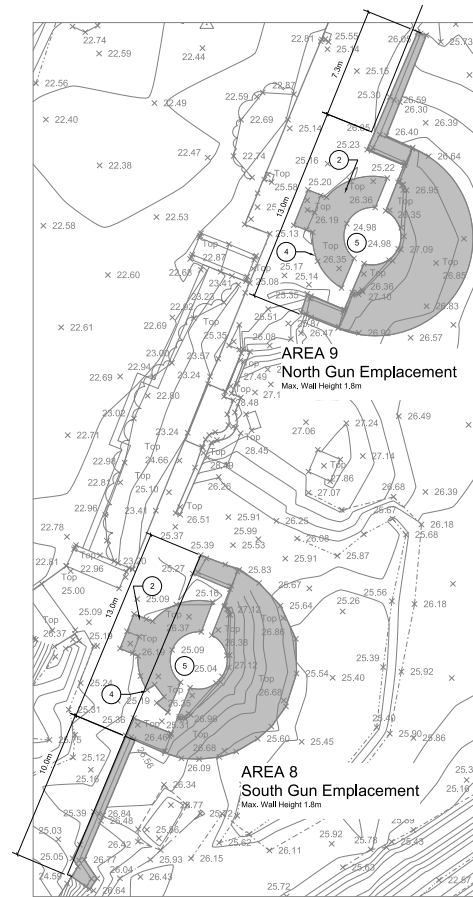
SOUTH GUN EMPLACEMENT:



REAR WALL

AREAS 8 & 9: CONCRETE GUN EMPLACEMENTS

1. REPAIR ALL CRACKS BY INJECTIONS AS PER SPECIFICATIONS
2. REFORM FRONT PLATFORM EDGE AND STEPS TO MATCH ORIGINAL PROFILE.
3. PATCH VOIDS AS PER SPECIFICATIONS
4. CLEAN AND PAINT ALL IRON HARDWARE AS PER SPECIFICATIONS
5. DO NOT REPAIR CONCRETE AREAS TO BE COVERED BY FILL. IN INNER CIRCULAR GUN PITS. FINISH GRADES 450mm BELOW TOP OF PLATFORM.



1 AREA 8 & 9 CONCRETE GUN EMPLACEMENTS
AT01 Scale 1:125

1 ISSUED FOR TENDER | SEPT. 20, 2010
No. Revision Date

THIS DRAWING MUST NOT BE SCALED.
THE SHOWN CONTRACTOR SHALL BE RESPONSIBLE FOR ALL DIMENSIONS, DETAILS AND CONDITIONS TO BE PROVIDED IN ACCORDANCE WITH THE PROJECT SPECIFICATIONS.

POINT PLEASANT PARK
FORTIFICATIONS STABILIZATION

Project Title
CAMBRIDGE BATTERY
MASONRY & CONCRETE REPAIR
AREAS 8 & 9

Drawing Title
HALIFAX
CORPORAL INFRASTRUCTURE
INFRASTRUCTURE AND ASSET MANAGEMENT
REAL PROPERTY PLANNING

Drawn	CKR	Approved	PB
Scale	AS NOTED	Date	9/20/10
Job	10 094	Drawn	A102 Rev.

Cambridge Battery



Cambridge Battery - 1958



Cambridge Battery



Cambridge Battery



Cambridge Battery



Cambridge Battery



Cambridge Battery



Cambridge Battery



Cambridge Battery



Cambridge Battery



Cambridge Battery



Cambridge Battery



Cambridge Battery



Cambridge Battery



Cambridge Battery



Cambridge Battery



Cambridge Battery



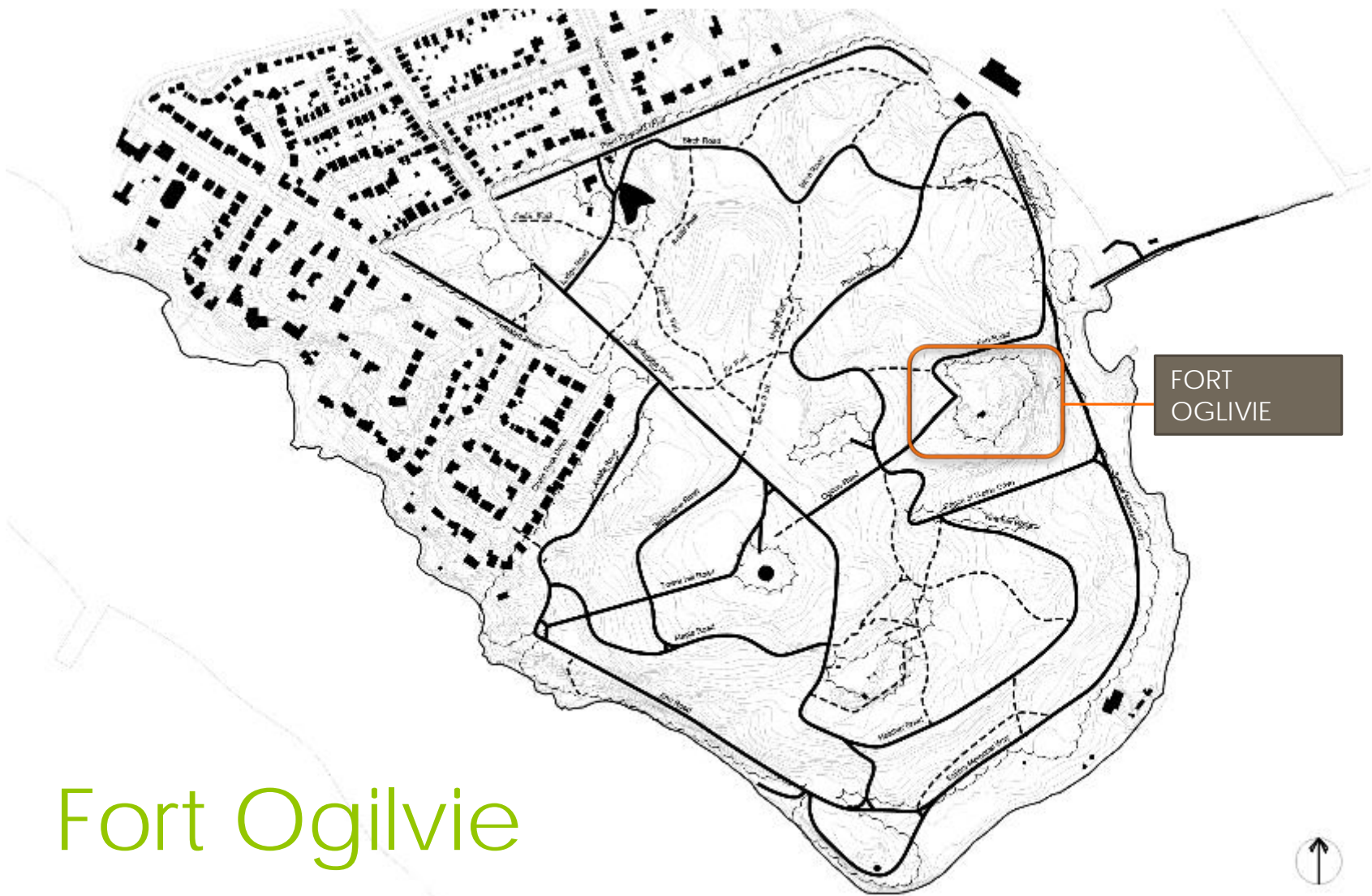
Cambridge Battery



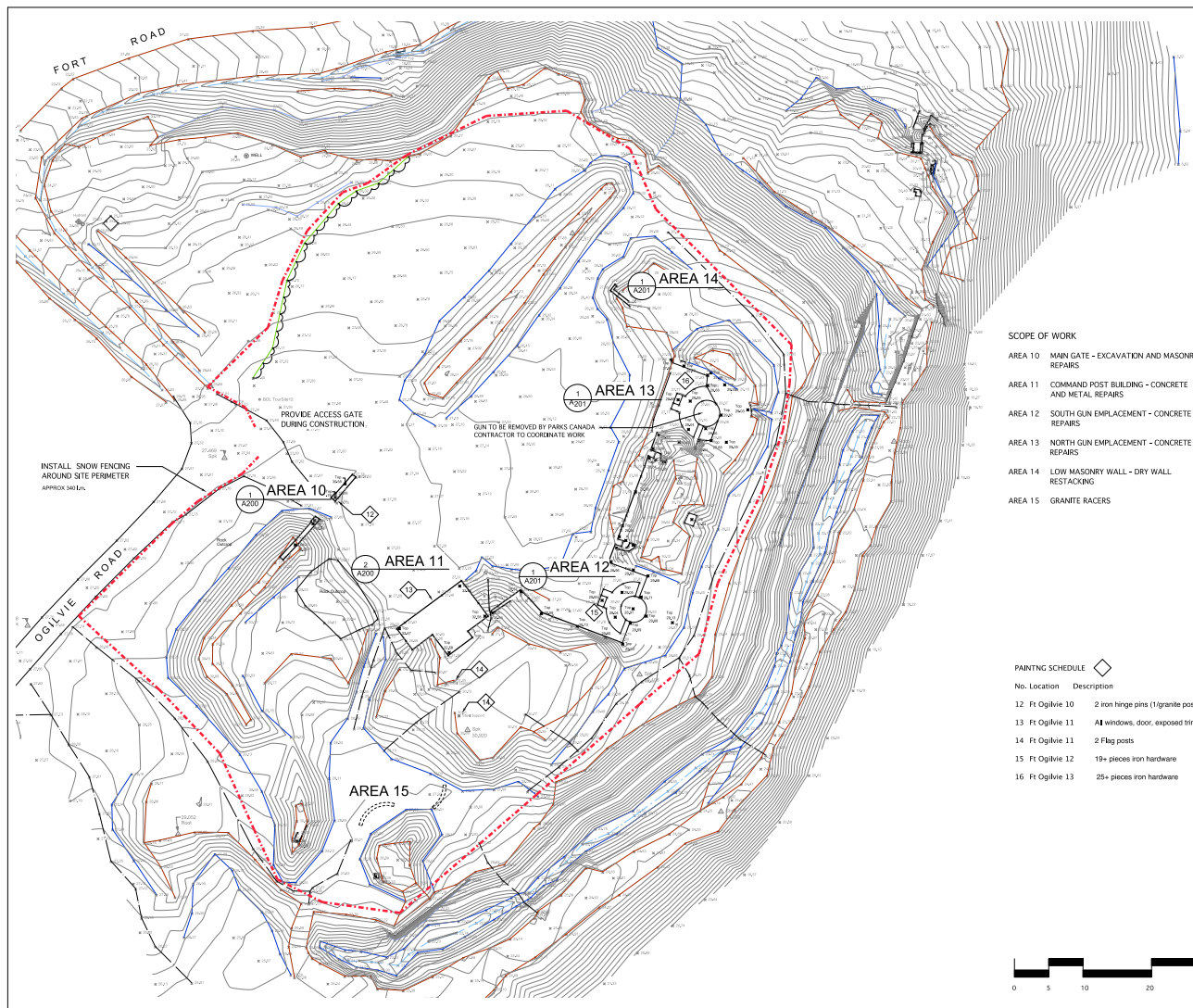
Cambridge Battery



Fort Ogilvie



Fort Ogilvie



Survey Reference:
 Survey: Boundary, McKenzie & MacDonald
 Plan No. 71-0304
 February 10, 2010

- Elevations are based on Geodetic Datum and are referred to NSICM 6046.
- Horizontal = 6.300m.
- Field survey was carried out between December 21, 2009 and January 27, 2010.
- Contour Interval = 0.25m.

- LEGEND**
- Survey Contour Line
 - Hardwood Tree with Trunk Diameter
 - Softwood Tree with Trunk Diameter
 - Clearcut with Broad Boundary
 - Top of Slope
 - Bottom of Slope
 - Grading Path

- SCOPE OF WORK**
- AREA 10 MAIN GATE - EXCAVATION AND MASONRY REPAIRS
 - AREA 11 COMMAND POST BUILDING - CONCRETE AND METAL REPAIRS
 - AREA 12 SOUTH GUN EMPLACEMENT - CONCRETE REPAIRS
 - AREA 13 NORTH GUN EMPLACEMENT - CONCRETE REPAIRS
 - AREA 14 LOW MASONRY WALL - DRY WALL RESTACKING
 - AREA 15 GRANITE RACERS

PAINTING SCHEDULE

No.	Location	Description
12	Ft Ogilvie 10	2 iron hinge pins (1 granite post)
13	Ft Ogilvie 11	All windows, door, exposed trim
14	Ft Ogilvie 11	2 Flag posts
15	Ft Ogilvie 12	19+ pieces iron hardware
16	Ft Ogilvie 13	25+ pieces iron hardware

1	ISSUED FOR TENDERS	SEPT 20, 2010
No.	Revision	Date

THE DRAWING MUST NOT BE SCALED.
 THE DRAWING CONTRACTOR SHALL BE RESPONSIBLE FOR OBTAINING ALL NECESSARY PERMITS AND APPROVALS FROM THE APPROPRIATE AUTHORITIES.
 WORK SHALL BE COMPLETED WITHIN THE SPECIFIED TIME FRAME FROM THE DATED DATE.

**POINT PLEASANT PARK
 FORTIFICATIONS STABILIZATION**

Project Title

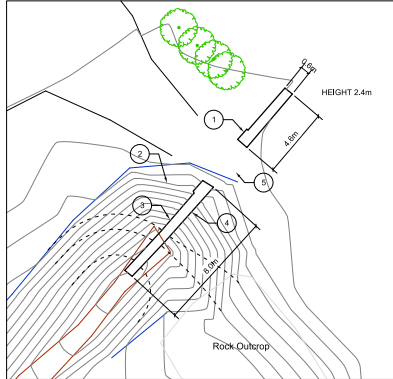
**FORT OGLIVIE
 SITE PLAN**

Drawing Title



Drawn	PKR	Approved	PB
Scale	1:250	Date	8/20/10
Job	10 094	Drawing	L200





1 AREA 10 - MAIN GATE
Scale 1:125



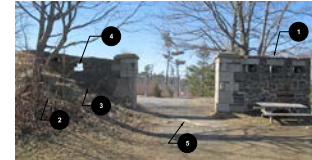
2 AREA 11 - COMMAND POST
Scale 1:125

MAIN GATE:

1. NE Gate Post & Wall. Re-point masonry as per Specifications. Remove all unstable parging. Re-point brick cap. Replace missing bricks.
2. SW Gate Post & Wall. Excavate bermed soil on each side to expose wall by hand as directed on site. Archeology monitoring required during excavation. Screen out rubble and stockpile at HRM storage facility in park.
3. SW WALL. Stability of walls to be assessed by Engineer when exposed. Re-point masonry or re-entomb as directed by Engineer.
4. Rebuild loopholes in southwest wall to match existing loopholes in northwest wall. Cut new stone to match originals if required.
5. Reset granite gate racers to be level and flush with surrounding grades. Excavation to be monitored by Archeologist.



MAIN GATE - FRONT ELEVATION



MAIN GATE - REAR ELEVATION



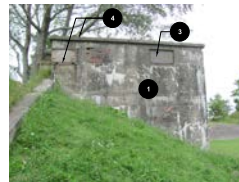
GRANITE GATE RACERS



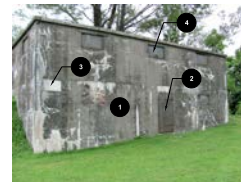
SW WALL LOOPHOLES



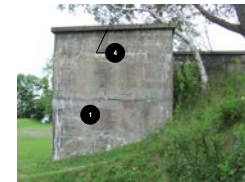
NE WALL DETAIL



COMMAND POST - NORTH SIDE ELEVATION



COMMAND POST - FRONT ELEVATION
WINDOW COVERING SIZE: 600 x 1100mm to 1000 x 1300mm



COMMAND POST - SOUTH SIDE ELEVATION

COMMAND POST BUILDING:

1. REPAIR CONCRETE AND PAVING ON ALL FOUR WALLS AS PER SPECIFICATIONS. WORK INCLUDES PATCHING AND CRACK INJECTION. ROOF?
2. METAL DOOR. REMOVE BY CUTTING SPOT WELDS. REPAIR METAL AS PER SPECIFICATIONS. DOOR TO BE RE-INSTALLED AS PER ORIGINAL AND SPOT-WELDED BACK IN PLACE. ENSURE OPENING IS SECURED DURING REPAIRS.
3. FABRICATE AND INSTALL TWO WINDOW COVERINGS TO REPLACE PLYWOOD USING 1/4" (6mm) IRON SHEET METAL.
4. CLEAN AND PAINT ALL IRON HARDWARE. WINDOW COVERS AND FRAMES. AND DOOR AS PER SPECIFICATIONS. REPAIR MORTAR SEALS AROUND WINDOWS TO MAKE SECURE WITH CONCRETE MORTAR MIX.



COMMAND POST - BACK ELEVATION



METAL DOOR - 1200 x 2400 mm

1	ISSUED FOR TENDER	SEPT. 20, 2010
No.	Revision	Date

THIS DRAWING MUST NOT BE SCALED.
THE GENERAL CONTRACTOR SHALL VERIFY ALL DIMENSIONS ON SITE AND OBTAIN THE NECESSARY PERMITS FROM THE APPROPRIATE AGENCIES.
WORK SHALL BE MONITORED TO ASSURE ACCORDANCE WITH DRAWINGS. ITEMS NOT TO BE COVERED UP PRIOR TO THE COMPLETION OF WORK.

**POINT PLEASANT PARK
FORTIFICATIONS STABILIZATION**

Project Title:

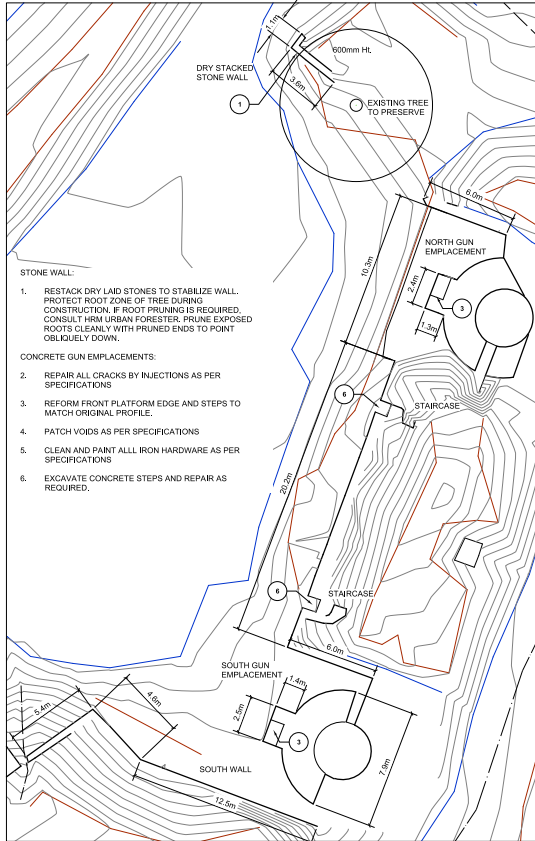
**FORT OGILVIE
MASONRY & CONCRETE REPAIR
AREAS 10 & 11**

Drawing Title:

**HALIFAX
NATIONAL HISTORICAL SOCIETY**

INFRASTRUCTURE AND ASSET MANAGEMENT
REAL PROPERTY PLANNING

Drawn	CKR	Approved	PB
Scale	AS NOTED	Date	9/20/10
Job	10 094	Drawing	A200 Rev.



1 AREA 12 & 13 GUN EMPLACEMENTS
A201 AREA 14 STONE WALL
Scale 1:125



DRY STACKED STONE WALL



NORTH STAIRCASE



SOUTH STAIRCASE



NORTH GUN EMPLACEMENT AND CENTER WALL



NORTH GUN EMPLACEMENT - GUN AND STAND TO BE REMOVED BY OTHERS



NORTH GUN EMPLACEMENT



SOUTH GUN EMPLACEMENT



SOUTH WALL

1	ISSUED FOR TENDER	SEPT. 20, 2010
No.	Revision	Date

THIS DRAWING MUST NOT BE SCALED.
THE ORIGINAL CONTRACTOR SHALL OBTAIN ALL NECESSARY PERMITS AND UTILITIES PRIOR TO COMMENCING WORK. ANY CHANGES TO THE ORIGINAL CONTRACT SHALL BE REFERENCED BACK TO THE ORIGINAL CONTRACT.
VARIATIONS TO THE ORIGINAL CONTRACT SHALL BE REFERENCED TO THE ORIGINAL CONTRACT.

POINT PLEASANT PARK
FORTIFICATIONS STABILIZATION
Project Title
FORT OGILVIE
MASONRY & CONCRETE REPAIR
AREAS 12 TO 14
Drawing Title



Drawn	OCR	Approved	PB
Scale	AS NOTED	Date	9/20/10
Job No.	10 094	Drawing	A201 Rev.

Fort Ogilvie



Fort Ogilvie



Fort Ogilvie





Fort Ogilvie











Fort Ogilvie



Fort Ogilvie



Fort Ogilvie



Fort Ogilvie



Fort Ogilvie



Fort Ogilvie



Fort Ogilvie



Fort Ogilvie



Fort Ogilvie



Fort Ogilvie



Fort Ogilvie



Pine & Birch Road



Pine Road Stone Wall



Pine Road



Birch Road Stone Wall & Culvert



Birch Road





Thank you

HALIFAX