Yvon Desloges

Structural History of Fort George

History and Archaeology
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4 List of Buildings
5 Abstract
6 Introduction
8 The Construction of Fort George, 1796-1811
29 Fort George and its Complements
36 Fort George During the War of 1812-14
45 The New Fort George, 1814-28
54 Fort George During the Years 1828-1934
57 Conclusion
59 Appendix A. Construction estimate for blacksmith's shop and coal shed.
  B. Wood-Yard.
61 C. Construction Estimate for Ordnance Shed.
62 D. Construction Estimate for Centre Blockhouse.
64 E. Construction Estimate for First Officers' Kitchen.
65 F. Construction Estimate for Bakehouse.
66 G. Construction Estimate for Powder Magazine.
68 H. Construction Estimate for Two Blockhouses.
70 I. Construction Estimate for Temporary Hospital.
71 J. Construction Estimate for Hospital and Kitchen.
73 K. Construction Estimate for Octagonal Blockhouse.
74 L. Construction Estimate for Officers' Quarters.
76 M. Construction Estimate for Officers' Kitchens.
78 N. Construction Estimate for Flagstaff.
79 O. Construction Estimate for Palisade.
81 P. Construction Estimate for Fire Engine Shed.
82 Q. Construction Estimate for Well.
83 R. Survey of Stores.
89 S. Sources of Illustrations.
90 Notes
98 Bibliography
LIST OF BUILDINGS

Centre Blockhouse
Officers' Kitchen
Bakery
Powder Magazine
The Two Soldiers' Blockhouses
Soldiers' Kitchen
Temporary Hospital
Hospital and Kitchen
Octagonal Blockhouse
Officers' Kitchen
Flagstaff
Palisade and Ditch
Fire Engine Shed
Well
ABSTRACT

Constructed by the British army between 1796 and 1800, Fort George was never considered a fortification but rather a regional depot for the advanced western posts. Only on the eve of the War of 1812 was the size of the defense perimeter halved to make the fort strategically more sound. Nevertheless the fort fell to the Americans on May 27, 1813. After the war the British made a few tentative efforts at reconstruction. The war had taught them that Fort George had not been situated as well as it might have been, as it did not dominate the mouth of the Niagara River. Nevertheless, the garrison was maintained until 1824, by which date the barracks were in total ruins. The fort was finally abandoned in 1828.

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INTRODUCTION

No historical research, regardless of how intensive it may be, can be definitive. This is no less true for historical research on military architecture, especially in the case of Fort George. Before proceeding with the analysis of our documentation, let us consider a few of the iconographic and documentary difficulties that were encountered.

The plans which support this research are very few in number. There are only three or four construction plans of buildings (the powder magazine, the officers' quarters and kitchens, and the centre blockhouse). This was a distinct disadvantage. And there are only three general plans showing the arrangement of buildings within the fort (1796-1811), including contradictory sets of plans, such as those dated 1799. The 1810 plan suggests several theories which are interesting but which are not supported by documentation.

Plans for the second fort (1814-28) are even more rare than those of the first fort. In fact, there are only two sets, and they raise numerous questions: the 1814 plan shows certain changes to the perimeter of the fortification but does not solve the problem of when these changes were made, and the Durnford plan of 1823 indicates that barracks and a powder magazine were located inside the fort, while according to the documentation there was also at least a guardhouse. There are a few etchings of Fort George, and these are extremely useful.

The collected documentation does allow us to fully retrace the architectural evolution of the first fort. Most of the construction and repair estimates for the buildings are available. However, it is difficult to know whether or not a building was constructed inside the second fort. There is a lack of precision in the historical documentation. To say that a building would be constructed at Fort George did not necessarily mean that it would be constructed within the fort's enclosure, because "Fort George" was a generic expression applying also to Navy Hall, Butler's Barracks, the Royal Engineers complex, the Indian "department" and even to Fort Mississauga.

This study consists of five chapters. The first two deal with the period from 1796 until 1811. In them the construction of each building, including when possible the materials, dimensions, frame, arrangement, and furnishings is related. It should be noted that this is not a discussion of the choice of the fort's site, nor of the construction date, but rather a study of the structure of each building. The second chapter also includes miscellaneous topics such as the regiments of the garrison, nature of the terrain, rations, armament and so on.

The third chapter deals with the war of 1812. The changes made by the British and the Americans at Fort George during that period are related. This chapter deals above all with the British changes, because
the American sources could not be consulted. The armament and the garrison are also mentioned.

Chapter four consists of two parts. The first deals with the reconstruction of the fort, from 1814-17, including an analysis of a few estimates showing the new role played by Fort George after the war. It is also possible to perceive developments in construction methods, pertaining to the materials used. The second part concerns the period during which Fort George was abandoned (1818-28), when the uselessness of the fort had become obvious. Fort George in 1828 was no more than a military camp in ruins.

Chapter five retraces the physical development of the fort from 1829 to 1934. This chapter analyses the various stages of repair, which during this period consisted only of repairs to the powder magazine, the only original building of what is presently Fort George.
Date of Construction

The Anglo-American rivalry over posts in the west raised several political problems. In 1783 the Americans demanded that Fort Niagara, an important post in the fur trade and highly coveted by the Americans, be handed over to them. In 1789, the British were thinking of permanently fortifying the plateau behind Navy Hall, to ward off a possible American attack on Fort Niagara.¹

In 1795 the British decided to construct a blockhouse, a storehouse, an ordnance storehouse and a powder magazine, as a result of their decision to abandon Fort Niagara. The blockhouse would contain 50 men; the storehouse would have a surface area of approximately 3,000 square feet and the ordnance storehouse approximately 2,400 square feet; these buildings would be used to lodge a part of Fort Niagara's garrison, which would guard the transferred equipment and provisions. Thus Fort George came into being. It was originally just a few scattered buildings and not a fort in any generic sense, which explained its rather irregular form and the fact that it was poorly planned.²

The land on which the fortification was to be constructed was considered to be a military reserve. It is unlikely that work started before the end of May, 1796, because part of this reserve behind Navy Hall was leased to Peter Russell, whose lease terminated on May 7, 1796.³ The construction materials had been on order since November 1795. Unfortunately it was impossible to determine how much of the work would be done by civilian labour, as this would depend on wages and the number of soldiers available. Nevertheless, it was certain that the labourers would consist of military personnel.⁴ The name for the combined constructions was chosen in 1796: in order to clearly distinguish between the military post and the surrounding town, these buildings were to be called Fort George.⁵

The Constructed Buildings

The Centre Blockhouse

History. This building, like the others constructed in 1796, was supposed to be a temporary structure.⁶ Work on it had not
started by March 1796, but by the end of June artillery provisions were already being stored. The blockhouse was apparently finished by September. The Government must have wanted to make changes as early as November, because an estimate was submitted for the construction of brick partitions between the soldiers' dormitory and the officers' quarters, using the surplus bricks from the powder magazine.

In September 1798 there was a need for two additional kitchens for troops in the blockhouse. The estimate was approved on September 20, 1798 and in October 1799 an inspection report mentioned that the fireplaces and back walls of the barracks' chimneys had to be repaired. Apparently these repairs were not made because the same recommendation was made again in October 1801, along with one for stabilization of the arches of the upper floor fireplaces by means of metal plates. A survey of the barracks dated September 25, 1800 indicates that one room of the centre blockhouse was occupied by a captain, another by two lower rank officers, and two other rooms housed 47 sergeants and 46 soldiers respectively. Each room was numbered.

The report of Bruyères, dated September 12, 1802, provides an inventory of the buildings constructed inside the fort. He believed that the centre blockhouse as well as the remaining three blockhouses should be weatherboarded and painted:

The Center Blockhouse is 100 feet long 30 feet wide 9 feet high in the Upper Floor, contains four rooms for Officers Quarters at present occupied by One Captain and One Subaltern and two rooms for Soldiers Quarters will contain 80 Men in a crowded state - 68 with convenience - The ground floor is 96 feet long 26 feet wide 12 feet high contains One large room filled with Ordnance Stores and two small rooms for Regimental Stores - These Stores are in a very improper situation in case of fire. It would be advisable to convert the whole of the Building into Quarters for Soldiers, and to erect a separate Building for Ordnance Stores - It would then contain 200 Men with ease.

Bruyères also recommended laths for the ceilings, whitewashing and painting the interior of the rooms, repair of the fireplaces and chimneys and new moveable double berths in order to accommodate more soldiers.

It seems that the Bruyères recommendations were carried out, because two of the three blockhouses inside the fort were weatherboarded in November 1803, while the third was almost finished. Pay lists suggest that the centre blockhouse was painted in 1804. A few repairs were made in 1806 to the soldiers' dormitory, when shelves were added and the floor was repaired. The soldiers' barracks were whitewashed in 1807. The ground floor of the centre blockhouse was still being used as an artillery depot in 1811:

I conceive it my duty to state for the consideration of the Commander of the Forces that tho' the Barracks in this Fort are insufficient for its Garrison, a considerable portion of the largest Blockhouse....are occupied by Ordnance Stores among which is fixed Ammunition.
Therefore, only the upper floor of this blockhouse was used to house the troops during the period 1796 to 1811.

Estimates of construction and repairs: January 22, 1796. The building was to have two storeys, the lower measuring 96 feet by 26 feet and the upper extending over the lower by 2 feet all around (100 feet by 30). The blockhouse was to rest on a stone foundation. The lower floor would be used for storage, and the upper floor as a dormitory for soldiers and for officers' quarters. The estimated cost was approximately 671 pounds.23

The sill would be pine, with dimensions of 9 by 12 inches (280 running feet); while the outside walls (5,400 running feet) were to be of pine 10 to 15 inches in depth by 8 inches thick. The sleepers would be cedar or hemlock and would consist of pieces having a length of 28 feet and a diameter of 13 inches, hewed on one side. There were also to be 20 projecting beams of pine with a length of 32 feet, cut 12 by 14 inches. Furthermore, 20 upper tie beams of pine would be used, having a length of 32 feet and cut 12 by 8 inches. The roof assembly would require 20 pine rafters, 20 feet long, 8 by 5 inches at one end and 6 by 5 at the other. The four pine hips would be 25 feet long, sawn 9 by 5 inches at one end and 6 by 5 at the other. There were also to be nine pine collar ties, 17 feet long and 8 by 5 inches.

The small rafters, purlins and jambs of the partitions were to be pine, 4-1/2 inches square (1,700 running feet). The coverings of the upper floor as well as the partitions would be boards with a thickness of one inch (2,920 boards). The undercovering of the stairway would consist of 1-1/2 inch thick boards (550 boards). The ground floor was to be made of planks with a thickness of two inches (460 planks), and the partitions between the officers' quarters, and the soldiers' dormitory would consist of 200 1-1/2-inch boards.

The foundation required ten toises of stone. In addition, 8,000 bricks were needed for the construction of the fireplaces and chimneys,24 as well as 480 window panes, 7-1/2 by 8-1/2 inches.

With respect to hardware, the following quantities were requisitioned:

- 12,000 20d nails
- 9,000 30d nails
- 2,760 40d nails
- 1,200 10d nails
- 300 weight of Iron (for hooks, hinges, chimney bars, hooks for hammocks)
- 6 stock locks
- 6 latches & catches
- 6 pairs of hook & strap hinges
- 3 pairs of HL hinges
- 3 pairs of H cupboard hinges
- 3 iron rimmed brass knob locks
- 3 cupboard locks

According to this estimate (Appendix D) it seems that the troops slept in hammocks. The blockhouse was probably equipped with cupboards and six doors for the soldiers and officers. However, the term "cupboard hinges" is suspect, because it might be describing a type of hinge pin rather than a hinge for a specific function. With respect to
the number of doors, there are also two possibilities: on the one hand, the hardware might be for interior doors only; but one or two of the required latches might also have been needed for toilets, since the estimate mentions the construction of privies. An analysis of the blockhouse plan (Fig. 1) indicates that there were only four outside doors.

It should be noted that the wood used was almost exclusively pine, and that there were no partitions on the ground floor, in preparation for its utilization as storage space. The blockhouse plan (Fig. 1) also confirms this assumption. The foundation must have been shallow, as 10 toises of stone were requisitioned for it. The roof was probably covered with one-inch-thick boards.

**Estimate dated November 10, 1796.** The estimate prepared for the construction of brick partitions between the officers' quarters and the soldiers' dormitories called for 10,000 bricks and 24 barrels of lime.

**Estimate dated September 15, 1798.** Two kitchens were constructed inside the blockhouse for use by the troops. The following materials were required:

- 160 feet of Oak, 8 inches by 10
- 160 feet of Pine, 8 inches square
- 1,800 feet of Pine, 6 inches by 12
- 800 feet of Pine, 4 inches square
- 80 1-1/2 inch planks
- 100 1 inch boards
- 16 1/4 inch boards
- 68 panes of glass
- 1 toise of stone
- 6000 bricks
- 30 barrels of lime
- 18 loads of sand and water

The following hardware was requisitioned:

- 6 pounds of putty
- 2 latches and catches
- 2 pairs of hooks and straps
- 2 pieces of flat iron (6 feet long each)
- 28 pounds of square iron

This estimate suggests that two doors were added, but it does not specify whether they were interior or exterior doors. The use of stone suggests that the kitchens were located on the ground floor. It is also apparent that windows were added at this time.

**Estimate dated August 20, 1806.** In order to repair the dormitory above the ordnance stores, as well as the steps and stairwell leading to it, 800 feet of 1-1/2-inch pine planks were needed. In addition, 200 feet of 2-inch pine planks were required, as well as 500 nails of 30-penny size.

To build six shelves in the barracks to be used by the soldiers, 400 feet of 1-inch pine boards were needed as well as 200 30-penny nails.
Location of the centre blockhouse. All the plans confirm the location of this blockhouse as being immediately in front of bastion No. 1 (Fig. 2). However, it is difficult to locate it exactly within a given periphery, because the plans have no scale.

Conclusion concerning the centre blockhouse. This was a two-storey building the ground floor of which measured 96 by 26 feet and the upper storey 100 by 30 feet, constructed on a stone foundation. The lower storey was used as a depot, whereas the upper floor was arranged for barracks. The barracks consisted of four rooms, two of which were for the officers and two much larger rooms for the soldiers. The construction materials used were mainly pine and local stone. It is impossible to determine the origin of the bricks.

The depth of the foundation is unknown, but the small quantity of stone used (10 toises) suggests that it was less than one foot. The floors were made of 1-1/2-inch pine planks, but it is impossible to determine whether nails or pegs were used. According to the plan (Fig. 1) there were two chimneys and four fireplaces, four main doors, and 18 windows (a requisition was made for 480 window panes).

It should be noted that the stairways leading to the upper floors were accessible from the outside. The rooms set aside for the officers occupied one-third of the upper floor, while there was a small storage area for the troops on the lower floor. There were windows on the upper floor on the two facades, and each window had a sill. Only 19 projecting beams are indicated, although in the estimate 20 are called for.

On the eve of the war, the dimensions of this blockhouse were the same, but the frame had undergone a few changes. The partition between the officers' quarters and the soldiers' dormitories was no longer just a simple division, 1/2 inch thick, but rather a brick wall. Furthermore, the lower storey included two additional kitchens, meaning two additional chimneys and probably two more windows. It is impossible to say where these kitchens were located. In short, the 1811 building was quite different from the 1796 building.

Officers' Kitchen

History. This building was constructed in 1796 behind the centre blockhouse. This "shed kitchen" measured 16 square feet and had a height of 10 feet. There are no references to this kitchen after 1798, when the officers' barracks and other kitchens were built. It may have been changed. The Bruyères report of 1802 makes no mention of it whatsoever.

Construction estimate: January 22, 1796. The kitchen was located behind the blockhouse (Appendix E). The plate and lower sill were pine, 8 inches thick by 6 inches (128 running feet). The posts, braces and tie beams were pine, 6 inches square (170 running feet). There were also 8 rafters of pine 14 feet long and 6 by 5 inches. The sides and roof were constructed of 340 boards, each 1 inch thick. The floor, door and window frames were made of 40 boards, 1-1/2 inches
thick. There was also a chimney and fireplace, for which 3,000 bricks were requested. There were probably two windows, because a request was submitted for 24 window panes measuring 7-1/2 by 8-1/2 inches. As for hardware, a requisition was submitted for:

- 2000 20d nails
- 1500 30d nails
- 1 stock lock
- 1 pair strong H hinges
- 1 latch & catch
- 15 lbs of iron

It therefore seems that there was only one door.

Again, the wood used was pine. This must have been a temporary kitchen, because the walls were made of boards rather than logs. On the other hand, it is certain that this kitchen had a brick chimney, but there is some question as to whether there was an oven. This estimate is very incomplete, because it lacks several details concerning the interior arrangement.

Site of the first officers' kitchen. A plan dated 1796 indicates that a kitchen had been constructed for the officers between Navy Hall and the powder magazine (Fig. 4). However, this does not seem to be the same building because according to the estimate the kitchen was to be constructed behind the centre blockhouse. It could, therefore, be one of the two small buildings located in front and at each end of the main blockhouse (Fig. 2). It is not known which of these two buildings was the kitchen. Furthermore, this kitchen may no longer have been in existence in 1799.

Conclusion. This was a temporary building, probably used between 1796 and 1798. The kitchen had relatively small dimensions and some interesting features. First of all, no stone foundation is mentioned. The walls were constructed not of logs but of boards. The specifications of the estimate are very rudimentary, because very little information is given concerning the interior arrangement. Nevertheless, it should be noted that six-inch square posts were used in the construction of the frame.

Bakery and Oven

History. The bakery and oven were constructed during the summer of 1796. Then the building burned either in December 1797 or January 1798. It was reconstructed in 1798, and the oven had to be repaired in 1800 and in 1811.

Estimates of construction and repairs: January 22, 1796. There are no indications as to the size of the building, but 6,000 bricks were needed to construct the oven and chimney. The building's frame was of wood. According to the specifications, this building only measured 15 x 9 feet (the last figure is only hypothetical). Four oak beams were needed, having a length of 15 feet and measuring 10 x 8, and 7 pine beams having a thickness of 8 inches square were required. Nine hundred
feet of pine 7 inches thick and 7 to 10 inches wide were needed for the frame. In addition, 200 running feet of scantling pine, 4 inches square, were needed. This might have been used as a firewall. The roof was covered with 2,500 shingles. The estimate also calls for 50 1-inch boards and 40 planks of 1-1/2 inch (probably for the floor).

Twenty-four window panes of 7-1/2 x 8-1/2 inches were needed (there were probably 2 windows). There was only one door. Hardware requirements were as follows:

- 2 pieces 2-1/2 inch flat iron each
- 6 feet long
- 6 sheets of iron
- 12 lbs of rod iron
- 500 10d nails
- 300 2d nails
- 300 30d nails
- 5000 shingle nails
- 1 stock lock
- 2 pairs of hooks & straps
- 1 pair of large - do -
- 2 shutter bolts
- 1 latch & catch

The estimate provides little information concerning the bakery. Some questions remain unanswered: was there a stone foundation and what was the interior arrangement?

Reconstruction estimate dated January 15, 1798. There is a difference of three pence between the reconstruction cost and the cost of initial construction. Four thousand bricks, 30 barrels of lime, and 120 running feet of oak with a thickness of 8 x 10 inches were needed. Also, 240 feet of pine, 8 inches square, were required, as well as 300 feet of pine measuring 4 square inches. The estimate called for 200 1-inch boards, 60 1-1/2-inch planks and 3,000 shingles. In addition a request was made for 48 window panes. The following hardware was requested:

- 2000 10d nails
- 2000 20d nails
- 1000 30d nails
- 1 stock lock
- 1 pair of hinges
- 1 latch & catch
- 3 pairs of hooks & straps
- 6 sheets of iron
- 12 lbs of rod iron
- 16 lbs of square iron

This estimate differs slightly from the first one. The second bakery seems to have been somewhat larger than the first, because proportionately more material was requested in the second estimate - twice the oak, four times the 8-inch square pine and 1-1/2 times the 4 by 4 pine. These materials were used for the construction of the roof and plate. In addition, four times the quantity of boards of 1 inch and 24 window panes were requested (windows may have been added). Fewer bricks were requested, but it is probable that bricks from the old chimney were used.
Estimate of repairs dated September 23, 1801. It is difficult to enumerate the construction materials required for the repairs to the bakery, but the floor, chimney and roof were apparently repaired.°

Site of the bakery. There are no plans showing the location of the bakery.

Conclusion. The bakery was not large. It seems that neither structure had a stone foundation. The frame was of logs, whereas the roof of the first bakery was shingled. The second bakery seems to have been slightly larger, taking the required materials into consideration. However, several pieces of information are missing with respect to the foundation, the roof and the interior arrangement.

The Powder Magazine

History. The construction of the powder magazine began during the summer of 1796, but was not completed by June 1797.°° Payrolls dated 1798 confirm that an estimate was approved "for draining and regulating of the ground contiguous to the powder magazine."°° Other payrolls indicate that the soldiers were engaged in draining the ground in September 1801.°° Bruyères made a recommendation to this effect in 1802. Furthermore, since it was observed in October 1804 that the floor of the powder magazine had rotted, it was decided to await the return of the engineer before proceeding with repairs.°° Heavy damages were observed in January 1805: the arches above the door threatened to collapse and there was a crack along the centre of the main arch. To solve this problem it was recommended that "proper divisions for the Powder Barrels and dwarf walls for the support of the floor [be built]."°°

Construction estimate: January 22, 1796. The powder magazine was located behind the blockhouse. Its outside dimensions were 35 feet by 21, whereas the ammunition chamber was 27 by 12 feet.°°° The inside walls were of masonry with brick arches (Appendix G).

Its construction required 38 toises of stone, 34,000 bricks and 270 barrels of lime. The sleepers were made of 8 pieces of cedar having a diameter of 13 inches, 14 feet long and hewn on one side. The floor was made of oak planks with a thickness of 2 inches, assembled with pegs. The inside covering was made of 10 oak planks 3 inches wide, halved and built on the side walls. The door and window frames were oak pieces 6 inches square (120 feet). The purlins were pine, 36 feet long and 8 inches square. The sill and the centering posts required 240 feet of pine, 7 inches square. The racks used to store the powder barrels required 216 feet of 6-inch-square pine; whereas the struts required 216 inches of pine 4 inches square. Fifty pine planks with a thickness of 2 inches were needed for the centering.

The doors and shutters were made of pine boards 1-1/2 inch thick. The first covering, the porch and the interior cover of the powder magazine were of boards one inch thick. The roof was covered with 545'
sheets of iron. The estimate mentions the use of shingle nails. Furthermore, the sheet iron was painted on both sides with white lead paint, black paint and linseed oil. The three doors and two windows were covered on the outside with copper sheet (110 square feet). The doors were provided with copper locks and keys and were suspended, as the shutters were, by copper hinges. In addition, the following hardware was used:

5450 6d shingle nails
800 40d nails
1880 20d nails
1600 copper blout nails

2 pairs copper hinges with screws for doors
do do do for window shutters

Supplementary estimate dated September 29, 1796. The additional requirements amount to "50 pounds of old copper; 37 pounds of brass; 6 pounds, 6 ounces sheet copper; 3 whole barrel copper hoops; 1 crucible." These materials were divided between Detroit and Fort George.\textsuperscript{42}

Site of the powder magazine. The powder magazine was located between bastions 5 and 6 on the south side of the fortification (Fig. 2). All the plans locate the magazine at this site. However, a plan that appears to date back to 1803-4 indicates a sizeable variation in ground level around the powder magazine. The plan also shows two ramps descending toward the powder magazine, around which a trench appears to have been dug.

Conclusion. Constructed in 1796-97, the powder magazine measured 35 feet by 21, while the walls were between 8 and 9 feet thick. The frame was stone on the outside and brick on the inside. The floors were two thicknesses, while the roofing was covered with sheet iron. The floor was pegged. The doors and windows were covered with copper sheeting, and all of the hardware was copper.

The Two Soldiers' Blockhouses

History. On January 30, 1797, Green wrote to Shank: "I am directed...to inform you that it is intended to erect next spring Two Blockhouses, at Fort George for the accommodation of about one hundred men."\textsuperscript{43} The construction actually started in the spring because it was noted in July that the "rooms in the Blockhouses should soon be finished."\textsuperscript{44} However, they were not finished by September.\textsuperscript{45}

In 1802 Bruyeres described the north blockhouse (the one closest to the main gate):

The North Blockhouse is 44 feet long, 24 feet wide 9 feet high in the Upper part contains one room for 36 Men. The Ground floor is 41 feet long, 21 feet wide 12 feet high contains one room for 32 Men.\textsuperscript{46}

The south blockhouse was in every respect identical. Bruyeres noted that the chimneys had to be repaired, the walls of the rooms pointed and whitewashed and the ceiling lathed.
The blockhouses were weatherboarded in 1803. In 1804 the payroll confirms that military workmen were making repairs to the blockhouse (battening ceilings, whitewashing inside of rooms), and that they had been painted the previous year. Shelves were installed in 1806 for the troops and the barracks were whitewashed again in 1807. Although a report dated September 25, 1800 indicates that these two blockhouses could contain 24 and 27 soldiers in one and 46 and 46 in the other, it is obvious that they were not used exclusively to house the troops. Bruyères pointed this out in 1802 and Proctor in 1811. One of them was used as an ordnance depot. The doors of these blockhouses were numbered, one bearing numbers 7 and 8 and the other 13 and 14. According to the report, each floor contained just one room.

Construction estimate: May 9, 1797. These blockhouses were used as dormitories for approximately 100 men and three officers. They were contiguous to the main blockhouse. Both were of the same construction and dimensions (Appendix H). The ground floor measured 41 by 25 feet and rested on a stone foundation. The upper floor measured 44 feet by 24, jutting out 1-1/2 feet, on all sides over the lower floor. This estimate includes a kitchen approximately 10 feet square. The construction cost amounted to approximately 424 pounds.

The frame was of pine logs of 10 to 15 inches in depth and 8 inches thick (6,000 running feet). The sill was pine or oak, 9 by 12 inches (300 running feet). The sleepers consisted of 16 cedar or hemlock pieces with a diameter of 13 inches and a length of 26 feet. The estimate provided for 12 projecting beams of pine having a length of 28 feet and a thickness of 12 by 14 inches. The end beams consisted of 12 pine pieces with a length of 10 feet and a thickness of 12 by 14 inches. The 36 cross joists were of pine and measured 20 feet long, having a thickness of 6 by 4 inches. The 14 upper tie beams measured 28 feet long and were of pine with a thickness of 8 by 10 inches. Twenty pine rafters 18 feet long, 8 by 5 inches at the bottom and 6 by 5 inches at the other end were required; plus eight pine pieces with a length of 22 feet and a thickness of 9 by 5 inches at the bottom and 6 by 5 inches above for use as hip-rafters; and eight pine pieces with a length of 12 feet and a thickness of 7 by 5 inches were used as traverses. The purlins and posts were of 4-1/2-inch-square pine (1,600 running feet). The first sheathing of the blockhouses were boards 1 inch thick (1,200 boards). The floor of the upper storey and the stairway were made of 400 planks 1-1/2 inches thick. The roofs were covered with 30,000 shingles. The two floors and the partitions consisted of 700 planks 2 inches thick. The inside sheathing and the partitions between the officers' quarters were made of 300 boards, 1/2 inch thick.

Twenty thousand bricks were needed, 14 toises of stone and 450 bushels of lime. The ceiling underneath the officers' quarters was lathed (a requisition was submitted for 4,000 additional laths and 20 lb of "bullock hair"). Also required were 300 window panes, 7-1/2 by 8-1/2 inches. The blockhouses were painted, because the estimate mentions 168 lb of white paint and 20 gallons of linseed oil. The following hardware was requisitioned:

4000 40d nails
5000 30d nails
8000 20d nails
5000 10d nails
60000 shingle nails
16000 lath nails
336 lbs of iron chimney barks
4 stock lock
4 latches & catches
5 iron rimmed brass knob locks
5 pairs of HL hinges
4 pairs of hook and strap hinges
3 pairs of cupboard hinges
3 cupboard locks

With respect to the kitchen construction materials, there are very few exact indications. The sill required 80 running feet of oak or 8-by 6-inch pine. The plates required the same quantity of wood of the same thickness, but this wood was to be pine. The kitchen frame was pine, 6 inches thick and from 10 to 12 inches wide. The eight pine rafters were 14 feet long and 6 by 5 inches thick.

Many of the construction materials for the blockhouses were used to construct the kitchen. Note that once again the wood used was pine and that oak or hemlock was used at certain locations. The masonry consisted of lime and sand.

Site of the two blockhouses. At each end of the main blockhouse, the one on the side of the main gate being called the north blockhouse and the other the south blockhouse (Fig. 2).

Conclusion. The construction estimate called for a ground floor measuring 41 by 25 feet, whereas the upper floor would measure 44 by 28 feet. According to Bruyeres the ground floor measured 41 by 21 feet and the upper floor 44 by 24. It is impossible to determine the accuracy of the figures.

The blockhouses rested on a stone foundation, while the frame was of pine logs. They were painted and weatherboarded, with shingled roof and lathed ceilings.

Soldiers' Kitchen

History. This kitchen was constructed at the same time as the two blockhouses. All that is known is that Bruyeres referred to it in his report dated 1802.

Construction estimate. This is included in the estimate for the two blockhouses.

Site of the kitchen. It seems that this kitchen is one of the two buildings mentioned on the 1799 plan (Fig. 2), consisting of one of two small buildings located between the blockhouses.

Conclusion. The building was approximately 10 feet square. It is impossible to determine further details, such as whether there was a
stone foundation, or a shingled roof, or how many doors and windows there were.

The Temporary Hospital

History. Beginning in September 1797 there is mention of constructing a hospital at Fort George. By October the hospital had become a priority, as had the guard house and octagonal blockhouse. In the meantime, an estimate for £33/10/0 was approved to convert the old artillery storehouse into a hospital. Needed were 1 toise of stone for the foundation, 6,000 bricks for the chimney, 96 window panes, 200 one-inch boards (probably pine) for the roof or inner partitions (Appendix I). Hardware included the following:

- 10 pounds of putty
- 16000 shingle nails
- 6000 10d nails
- 4000 20d nails
- 1200 30d nails
- 2 pieces of flat iron (6 feet long each and 2-1/2 inch wide)
- 36 pounds Square Bar Iron
- 2 latches and catches

Location. There is no plan on which the location of this hospital appears. Most plans are dated 1799, and it is possible that the building no longer existed by that date.

Conclusion. This rudimentary hospital probably stood on a stone foundation, with possibly two chimneys, two doors and between four and eight windows. It was used for a short time only, because the permanent hospital was constructed in the spring of 1798. Beyond this date it is not possible to determine what the fate of this building was.

The Hospital and Kitchen

History. Of the three buildings whose construction was planned for the spring of 1798, the hospital was the first one built. It was located close to the powder magazine, and had two sick wards, one kitchen and other utilities. The construction of the building was slowed down by an illness that spread through the garrison. Civil labour had to be hired to compensate for the labour shortage, necessitating an additional estimate. Bruyères described the building in 1802: "The Hospital is a good Building, 72 feet in length, 24 feet wide, and 13 feet high, contains two sick wards for 60 Men with a detached surgery." The interior was whitewashed in 1807.

Construction estimate dated December 26, 1797. The hospital had a frame of wood logs and rested on a stone foundation. The requirements for its construction and for the kitchen were: 8 toises of stone for the foundation and 18,000 bricks for the chimneys; 3880 feet...
of pine board from 10 to 14 inches and sawed to a thickness of 6 inches for the frame and partitions; 450 running feet of oak board, 9 by 12 inches. Also needed were 10 pieces of oak board, 20 feet long, 9 by 12 inches; and 26 pieces of oak board, 26 feet long, 9 by 12 inches; 26 pieces of pine, 8 by 10 inches by 28 feet; 10 pieces of pine board, 23 feet long, 8 by 10 inches.

For the roof, they required 52 pairs of rafters, 18 feet long, 7 by 5 inches at one end and 5 inches square at the other, and 20 additional pairs 16 feet long but having the same dimensions elsewhere. Two pairs of hip rafters are 21 feet long, 8 by 6 inches at one end and 6 inches square at the other; four other pairs are 19 feet long with the same thicknesses. The roof was covered with 800 one-inch planks and 18,000 shingles.

The partition mounts and purlins required 1,000 running feet of pine 10 by 10 inches, 500 pieces 8 by 10 and 1,600 pieces 4-1/2 inches square. Two-inch pine boards were used for the floor, and planks varying from 1/2 to 1-1/2 inches to cover the partitions. The frame of the hospital was painted, as 168 lbs. of white paint and 28 of "Spanish Brown" were requisitioned. The hospital windows contained 548 panes 7-1/2 by 8-1/2 inches (Appendix J).

The hardware requirements were:

- 8 pairs of Brass Pullies
- 350 pounds of Lead
- 100-1/2 weight of Iron
- 12 pairs of Hinges
- 8 pairs of HL Hinges
- 4 Stock Locks
- 4 Cupboard Locks
- 4 Strong Bolts
- 4 Small Bolts
- 8 pairs of Cupboard Hinges
- 10 Latches and Catches
- 24 doz. 1 inch screws
- 16 do 1-1/2 inch do
- 12 doz. 3/4 inch do.

Location of the Hospital. The Hospital was located in the southern area of the fort, between the officers' quarters and the powder magazine (Fig. 2).

Conclusion. Resting on a stone foundation not exceeding one foot in depth, the hospital had a frame of pine logs, measured 72 by 24 feet, and was the largest building in Fort George in 1798. The building's roof was shingled and the frame was painted inside and outside. The joints were filled with hair. However, this estimate is not entirely trustworthy, because the required materials were also used for the construction of the kitchen which, according to Figure 2, forms a distinct complex. Thus, it is difficult to state exactly how many doors and windows there were in each of these buildings, because no plan is available.
The Octagonal Blockhouse

History. In December 1797, the construction of a small blockhouse, to be located near the powder magazine, was requested. This building was to be used for an artillery depot and was probably constructed during the summer of 1798. Bruyères stated in 1802: "It will be advisable to connect the picketing round the Octagon Blockhouse with that of the Fort as it is now open to the Country and the Ordnance Stores lodged in it are not secure." Therefore, this blockhouse was not connected to the fort until 1802, which is clearly illustrated on the 1799 plan (Fig. 7). This work was not executed until 1804 when it was thought to be "essentially necessary for the security of that Building and the ammunition etc therein." Furthermore, that same year the blockhouse was painted and weatherboarded.

Construction estimate dated December 26, 1797. The materials required to construct this blockhouse at a height of 9 feet and a diameter of 28 feet for the upper storey and 25 feet diameter by 9 feet high for the lower storey were as follows: 2 toises of stone for the foundation; 12 pieces of oak 25 by 10 feet by 12 inches for the frame and projecting beams; 40 pieces of pine having the same length and measuring 7 inches wide by 12 inches thick; and for the upper floor, a platform constructed of ten pieces of pine 30 feet long by 11 x 13 inches; four pieces of pine 30 feet by 9 inches square, and 8 pieces of pine 30 feet by 8 x 10 inches. The frame would be covered by 200 feet of 7- by 6-inch pine and 600 pieces of pine measuring 4-1/2 inches square. One-inch planks covered by 6,000 shingles would make up the roof. The windows would have 72 panes (Appendix K). Very little hardware was needed:

1 Stock Lock
one hundred weight of Iron

Site of the blockhouse. This small structure was situated at the south end of the fort, outside the palisade near the powder magazine, protected by a redan (Fig. 2).

Conclusion. According to the estimate, this blockhouse rested on a stone foundation. There were two storeys, of which the upper had a larger circumference. The roof was covered with shingles. It seems that there was only one door and possibly three or four windows. This structure was used as an observation post only and was not considered to be a defensive post. It was not heated.

The Officers' Barracks

History. By January 1798 an estimate for the construction of officers' barracks had been approved: this would have a frame of log work that was to be "weatherboarded." The frame rested on a stone foundation. Its estimated cost amounted to 494 pounds. Construction started during the summer and by the beginning of 1799 the building was completed. A report dated September 25, 1800
indicates that the building housed the commanding officer, who occupied three rooms, one of which was needed for his office, the assistant surgeon, a captain, his lieutenant and his ensign. Each door was numbered, and the lieutenant and ensign shared a room. There were therefore six rooms in all.68

According to Bruyères,

The Officers Pavillion is an excellent Building 120 feet long, 20 feet wide, 12 feet high, with two Wings 20 feet square - contains Quarters for four Captains and four Subalterns. The rooms require to be Whitewashed; the Hearths and Chymneys to be repaired.69

It therefore seems that between 1800 and 1802 the purpose for which each room was utilized had changed.

It is not known whether or not there was a fence around the officers' quarters. There was one around the officers' quarters at Navy Hall, measuring 5 feet in height and going into the ground to a depth of 1-1/4 feet.70 According to the painting by officer Walsh (Fig. 9) there was a fence around the officers' quarters at Fort George: however, this is the only indication of such a fence.

The officers' quarters were painted and whitewashed in 1807: a request was submitted for 30 pounds of "yellow ochre" and 4 barrels of lime.71

Construction Estimate dated January 16, 1798. The officers' pavillion was to have a frame of logs; it would be weatherboarded and would rest on a stone foundation.72 The materials required for this building would include 16 toises of stone for the foundation and 30,000 bricks for the three fireplaces. The frame would be made of 25,000 feet of 12-inch pine sawed to 6 inches and between 10 and 14 inches wide; plus 1,000 feet of pine 10 inches square, 500 feet of 10-inch oak and 12,500 feet of 8- by 10-inch pine. In addition, they would require 50 pieces of oak measuring 20 feet by 9 by 12 inches, and 50 pieces of 7- by 10-inch pine the same length. The partition mounts would require 4,000 pieces of pine 4-1/2 inches square. For the roof, the requirement was 50 pairs of rafters, 16 feet long, 17 by 5 inches at one end and 5 by 5 inches at the other, plus 4 pairs of hip rafters, 21 feet long, 8 by 6 inches at one end and 6 by 6 at the other. The roof frame was probably covered with one-inch planks, shingled (3,000 required).

The floor may have been made of 1-1/2-inch planks, and the partition walls of planks between 1/2 and 1-1/4 inches. The ceilings were lathed (13,000 required); and the windows contained 630 panes in all. The building was painted, as the estimate called for 392 lb of white paint, 28 lb of black paint and 56 of brown (Appendix L).

Hardware requirements were as follows:

- 3 Cwt of Iron
- 10 Latches and Catches
- 12 Locks with Brass Knobs
- 18 pairs of Cupboard Hinges
- 18 pairs of Door Hinges
- 12 Cupboard Locks
- 6 Stock Locks
- 44 pairs of Shutter Hinges
Location of the barracks. These barracks were located in the southern area of the fort, near bastion No. 4 (Fig. 2).

Conclusion. The officers' quarters rested on a stone foundation not exceeding one foot in depth. The sill was oak, and the frame pine logs. The joints were stuffed with hair. The barracks were divided into six rooms, while the wings did not directly connect with the main part of the building. According to Bruyères, the subalterns were housed in the wings and the senior officers in the centre block of the building. The heating was provided by three double hearths. The roof seems to have been pyramid shaped and shingled. The ceilings apparently were lathed and the building was painted. The doors were slightly raised, because there were three steps to give access to the building (Fig. 8). Nevertheless, the plan and estimate do not agree when an analysis is made of the required hardware: according to the plan there were four doors and 28 windows, whereas the estimate provides for six "Stock Locks" and 44 pairs of shutter hinges. It is possible that the windows were not equal in size, but at least two pairs of hinges were required per window. Another interesting detail is the fact that every window had a sill.

Was the officers' pavilion built as indicated on the construction plan? An etching by James Walsh, surgeon of the 5th Regiment, around 1805, (Fig. 9) provides a few details of the layout that did not appear on the 1799 plan. According to Walsh, there was an enclosure around the pavilion, as there was at Navy Hall around the "Government House" which was used as officers' quarters. However, this is the only indication of there being any fencing at Fort George.

There were also porches above the pavilion's main doors. These porches, according to the etching, do not appear to be too pronounced, but the shape of the roof had changed considerably. The gabled roof appears to have been supported by beams, but this may have been just a facade. Furthermore, the three steps are still there, which could suggest, after a comparison of the construction plan with the etching, that the foundation rises above the ground. In this respect, note the different colour that separates the building proper from its lower part.

Another characteristic that shows up on the engraving are the windows, four panes wide and five high, according to the drawing, which might not be entirely reliable. However, there does appear to be a window with a sill, as depicted in the estimate and construction plan. A last detail to be emphasized is the presence of trees around the officers' quarters. We do not know whether they were added to embellish the drawing or whether there actually were trees present.
The Officers' Kitchen

History. The kitchen was constructed at the same time as the officers' barracks, at a cost of approximately 78 pounds. It was the same type of construction as the barracks - stone foundation, weatherboarded, wooden frame. According to the plan (Fig. 8) the kitchen was divided into four non-interconnected rooms with a central chimney and four fireplaces. There were also four doors and four windows, and two steps in front of each door.

Construction Estimate dated January 16, 1798. The kitchens required 4 toises of stone for the foundation and 11,000 bricks for the central chimney. For the frame, they needed 900 running feet of pine, 10-14 inches thick, to be sawed to a thickness of 6 inches; and for the sill, 120 running feet of oak, 9 by 7 inches. The plates required the same amount of material, in pine; the sleepers 7 pieces of pine or cedar, 27 feet long, having a diameter of 10 inches; the tie-beams 7 pieces of pine, 6 by 10 inches; the roof 6 pairs of 18 feet long, 7- by 5-inch rafters; 2 pairs of 22 feet long, 8- by 6-inch hip rafters. The purlins and uprights consisted of 800 feet of pine, 4-1/2 inch (quartering), and the floor 140 two-inch beams. The curtains were made of sixty 1-1/2-inch planks. The roof frame was covered with 384 one-inch planks, covered in turn with 6,000 shingles, and the windows required 80 panes of glass, or 20 panes per window (Appendix M).

Hardware requirements were as follows:

- 2 Cwt of Iron for Chimney Bars, etc.
- 4 pairs of HL Hinges for Doors
- 4 Latches and Catches
- 4 Stock Locks
- 8 pairs of small Hinges for Windows
- 8 Window Bolts

Site of the kitchen. The kitchen was located between the two wings of the officers' quarters, slightly recessed (Figs. 7 and 8).

Conclusion. The officers' kitchen was a pine frame building, weatherboarded and standing on a stone foundation. Window shutters were not included in the original estimate.

The Flagstaff

Flags and haulyards were sent in June, 1798. An estimate dated September 15, 1798 set the construction cost of the flagstaff at £9/12/6. The following materials were required: "one piece of timber for the staff, one hundred and sixty feet of oak (12 in square), 200 30d nails" (Appendix N). Sergeant Gray of the Royal Artillery requested in October, 1804: "new Haulyards for the flagstaff, it is 74 feet long. Their [sic] is no common threed [sic] in Store for repairing the Flag." The pole had to be repaired in August 1806: four pieces of oak, 10 feet long and 12 inches square were required, as well as four other pieces 8 feet by 6 inches square. According to a plan dated 1810 (Fig. 10), the pole was placed near Bastion No. 1.
The Palisade and Ditch

History. Fort George did not become a real fortification until 1799, when the palisade and bastions were constructed. The trenches were dug at a later date. An estimate dated January 1799 made provision for a palisade of 1,220 yards and 6 bastions in which the artillery was organized into batteries.78 The cost amounted to approximately 1,385 pounds.79 Considerable progress had been made by May 1799 in the earthwork of the several batteries.80 In July, McDonell pointed out: "Two of the Bastions are nearly cased - and as most of the Pickets are now on the spot, I have reason to think that two sides of the Work will very soon be enclosed."81

The first estimate called for the use of 6,000 pickets. In fact, more pickets were needed because of the unevenness of the land. The first pickets delivered had a diameter of from 5 to 8 in. However, these were too small. Pilkington noted: "Having selected the larger Pickets for the Curtains, I discover by the application of the smaller in the picketting of the Ditches that they will not only be inadequate in point of strength, but will also fail me in covering to the extent proposed."82 Pickets would be used to enclose the wood-yard. The palisade was completed in 1800.

In 1802, Bruyères noticed several flaws in the palisade and suggested:

Part of the line of picketting between No 1 and No 2 Batteries will require to be taken up and refixed, as the ground has settled, and displaced the pickets. Two of the Barrier Gates and one of the Wicket Gates require to be repaired, and padlocks wanted to all Gates.

The Earth-work of the six Batteries has settled very considerably, and will require filling in. The Banquettes require to be regulated, and made perfect round all the work - the Counterscarps of the Ditches require to be sodded and repaired - The ground contiguous to the Powder Magazine will require to be levelled, and regulated also along the line of picketting between No 1 and No 6 Batteries. The ditches to be continued round the Work according to the original plan.

It will be advisable to connect the picketting round the Octagon Blockhouse with that of the Fort, as it is not open to the Country and the Ordnance Stores lodged in it are not secure.

The Works are considerably injured by the quantity of Cattle that are continually grazing and treading over every part of them. It will be necessary that an Order should be given to prevent any Cattle whatever being turned out near the Works. I should further recommend to enclose the whole work with a post and rail Fence to extend 60 feet from the salient angle of each Battery, this would effectually secure the work. The extent of Fencing required will be about 1100 Yards.83
Were these works actually executed? In August 1806 an estimate was submitted for the repair of 120 pickets. The palisade had to be made stronger, 50 cedar posts were used. In addition, 30 feet of white oak 12 inches square and 100 spikes of 7 inches were needed. In his report Bruyères mentioned Barrier and Wicket Gates. Where were these located? There is no plan on which they are identified, but the two 1799 plans (Figs. 2 and 7) indicate a few possibilities.

Construction Estimate dated January 19, 1799. The construction of the palisade required the removal of 10,298 cubic yards of soil to be used to form bastions. This was how the moat was dug. Furthermore, the blacksmiths manufactured hinges on the spot, and repaired the tools. The materials required for the scarp sills included 1,200 feet of 14- by 12-inch oak; the scarp cap required the same amount of oak, measuring 12 by 6 inches; the ribband for picketing 4,000 feet of 8- by 5-inch oak; the frames for embrasures and parapets of the batteries, 32,000 cubic feet of oak; the gates and pickets to retain the sills, 7,500 cubic feet of oak; the lining embrasures and the parapet, 960 2-1/4-inch oak beams and the platforms 400 beams the same size. The palisade pickets were to be 12 feet long, 7-8 inches in diameter and 6,000 in quantity; for the framing posts for the pickets, 1,000 cubic feet of cedar were required; and the sleepers under the platform joists required 1,000 cubic feet of oak or cedar. For the bank ties to the scarp, 3,500 running feet of cedar or hemlock were needed, 9 inches in diameter; and for the scarp, 1,400 pieces of cedar or hemlock, 14 feet long, sawed to approximately 9 inches (Appendix 0).

Hardware requirements were as follows:

- 7cwt of Iron
- 1-1/2cwt of Steel
- 4000 spikes (7 inches)
- 2000 40d nails
- 4 double Padlocks

The major detail to be observed in this estimate is the use of oak. The doors, platforms and bastions were all made of this wood, which had the strength to bear the weight of the guns (Appendix 0).

Conclusion. The construction estimate mentions removal of 10,298 cubic yards of earth, proving that there was a moat around the fortifications. This moat seems to have had a depth of about 8 feet and a width varying from 14 to 24 feet, from its deepest point to ground level (Fig. 12).

Fire Engine Shed

There was an estimate dated November 4, 1802 for the construction of a fire engine shed and for the manufacture of two sleds for the fire pumps. The shed would be 24 feet long by 18 feet wide. However, it should be noted that according to the estimate, they would have to await the arrival of an engineer before it could be undertaken. The cost amounted to 10 pounds. The following materials were required (Appendix P):

- Sill: 100 running feet of oak, 8 by 10 inches
- Sleepers: 9 pieces of oak, 10 inches square
Post and plates: 200 running feet of pine, 8 inches square  
Tie beams: 8 pieces of pine, 6 by 8 inches  
Rafters: 20 pieces of pine, 13 feet long, 5 by 4 inches  
Studs: 300 running of pine, 4 inches square  
Floors: 40 pine boards, 1-1/2 inch  
Roofing and doors: 75 boards of pine, 1 inch  
Weatherboarding: 60 pine boards, 3/4 inch  
Roof: 3,500 shingles  
   There was only one door (only one padlock was requested).  
The hardware consisted of:  
   100 40d nails  
   900 30d nails  
   700 20d nails  
   7000 shingle nails  
   6 pairs of hook & strap hinges  
   140 lbs of iron  
To construct the sheds two round pieces of oak were to be used as  
runners and 100 running feet of oak, 4 inches square, for the beams and  
remainder of the sleds.  
   It is impossible to know whether this shed was in fact constructed.  
   Even if it was, several details are lacking, such as the type of  
   foundation (stone or ground sills), the size of the door, and the  
   location.

The Well

Bruyeres noted in his report that two wells were needed inside the  
fort. One was dug, but not until 1807.

Construction estimate dated March 29, 1807. Neither the  
dimensions nor the site are indicated; it cost almost 8 pounds to dig  
the well (Appendix Q). The following materials were required:  
5 toises of stone  
16 feet of white oak, 10 by 6 inches  
32 feet of 6 inch square oak  
10 feet of white oak, 10 inches square  
128 feet of pine planks, 2 inches  
100 40d nails  
120 feet of cable, 1-1/2 inch in diameter  
120 feet of cable, 1 inch in diameter  
50 pounds of metal, 1-1/2 inches square  
20 six-inch spikes  
   On the basis of the dimensions of the required cables, it would  
   seem that the well was dug relatively deep and the foundation was  
   stone. 

Site of the well. According to the plan dated 1918, the well  
was located in the northern area of the fort between Bastions 1 and 2,  
near the palisade and the north blockhouse (Fig. 10).
General Conclusions Concerning Buildings

Most of the buildings rested on stone foundations. Since the amount of stone usually requisitioned was minimal, it seems reasonable to assume that the foundations were shallow, usually one foot to one and a half feet deep (a toise of stone, as used in all the estimates, is a cubic measure). The archaeological investigation during the summer of 1873 confirmed this hypothesis in respect to the foundations of the guard house. This dig also showed that the foundations were built directly on the ground.

Lime and sand were used for the manufacture of mortar. The hardware used varied only slightly from building to building: the hinges, latches and so on were made of iron. Only the most simple hardware items were made on the site: the rest were imported. The only exception was the hardware for the powder magazine, which was copper. The principal wood was pine, although quantities of oak, cedar and hemlock were also used. Labour was supplied exclusively by the soldiers, except for a period in 1798 when sickness spread throughout the garrison and civilian labour was hired.

Significant alterations were made to some buildings after their original construction was finished. This applies particularly to the central blockhouse and bakery. Certain questions, such as the type of windows used and the construction methods for the large buildings (blockhouses, officers' quarters) remain unanswered. It is almost impossible to determine the type of windows on the basis of the requisitions for panes of glass, for the number and size of these windows could vary. Furthermore, a certain quantity of glass could have been ordered to cover loss and breakage. However, the allowance made for damage is not known and is difficult to estimate.

It seems reasonable to assume that in the frames of the larger buildings a series of upright supports at regular intervals was used to support the building's weight. However, no plan shows that such a construction method was employed. On the other hand, it is virtually certain that they did not use pine logs of 96 to 100 feet in length, because of the difficulty in transporting and handling such long pieces. This logic suggests that it would be preferable to use vertical uprights at regular intervals to support the weight of the second storey and the roof. In the present reconstruction a "scarf joint" is used, but this could not withstand a sustained cannon barrage. The use of vertical supports can be documented for this time period at Amherstburg in the construction of the Indian Council Room and even for Fort George, in the first officers' kitchen.
FORT GEORGE AND ITS COMPLEMENTS

Armament and Ammunition

The artillery pieces were transported from Fort Niagara to Navy Hall in 1796. The following items were in Fort George in March 1799, as indicated in a “Brass Ordnance” report:

- 6 pounders
- 3 pounders
- 8-inch mortar
- 4-2/5-inch mortar

<table>
<thead>
<tr>
<th>Item</th>
<th>Serviceable</th>
<th>Unserviceable</th>
</tr>
</thead>
<tbody>
<tr>
<td>6 pounders</td>
<td>2</td>
<td>3</td>
</tr>
<tr>
<td>3 pounders</td>
<td>3</td>
<td>2</td>
</tr>
<tr>
<td>8-inch mortar</td>
<td>1</td>
<td>1</td>
</tr>
<tr>
<td>4-2/5-inch mortar</td>
<td>3</td>
<td>1</td>
</tr>
</tbody>
</table>

In addition, there were 300 shells for each piece, one-third of which were used to fire case shot. There was also a reserve of 50,000 ball cartridges. Bruyères observed in 1802 that there were three 18-pounder guns, eleven 12 pounders and seven 9 pounders, or “Iron guns mounted on Garrison Carriages.” There was also one 12 pounder (Iron Carronade on travelling carriage), one 8-inch howitzer (brass), one 12 pounder, six 6 pounders, one 4 pounder, four 3 pounders or “grass guns and field carriages.” Five 18-pounder guns were kept in reserve as well as four 12-pounder guns (Iron Carronades), one “Iron swivel” and four brass 4-2/5-inch howitzers. Bruyères also observed that a number of carriages needed repairs, and he even suggested that they be painted.

It should be observed that the post became more defensible after 1803; this is indicated on the plans as well as the artillery reports. According to the 1799 plan (Fig. 2) there were 23 embrasures for the six bastions, whereas the plan thought to be dated 1804 (Fig. 6) shows at least 29.

The Armament report for June 1804 shows the following situation:

<table>
<thead>
<tr>
<th>Brass</th>
<th>Serviceable</th>
<th>Unserviceable</th>
</tr>
</thead>
<tbody>
<tr>
<td>12 pr medium</td>
<td>1</td>
<td></td>
</tr>
<tr>
<td>6 pr light</td>
<td>6</td>
<td></td>
</tr>
<tr>
<td>4 pr French</td>
<td>1</td>
<td></td>
</tr>
<tr>
<td>3 pr light</td>
<td>4</td>
<td></td>
</tr>
<tr>
<td>8 in. mortar</td>
<td>1</td>
<td></td>
</tr>
<tr>
<td>4 2/5 do</td>
<td>5</td>
<td></td>
</tr>
<tr>
<td>1/2 pr swivel</td>
<td>2</td>
<td></td>
</tr>
<tr>
<td>18 pr</td>
<td>3</td>
<td></td>
</tr>
<tr>
<td>12 do</td>
<td>2</td>
<td>3</td>
</tr>
<tr>
<td>9 do</td>
<td>2</td>
<td>5</td>
</tr>
<tr>
<td>1/2 do</td>
<td>1</td>
<td></td>
</tr>
<tr>
<td>18 do carronades</td>
<td>5</td>
<td></td>
</tr>
<tr>
<td>12 do carronades</td>
<td>5</td>
<td></td>
</tr>
<tr>
<td>6-1/2 in. mortars</td>
<td>37</td>
<td>2</td>
</tr>
</tbody>
</table>

29
Given the fact that the "Brass Ordnance" was used as field artillery, there were still at least 28 guns on the ramparts of Fort George. The French gun remained at Fort George until the summer of 1807, after which it becomes difficult to trace Fort George armaments; several guns were sent to Amherstburg or to Fort Erie or even returned to Kingston or Quebec City.

A report dated 21 July, 1807 reads as follows: ^7

<table>
<thead>
<tr>
<th>Iron Ordnance</th>
<th>Serviceable</th>
<th>Unserviceable</th>
</tr>
</thead>
<tbody>
<tr>
<td>18 pr</td>
<td>3</td>
<td></td>
</tr>
<tr>
<td>12 pr</td>
<td>6</td>
<td></td>
</tr>
<tr>
<td>9 pr</td>
<td>7</td>
<td></td>
</tr>
<tr>
<td>18 pr caronades</td>
<td>5</td>
<td></td>
</tr>
<tr>
<td>12 pr caronades</td>
<td>5</td>
<td></td>
</tr>
<tr>
<td></td>
<td>15</td>
<td>16</td>
</tr>
</tbody>
</table>

Therefore a total of 31 artillery guns are mentioned. It is not known whether they were all mounted in batteries. Another report dated September 1811 written just before the war mentions that there were: ^8

- Cast Iron Mortars: 5
- Iron: 6
- 9 pr: 3
- 1 mortar: 1
- Brass: 1
- 6 pr (light): 5
- 3 pr: 4
- 5-1/2 in. howitzer: 1

Therefore there was a total of 26 guns, but it should be observed that there were no 18 pounders left. On the other hand, a "car brigade" was observed at Fort George in 1811.

The Russell Barracks

The Fort George garrison was not lodged in its entirety within the fort. The officers' quarters had not yet been constructed and the government bought the property of President Russell at a cost of 900 pounds in November 1797. This was where the officers of the 2nd battalion of the Royal Canadian Volunteers were housed. ^9 Russell observed that his properties "lie considerably lower than the blockhouse" - approximately 750 yards lower. ^10 According to a report written by Gother Mann, dated 18 December 1797, the buildings owned by Peter Russell housed the garrison officers for a short time only, until the barracks could be constructed. Mann suggested that the location be exclusively used by the "Indian Department," which from 1798 onward had its quarters in it. The other branches, called the civil branches of the military organization, including the commissariat service, also occupied these quarters.
The Smith Barracks

Although the officers' quarters were constructed at Fort George, in November 1801 the house and offices of Surveyor General W. Smith had to be purchased in order to house all the garrison officers. These new quarters, located near Navy Hall, housed three captains, three lower ranked officers and their stickmen.

The Mess

There was apparently no mess at Fort George, because Colonel Landman, who was stationed at the fort in 1798, noted that the officers' mess of the garrison was in Navy Hall. The situation had not changed by 1812.

Ladders, Toilets and Sentry Boxes

Every building at Fort George had a roof ladder. In 1798 the construction of ten sentry boxes and ten standing and roof ladders was requested. An estimate dated 1806 called for two standing ladders and ten roof ladders. Eight pieces of pine, 32 feet long and 7 by 3 inches, 20 pieces of 16-foot pine hewn 5 by 3 inches and 20 feet of white oak 12 inches square were needed.

Bruyères noted in his report that two privies had to be constructed, one for the officers and the other for the soldiers. These two privies (built of masonry) measured 14 by 8 feet. Bruyères suggests that there were two others, but it is impossible to locate them. However, it is reasonable to assume that they were located not far from the barracks.

The Regiments

The size of the Fort George garrison averaged approximately 300 men, of six companies. It is difficult to fully determine which regiments composed the garrison, for the period from 1796 until 1800, because there are no returns for these years. In 1796 detachments of the 5th Regiment as well as some Royal Artillery detachments were working at Fort Niagara and at Navy Hall, moving the artillery and equipment from the fort to Navy Hall. Whether they supplied the
labour for the construction of the buildings at Fort George is not known. However, it is known that the Queen's Rangers were working on the construction of a warehouse at Navy Hall. 21 This building was not to be included within the Fort George enclosure, but the construction estimate for it is included in the estimates for other buildings at the fort, such as the central blockhouse, the powder magazine and the bakery. The Queen's Rangers were still at Fort George at the end of 1798; 22 whether they were there in 1799 is not known.

There is also evidence that Lieutenant-Colonel McDonell, of the 2nd Battalion Royal Canadian Volunteers, commanded Fort George in May 1798. 23 In December 1800 the Fort George garrison consisted of the 2nd Battalion of the Royal Canadian Volunteers (13 officers and 220 soldiers), a Royal Artillery detachment of 2 officers and 23 soldiers, and one captain of the Royal Engineers. 24

The 2nd Battalion of the Royal Canadian Volunteers was disbanded on 29 August 1802; 154 soldiers at Fort George were dismissed from the companies of Captains Drummond, McLean, McDonell, Wilkinson, McMillan, De Léry and Ferguson. 25 On August 30, 1802 Major Jasper Grant of the 41st Regiment was in command at Fort George. 26 The Queen's Rangers assembled at the fort in the fall of 1802 and were disbanded. 27

Major Grant and the 41st Regiment were relieved of their duties on May 25, 1803, at which time Lieutenant-Colonel Roger Hale Sheaffe of the 49th Regiment assumed command. 28 On August 14, 1803, Sheaffe relinquished his post to Lieutenant-Colonel Isaac Brock, also of the 49th Regiment. 29 Brock was in command until August 29, 1804, when he was replaced by Major W.B. Bleamire. He in turn was in command until September 23 of the same year, when he was replaced by Lieutenant-Colonel John Vincent, who remained in command until June 24, 1805. 30

The 49th Regiment was probably replaced by the 41st on the same date. In April 1806, when Lieutenant-Colonel Proctor was in command, Fort George was considered to be the headquarters of the 41st Regiment. The monthly report of the 41st Regiment for January 1808 indicated that there was a total of 435 soldiers and officers at the fort. 31 The June 1808 report mentioned for the first time the presence of a "Fort Major" in the person of Lieutenant Donald Campbell. 32 The number of soldiers decreased in October 1808 to 131 but rose in November to 164. This fluctuation occurred because the troops were on manoeuvres. 33 In February 1809, the number of soldiers climbed to 229. 34

In August 1809 the 41st Regiment was relieved by the 100th Regiment under the command of Major Hamilton: the 100th Regiment contained 435 soldiers, 35 who defended Fort George until August 1811. On that date the 41st Regiment returned with a garrison of 274 soldiers. 36

The Food Supply for the Troops

The food rations issued to the soldiers consisted of flour, peas, rice, pork, butter and rum. However, only the first three items were purchased locally. According to James McGill, Deputy Commissary, the
flour was stored in small barrels, while the peas were kept in large barrels. An inspection committee reported that the following items were present in the Fort George warehouse in July 1808: 67,816 pounds of good flour and 527 pounds damaged by mice; 41,600 pounds of good pork; 700 bushels of good peas; 4,308 pounds of good rice; 350 pounds of inedible butter and 295 gallons of good quality rum.

Barracks Furnishings

To begin with, the troops lodged in the central blockhouse slept in hammocks from 1796 until 1801 and perhaps until 1803. The construction estimate for the blockhouse mentions hooks for hammocks. A more tangible piece of evidence could well be Bruyeres' report dated 1802, in which he states: "It was intended by Lord Dorchester that these buildings should be provided with hammocks instead of berths." He believed that 192 soldiers could sleep in 48 double beds (berths), an average of four soldiers per bed. Were these beds distributed throughout the three blockhouses or were they in the central blockhouse alone? Note his suggestion that the central blockhouse should be used exclusively for lodging the troops.

In September 1808 military workers began work on the construction of beds, tables for receiving powder, and hospital cradles. A merchandise report dated August 1797, when the garrison contained approximately 300 soldiers, lists what was required: 75 pans, 75 pairs of pot hangers, 58 pairs of dog irons, 58 pairs of tongs, 58 fire shovels, 58 pairs of water buckets, 58 tables, 29 pairs of benches, 87 chairs, 58 ash boxes, 58 candle holders and three lanterns. Does this mean that there were 58 fireplaces? More likely this list is a warehouse requisition. Furthermore, it is impossible to determine what type of utensils were used by the soldiers.

This same difficulty arises in connection with the officers' utensils. Every officer brought with him his personal effects. However, it is difficult to estimate quantity and quality because everything depended upon his financial status. Thus, a list of personal effects belonging to a Lieutenant of the 100th Regiment has been compared with a list of basic effects issued to the officers and soldiers under legislation passed in 1795.

List of possessions of Lieutenant Dixon of the 100th Regiment:
1 chest
1 bedstead
1 curtain of Calico
1 Mattress, Bolster and Pillows
3 Blankets
4 sheets
4 pillow cases
1 quilt
3 Table cloths
6 Towels
4 Silver Spoons
9 Shirts
3 small do
6 pairs cotton hose
4 pairs Silk do
4 pairs Woolen do
2 pairs boots, 1 pr. new
2 prs. shoes
6 Neck cravats
6 pocket handkerchiefs
1 pr. leather Breeches
1 pr. Pantaloons
4 Vests
2 razors hone & Strap
1 pr. Cloth Breeches

List of items issued to the officers and soldiers in 1795:

Infantry officers are entitled to:
1 Closet
1 table
2 Chairs
1 Coal Box
1 Coal Tray
1 Bellows
1 Fire Irons
1 Fender

The non-commissioned officers and soldiers were entitled to:
12 single bedsteads or 6 double
12 single mattresses or 6 double
12 single Bolsters or 6 double
12 single pairs Blankets or 6 double
12 pairs sheets single or 6 double
12 single Rugs or 6 double
1 Round Towel
1 Closet or Shelves
1 Table
1 Rack for Arms
1 Set of Fire Irons
1 Fender
3 Forms

The following utensils were issued:
2 Iron Pots
2 Wooden Lids
2 Pair of Iron Pot Hooks
2 Iron Trivets
2 Wooden Laddies [sic]
1 Iron Flesh Fork
1 Frying Pan
2 Large Bowls or Platters
12 Small Bowls or Porringers
12 Trenchers
12 Spoons
1 Water-Bucket
1 Coat Tray
l Candlestick
l Tin Can for Beer
l Large Earthern Pan for Meat
l Box or Basket for carrying Coals
2 Drinking Horns
l Wooden Urinal
l Broom
l Mop

Note that items issued to the non-commissioned officers and to soldiers were shared by 12 persons.

Remarks Concerning the Plans

A plan dated 1790 indicates that the fort was to be constructed on a four-sided area located to the northeast of Navy Hall (Fig. 16). However, a 1796 plan (Fig. 4) indicates that the buildings constructed by the military personnel were located in the southeastern part of the four-sided area. Therefore, comparing this with the 1799 plan (Fig. 2), it is obvious that the site of the powder magazine is not the same. Furthermore, the original construction estimate dated 1796 mentions that the officers' kitchen would be constructed behind the main blockhouse. On this 1796 plan the officers' kitchen was located near Navy Hall, opposite the powder magazine.

Furthermore, the 1799 plans do not agree with one another, which suggests that they do not all date back to 1799. A 1799 plan (Fig. 7) shows only one passage in the palisade between the powder magazine and the octagonal blockhouse, whereas another plan (Fig. 2) indicates two passages, and a third plan shows no passage (Fig. 6). This latter plan was probably made around 1803-4, because the octagonal blockhouse at that time was connected with the fort by a palisade. Note also that these plans do not show all the buildings, such as the bakery, privies and so on. Furthermore, an 1810 plan (Fig. 10) contains unidentified buildings and omits others such as the guardhouse and the palisade between the octagonal blockhouse and the fort.
1812 - The Changes

In February 1812 military secretary Freer suggested to Bruyères that he place the fort in a state of defence. Captain Vigoureux of the Royal Engineers was to be in charge of the work, but no description is available. A "Temporary Magazine for the reception of the spare powder at Fort George" was constructed in April. The repair work was started in June: "They are repairing Fort George... A number of boats are daily employed, manned by their soldiers, plying between Fort George and Queenston, conveying stone, lime and pickets for necessary repairs." The Americans observed in September that the British had started to work on the fort: "The enemy are extending their works at Fort George." According to an order given by Brock, all the officers and soldiers of the garrison had to complete the labour, because "new works were thrown up and old ones modified to meet us at every point." The works were almost completed by September 20. Brock and Macdonell were buried on October 17 in the York bastion, the construction of which had not been completed by that date. Sheaffe, Brock's successor, wrote to Prevost in November: "We are yet employed in raising works for the protection of the interior of Fort George." What kind of work was being done at Fort George during the summer of 1812? It is hard to determine. However, changes were definitely made to the fort's perimeter, because Bruyères notes in his February 1813 report: "Fortunately the line of the parapet to the Curtains opposite the American Shore was completed last fall." Bruyères wrote:

It will be indispensably necessary to complete this Fort as a Field Work as soon as the season can possibly admit of removing Earth; to form the Parapet of good Sod Work of Sufficient height and thickness to resist battering from the opposite shore. It will be further very desireable to diminish the Line as much as possible by cutting off the present Work on the South East Front in order to reduce the extent of the Fort which is rendered very weak by enclosing too large a space of Ground; it will then become much more compact and defendable; at the same time it will decrease the Labour and Expense necessary for its construction.... Splinter proof Barracks to contain about 400 Men will be required to be constructed in the rear of the Curtains to secure them from the effects of Shot or Shells...
Stabling for the Artillery Horses with Barracks for the Drivers and Royal Artillery must also be provided within the Fort. The present Blockhouses are so much exposed that it will be necessary to take down and remove the Upper Story of these Buildings and to lower the whole to the level of the proposed terreplein. They will then become sufficiently secure to contain the Ordnance and Commissariat Stores for the use of the Garrison. The Powder Magazine can only at present be made temporary constructed of Log Work well covered with Earth....Gun Sheds are required for the Car Brigade and Field Guns in the Fort.

It now appears that Fort George's structure was changed: The question is no longer who was in charge of the work, as we know who this was, but rather when was it completed. Were the works already in progress in the fall of 1812 and were they completed in the spring of 1813? It would then have been a work executed in two stages. However, the following problem arises: if the work suggested by Bruyères was done in 1813, did the troops of the garrison have time to finish it? Would the period from February to May have sufficed to execute this huge project?

On June 28, 1812 American Christopher Van Deventer was assigned the task of drawing a plan of the new Fort George and writing a description of it. These were signed by Van Deventer. There is no way of determining the exact date on which he wrote his report, but his description corresponds to the proposals put forth by Bruyères in February, 1813. The fact that Van Deventer did not believe a disembarkment at Queenston would be possible, perhaps because of the defeat suffered on October 13, 1812, leads us to believe that the plan was drawn in April or May, 1813. In fact, this officer arrived at the Niagara frontier on April 18, 1813. But was it physically possible for the British to complete such a vast undertaking in a few months (March, April and May)? This is doubtful. And would an officer take almost ten months to execute such an important mission in wartime? So the Bruyères proposal of February 1813 was probably a proposal for work already in progress. Finally, Van Deventer mentioned that the garrison of the fort was 400 men. According to the figures we have, this size of garrison did not exist at Fort George until between May and September, 1812. Van Deventer says that only 12-pounder guns were set up in batteries, and we know that 24 pounders were not mounted until October of 1812. Possibly, then, the plan was drawn between late June and the end of September, 1812. Van Deventer was at Fort Niagara in July, 1811, but by the end of that year he was at New York. There is no indication in correspondence of his having visited Fort Niagara during 1812. We are dealing here with a question of interpretation which in no way alters the main conclusion of this study: it was the British who altered the structure of Fort George.

This plan (Fig. 17) indicates that the southeast part of the fort was cut and new barracks constructed. Furthermore, the person who signed the text had unquestionably been admitted inside the fort, because the details were quite precise:

Fort George is situated on the West side of Niagara river, 3/4 of a mile from its mouth. It stands two hundred yards
back from the margin of said river on the Summit of its bank. It is an irregular Pentagon; and its principal strength consists in four Bastions with Sod Revetments, connected (except on the N.W. side, which is parapetted throughout) by lines of palisades answering to Curtains enclosing about four acres. One of these Bastions defends the gate in the East, to the gate in the Northwest; the other the W S W and south directions. Each of these Bastions contain four 12 pounders, mounted on Ship or low Garrison Carriages. No greater number of Guns can be mounted, unless new Bastions may have been constructed very recently.

Between the River and the fort is a low piece of Ground, of 6 or 8 acres. This spot is covered with Stores and Dwelling houses, and communicates with the fort by one road only, as you ascend the Bank. Here you enter by a gate defended by a Bastion on its right and a line of Palisades which stretches from it to the Bastion on the South Corner. The Gate on the N.W. side is rendered more difficult to approach by a fossé terminating in the Shoulders of the Bastion which defends it; and which is about 50, or 60 yards long, 14 feet wide and ten deep, and is the only piece of ditch about the whole work.

The Parapets of these Bastions are about six feet thick, with Embrasures and Merlins, sufficiently high to hide from view the men behind them.

On the N W side of the Fort, distant 1/2 mile, is the village of Newark. Fort Niagara has full Command of it, being about 700 yards distant. The Country that bounds Fort George, on the W S W & south, is level and smooth and freed from Trees and Bushes to considerable extent around. It is level with the fort; but exhibits no position (within the range of the Guns of the fort) that commands it. In fine, all that part of the Country which lies below the mountain, (which crosses the Country East and West and occasions the Falls of Niagara) and extends to Lake Ontario is champaign and populous......

Note. The Berme of the Ditch is fraized, but the Bastions are not. They present the Sod revetment only to front....

Simultaneously with the Embarkation from our Shore, directly opposite Fort George, the Batteries here would be but 700 yards apart, and level with each other. Fort George is 3/4 of a mile above fort Niagara, and is 14 feet higher; so that, our fort could not, but by means of her Block Houses (which are stone and the upper tier of Guns, which are scarcely level with the bottom of the Embrasures of their Bastions) do them any essential injury. After you ascend the River 3/4 of a mile from Fort Niagara, the Bank rises to a level with the British Fort. Here then is the only point on our shore from which we can attack that fortress with success. Fort George contains two Block
Houses; these are constructed of wood; and slender; no Guns are mounted on them, being intended only for Infantry. One of them defends the Gate in the East; the other stands on South angle, and is intended to answer as a Bastion to it. It may be proper to mention here that, that part of the work which extends from the Bastion in the West opposite the river South to this angle without a Bastion, nor by any Cannon whatever. The mere shell of a Block House before mentioned is its only defence.

These Bastions are not more than eight feet above the level of the surrounding plain - The Magazine is also wood. It stands under the South line of Pickets, sunk deep into the Earth; its roof is scarcely on a level with said Pickets.

This Fortress is now Garrisoned by about 400 Troops.

Van Deventer's is a description of the new Fort George, the "second" fort. The only way to compare these two forts is by juxtaposition: at this date, the powder magazine, octagonal blockhouse, hospital and kitchen, officers' quarters and kitchens were outside the new fort. This may also apply to the guardhouse and the three blockhouses. It is impossible to be precise, because these buildings might no longer have been in existence - Fort George had been bombarded several times. Therefore the American plan describes new buildings in a new fort. It is also essential to compare this plan to the 1814 plan (Fig. 19), which shows that the curtain between the various bastions was no longer just a simple palisade, at least on the southeast and southwest flanks.

It would therefore seem that the major part of the proposed work had been executed during the summer and fall of 1812. The structure of Fort George was changed by the British.

Armament

Another detail of importance in the light of this reasoning is this: Van Deventer mentioned in his description on the fort that each of the bastions was defended by only four twelve pounders and that other guns could not be mounted unless other bastions were constructed. Furthermore, Brock had to send large guns from Fort George to Amherstburg in July 1812. The twenty-four pounders taken at Detroit were not installed in a battery at Fort George until the end of September 1812. A return dated December 15, 1812 shows that the armament of Fort George consisted of:

<table>
<thead>
<tr>
<th>Brass</th>
<th>Iron</th>
</tr>
</thead>
<tbody>
<tr>
<td>12 pr</td>
<td>1</td>
</tr>
<tr>
<td>6 pr light</td>
<td>2</td>
</tr>
<tr>
<td>5-1/2 in. howitzer</td>
<td>1</td>
</tr>
<tr>
<td>5-1/2 in. mortars</td>
<td>2</td>
</tr>
<tr>
<td>4-2/5 in. mortars</td>
<td>2</td>
</tr>
<tr>
<td>5-1/2 in. mortars</td>
<td>1</td>
</tr>
<tr>
<td>10 in. mortars</td>
<td>1</td>
</tr>
<tr>
<td>8 in. mortars</td>
<td>2</td>
</tr>
</tbody>
</table>

All these guns were "mounted on garrison and travelling carriages."
Fort George's garrison in May 1812 consisted of "a Captain's command of artillery and about 400 men of the 41st regiment. ...The Militia force in the neighbourhood of Fort George does not exceed 2,000 Nominal Men." A detachment of the 41st Regiment and the flank companies of the 1st and 4th regiments of the Lincoln Militia assured the fort's defence in June. The "Car Brigade" was completed at the beginning of July when the Royal Artillery amounted to 80 Officers and soldiers, whereas most of the soldiers of the 41st Regiment were at Amherstburg. On September 4, the flank companies of the 49th Regiment took care of the fort's defence. On the 18th of the same month, a detachment of the Royal Newfoundland was stationed at Fort George. A report dated November 12 states that on that day there were at the fort:

<table>
<thead>
<tr>
<th>Unit</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>Royal Artillery</td>
<td>1 officer, 1 bugler, 31 soldiers</td>
</tr>
<tr>
<td>Royal Engineers</td>
<td>1 officer, 11 officers, 28 sergeants, 15 drummers, 337 soldiers</td>
</tr>
<tr>
<td>41st regiment</td>
<td></td>
</tr>
<tr>
<td>Royal Newfoundland Fencibles</td>
<td>4 officers, 5 sergeants, 2 drummers, 107 soldiers</td>
</tr>
<tr>
<td>Glengarry Light Infantry</td>
<td>1 officer</td>
</tr>
</tbody>
</table>

Thus, a total 475 soldiers and 69 officers. On November 25, only 385 soldiers remained, divided between:

<table>
<thead>
<tr>
<th>Unit</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>Royal Artillery</td>
<td>1 officer, 20 soldiers of whom 3 were ill</td>
</tr>
<tr>
<td>Royal Engineers</td>
<td>1 officer, 10 officers, 20 sergeants, 16 drummers, 155 soldiers, of whom 10 were ill</td>
</tr>
<tr>
<td>41st regiment</td>
<td></td>
</tr>
<tr>
<td>49th regiment</td>
<td>4 officers, 7 sergeants, 4 drummers, 130 soldiers, of whom 17 were ill</td>
</tr>
<tr>
<td>Royal Newfoundland Fencibles</td>
<td>2 officers, 3 sergeants, 53 soldiers of whom 4 were ill</td>
</tr>
<tr>
<td>Glengarry Light Infantry</td>
<td>1 officer</td>
</tr>
</tbody>
</table>

On December 21, 467 soldiers of the same regiments were present.

<table>
<thead>
<tr>
<th>Unit</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>Royal Artillery</td>
<td>3 officers, 41 soldiers</td>
</tr>
<tr>
<td>Royal Engineers</td>
<td>1 officer</td>
</tr>
<tr>
<td>8th regiment</td>
<td>1 officer</td>
</tr>
<tr>
<td>41st regiment</td>
<td>10 officers, 21 sergeants, 16 drummers, 169 soldiers</td>
</tr>
<tr>
<td>49th regiment</td>
<td>4 officers, 7 sergeants, 4 drummers, 153 soldiers</td>
</tr>
<tr>
<td>Royal Newfoundland Regiment</td>
<td>4 officers, 5 sergeants, 2 drummers, 104 soldiers</td>
</tr>
</tbody>
</table>
Glengarry Light Infantry 1 officer

What happened at Fort George between June and December 1812? The real bombardment did not start until October. The period from June until October was used to make the necessary repairs. In the meantime armistices were signed. On October 13 the Americans bombarded Fort George and some barracks were destroyed. The roof of the powder magazine, containing 800 barrels of powder, caught fire. However, the fire was brought under control. All the depots near Navy Hall were destroyed.25

On October 21 the British opened fire on Fort Niagara, using "heated shot." The Americans, in answering the fire, damaged the barracks housing the soldiers of the 49th Regiment. On November 21, following a ceasefire, the Americans answered a British cannonade and destroyed the Navy Hall mess as well as the central building within the Fort.26 It is not known which building was involved - possibly the central blockhouse or the new officers' quarters as shown on the American plan, which may date from September, 1812. At sunrise on November 28 the Americans launched a land attack which at first pushed back the soldiers of the 49th Regiment sent to meet them; but they had to withdraw and return to Fort Niagara after a second unsuccessful attempt to take the fort.27 After that date calm presided and the troops moved into their winter quarters.

It should be noted, however, that some 300 civilians and prisoners were in Fort George in October, lodged in the blockhouses.28 There were only 11 prisoners in the fort in December.29 They may have been lodged in the guardhouse.

1813 - American Capture of the Fort

Garrison

In 1813 Fort George's garrison increased. The First Battalion of the 49th Regiment replaced that of the 41st in March: it consisted of 622 men.30 The 8th Regiment also supplied a few companies.31 At about the same time, the First and Fourth regiments of the Lincoln Militia supplied 6 companies of 50 men each. However, there was no place to lodge them.32 A monthly report indicated that the First Battalion of the 8th Regiment contained 901 soldiers in April, and the First Battalion of the 49th contained 621 soldiers.33

In the beginning of May, the Fort George garrison consisted of:34

<table>
<thead>
<tr>
<th></th>
<th>Fit</th>
<th>Unfit</th>
</tr>
</thead>
<tbody>
<tr>
<td>Royal Artillery</td>
<td>26</td>
<td>4</td>
</tr>
<tr>
<td>8th regiment</td>
<td>205</td>
<td>9</td>
</tr>
<tr>
<td>41st regiment</td>
<td>165</td>
<td>0</td>
</tr>
<tr>
<td>49th regiment</td>
<td>232</td>
<td>23</td>
</tr>
<tr>
<td>Black Corps</td>
<td>23</td>
<td>5</td>
</tr>
<tr>
<td>Militia</td>
<td>172</td>
<td></td>
</tr>
<tr>
<td>Artillery</td>
<td>88</td>
<td></td>
</tr>
<tr>
<td></td>
<td>1011</td>
<td>41</td>
</tr>
</tbody>
</table>
There were only 790 soldiers in garrison on May 13.\textsuperscript{35} On May 19 the garrison was divided into three columns ready to face the enemy. Only one company of the 49th Regiment, the guards and a few militiamen assured the safety of the fort.\textsuperscript{36}

Armament

By the end of March the Fort George artillery consisted of:\textsuperscript{37}

<table>
<thead>
<tr>
<th>Garrison Artillery</th>
<th>Field Artillery</th>
</tr>
</thead>
<tbody>
<tr>
<td>2 24 pounder iron carronades</td>
<td>1 6 pounder brass</td>
</tr>
<tr>
<td>1 12 pounder iron carronade</td>
<td>1 5-1/2 in. howitzer</td>
</tr>
<tr>
<td>1 10 in. mortar brass</td>
<td>1 6 pounder iron</td>
</tr>
<tr>
<td>1 8 in. mortar brass</td>
<td></td>
</tr>
</tbody>
</table>

The eighteen pounder carronades were used to equip a ship.\textsuperscript{38}

The American launched boats on May 24 and fired on the fort until around 2 o'clock in the afternoon. Harvey observed that all the wooden buildings had burned down.\textsuperscript{39} When the bombardment stopped, the garrison repaired the parts of the palisade destroyed by the howitzers.\textsuperscript{40}

On the 27th at dawn the Americans opened fire on Fort George. Taking advantage of morning haze, they advanced in three divisions by boat and landed at 2 Mile Creek. Between 3,000 and 4,000 men supported by artillery advanced in three columns. They met with slight resistance (from the Glengarry Light). Lieutenant-Colonel Harvey then decided to retreat.\textsuperscript{41} At 11 o'clock Harvey gave orders to blow up the fort as soon as the troops had withdrawn from it. The guns were spiked and the ammunition destroyed. Claus mentioned that one or two small powder magazines were blown up.\textsuperscript{42} Harvey made his decision after the palisade had been almost entirely destroyed. There remained no further obstacles to the march of the Americans.

Holcroft described the siege as follows:

I arrived to witness the destruction of the 2 sheds in which were many valuable Stores, the Carriage of the 24 pr at the Flag Staff had been struck in two places...and from the approximation of the Flames, that Gun could not be used; the brass 12pr received an 18pr shot through both the cheeks of the Carriage & which broke the right wheel & carried away the tube box which was buckled on the Gunner serving as No. 9. The firing then remained with one 24pr in the Cavalier Bastion & a 12 pr in the N.W. Bastion.\textsuperscript{43}

According to the American lists of prisoners, the following regiments defended Fort George: Royal Artillery, 8th Regiment, 41st Regiment, 49th Regiment, Royal Newfoundland Regiment, Glengarry Light Infantry, 19th Light Dragoons, 100th Regiment, and Royal Scots.\textsuperscript{44} Also present were 27 soldiers of the Black Corps.\textsuperscript{45}

Fort George fell into the hands of the Americans on May 27. The American forces consisted of the Light Artillery, the 6th, 15th, and 16th infantry regiments, the New York Volunteers, and the Winder, Chandler and Boyd Brigades.\textsuperscript{46} According to an American officer, Fort George was in ruins: "Every building had been burnt and even the
fire engine destroyed...Nothing was saved but those articles placed in detached magazines in the ramparts." This detail should be noted, because all the British officers mentioned that one or two powder magazines had blown up. On May 27, only the stone powder magazine remained standing at Fort George.

In June 6,000 American soldiers, several hundred of whom were sick, were observed at Fort George. On June 9 the Americans withdrew their troops from Fort Erie to concentrate them at Fort George: "they hastily began throwing up Field Works." An article in the Buffalo Gazette described the Fort in July: "But the place is not considered in any danger; its batteries, breastworks and defences are very formidable and commanding. A battery has been erected on the point of the terrace fronting the lake mounting on long 12 and 6-pounder." The New York Evening Post stated "The army... are entrenched on the right of the fort, which is garrisoned pretty strongly by artillery and other troops."

In August the American garrison at Fort George consisted of:

<table>
<thead>
<tr>
<th>Artillery Type</th>
<th>Fit</th>
<th>Unfit</th>
</tr>
</thead>
<tbody>
<tr>
<td>Light Artillery</td>
<td>302</td>
<td>52</td>
</tr>
<tr>
<td>Dragoons</td>
<td>200</td>
<td>17</td>
</tr>
<tr>
<td>Artillery</td>
<td>162</td>
<td>70</td>
</tr>
<tr>
<td>Infantry</td>
<td>3032</td>
<td>862</td>
</tr>
<tr>
<td></td>
<td>3696</td>
<td>1001</td>
</tr>
</tbody>
</table>

However, the troops' morale was very low; they had a constant fear of being attacked by the British.

An American deserter described the defence system put up by the Americans as follows:

Respecting the intrenchments that which runs from the church towards the water finishes at the top of the hill, but from thence a trench two or three feet deep, with a row of pickets of nearly twelve feet in length, slanting outwards is continued down quite to the water's edge... The line of sentries is continued to the water, a considerable distance outside. The encampment on the other side is said to contain about 500 dismounted cavalry and a few Indians. On the face of the fort towards Queenston, there are five guns, 18-pounders and they are going to begin to build barracks for the troops there. They have not altered the work which covers that face of the fort. A considerable space remains between the end of it and the end of the new works, very slight. Conceives the top of the parapet not more than two or three feet, the lower part 5 or 5 feet. When the breastworks are manned the men are at extended order, about four feet hereunder. Believe that there are about 15 field pieces.

According to another deserter, "the breastworks are very slight, about three or four at bottom, the ditch between 3 and 4 feet deep, no palisades. Agrees respecting the trench down to river, and the pickets say there is a small redoubt, which flanks the ditch and pickets."
The regular American troops were replaced by militia in September 1813 in preparation for the attack upon Kingston. Only 1460 men remained at the fort, under the command of Colonel Scott of the 2nd Artillery Regiment. In October, the American troops were working on improving the fortifications. On October 17 many of the regular troops embarked for Sacket's Harbour. Only one company of 60 soldiers stayed behind as the garrison to defend Fort George - a company of the 24th Infantry Regiment helped by a few militiamen. This was the period during which most of the terms of the militiamen expired. As a result they had to sleep in tents and not liking the experience, many decided to go home. Knowing that the British were marching on Fort George and that only a small garrison remained behind, Commanding Officer McClure decided to evacuate the fort.

On December 12, 1813, Murray marched on Fort George with a force of approximately 500 men. On hearing our approach he layed the town of Newark in ashes, passed over his Cannon and stores but failed in an attempt to destroy the fortifications which are evidently so much strengthened whilst in his possession.

The Americans left their equipment behind; the guns and war material were thrown into the moats. The British found:
- one long 18Pr, four 12Pr, two 9Pr, an immense quantity of shot with camp equipage for 1500 men. The Arsenal was burnt to the ground & the principal Magazine blown up in which were contained a quantity of arms and ammunition, some temporary magazines containing fixed Ammunition have been saved.

According to Charles Askin, the fort was unrecognizable, and there were no barracks in it.

The British worked on the reconstruction of the fort from December onward. They had to bring it into a state of defence which would not involve too much expense, because the earthworks had not suffered too much damage. However, "some cover must be erected for a small Garrison of (Log) 150 Men and the Batteries armed towards the opposite Bank as they completely command the approach to Fort Niagara." Prevost suggested that "the land front being strengthened and improved whilst the water front towards Fort George should be weakened if not laid open to Batteries to be established on our shore."
The Reconstruction of Fort George

After recapturing Fort George, the British overpowered Fort Niagara. The effects of the war required immediate repairs to the two fortifications. However, Fort Niagara’s strategic value was considered to be of primary importance, and reconstruction was concentrated on the American side. Bruyères, in his instructions for the defence of Niagara, left no room for doubt: "the Works at Fort George to be repaired and an intermediate Battery between Fort George and Mississauga. Point to be established....These are essential positions to be immediately occupied with strong batteries to act against the opposite shore."¹ Lieutenant-Colonel Harvey was even more explicit when he described Fort George’s role:

The occupation of Fort George as a flank to Fort Niagara is essential to the defence of the latter - A Battery of a few heavy guns to bear upon the Esplanade of Fort Niagara should therefore be immediately completed in Fort George....A small detachment...would be sufficient to place in that Fort (George) which is in its turn protected by as it is commanded from Fort Niagara.²

Drummond was of the opinion that there should be no delay in repairing Fort George because he believed "the former [Fort George] in so defective a state of defence, as to be incapable of holding out for any length of time, should it be seriously bombarded."³ Nevertheless a garrison was given the responsibility for the defence of the fort for the remainder of the war. It is difficult to state the exact number of soldiers involved, because the reports specify that troops were installed in Fort George and environs (Mississauga, Chippawa and Queenston). Thus, in February 1814, the garrison consisted of soldiers of the Provincial Dragoons, the First Company of the Royal Scots and the Coloured Corps, a total of 123 men under the command of Lieutenant Jenoway of the Royal Scots.⁴ In April, the garrison consisted of the First Battalion of the 1st Regiment with a total number of 1,014 men.⁵ In June Fort George contained 1,033 soldiers, from nine different regiments, under the command of Lieutenant-Colonel Gordon of the Royal Scots:⁶

<table>
<thead>
<tr>
<th>Regiment</th>
<th>Number of Soldiers</th>
</tr>
</thead>
<tbody>
<tr>
<td>19th Light Dragoons</td>
<td>33</td>
</tr>
<tr>
<td>Provincial Dragoons</td>
<td>16</td>
</tr>
<tr>
<td>Royal Artillery</td>
<td>23</td>
</tr>
<tr>
<td>Royal Marine Artillery</td>
<td>32</td>
</tr>
<tr>
<td>Incorporated Militia Artillery</td>
<td>2</td>
</tr>
</tbody>
</table>
Royal Artillery Drivers 7
1st Royal Scots 765
103rd regiment 129
Coloured Corps 26

By early July there were 2,418 soldiers in the immediate vicinity of Fort George, distributed as follows: 7

<table>
<thead>
<tr>
<th>Unit</th>
<th>Soldiers</th>
</tr>
</thead>
<tbody>
<tr>
<td>19th Light Dragoons</td>
<td>68</td>
</tr>
<tr>
<td>Provincial Dragoons</td>
<td>16</td>
</tr>
<tr>
<td>Royal Sappers &amp; Miners</td>
<td>6</td>
</tr>
<tr>
<td>Royal Artillery</td>
<td>165</td>
</tr>
<tr>
<td>Incorporated Militia Artillery</td>
<td>10</td>
</tr>
<tr>
<td>Royal Artillery Drivers</td>
<td>29</td>
</tr>
<tr>
<td>1st Royal Scots</td>
<td>881</td>
</tr>
<tr>
<td>8th or King's</td>
<td>526</td>
</tr>
<tr>
<td>100th Regiment</td>
<td>382</td>
</tr>
<tr>
<td>Incorporated Militia</td>
<td>309</td>
</tr>
<tr>
<td>Coloured Corps</td>
<td>26</td>
</tr>
</tbody>
</table>

By late July the troop situation at Fort George was as follows: 8

<table>
<thead>
<tr>
<th>Unit</th>
<th>Soldiers</th>
</tr>
</thead>
<tbody>
<tr>
<td>Royal Artillery</td>
<td>39</td>
</tr>
<tr>
<td>Royal Artillery Drivers</td>
<td>14</td>
</tr>
<tr>
<td>1st Royal Scots</td>
<td>363</td>
</tr>
<tr>
<td>100th Regiment</td>
<td>276</td>
</tr>
</tbody>
</table>

In September the 1st Battalion of the 8th Regiment and the de Watteville Regiment supplied garrisons of 600 and 694 men respectively. 9 In October, the de Watteville Regiment alone was defending the post, under the command of Major Stovin.10

The fort's garrison appears impressive, but such was not the case for the armament. In April, two 24-pounder brass guns were mounted; however, they were not long in service because they were used to defend another post.11 Riall described the weaponry of the fort in July 1814:

Fort George has not as you imagine a 24 pr mounted in it - there are 3-18 pr, 2 Garrison 12 pr and 2 Field 12, that were brought from Queenston Mill, one 9 and an 8 inch Mortar and Howitzer but I do not think the 12 pr which are mounted in the land or western face are sufficiently heavy in case the enemy shall erect Batteries against it.12

Fort George was no longer as important as it had been before the war. Nevertheless it had to be retained in case of aggression on the part of the Americans. The defense work did not progress rapidly because of a shortage of labour.13 After the month of June a guardhouse, officers' barracks, two barracks for the soldiers and one powder magazine were constructed. These buildings were located within the fort. The defense system was too weak and Riall "gave direction that the Rampart of the North Face of Fort George should be levelled in order to open the plain as much as possible to the fire of Niagara."14 We know nothing more than where the buildings within the fort are located. It is impossible to determine whether the work suggested by Riall was actually executed.

Nevertheless a description of the fort of 1815 suggests that other work had been performed:
The Western and 2 southern Fronts have been reformed - Barracks have been built within the Fort for 300 Men - as I am of opinion that its site is much inferior to that at Mississauga Point, I would recommend that what should further be done, should be to level the old works to the southward and eastward and to secure it from assault without going to any great expense.  

Drummond alleged that the fort was useless and that it should be demolished. However, Drummond's opinion was not shared by others, and Fort George was preserved. Nevertheless, it is difficult to state whether other buildings were constructed inside the fort, and it is impossible to locate them due to lack of plans. On the other hand it is known that public buildings were not to be constructed within firing range of Fort Niagara. Fort George required much in the way of repairs. Drummond wrote to Bathurst: "I have given orders in consequence for the proposed alterations and improvements to be completed and the Expense of repairing and keeping up the old and useless Fort George already trembling into ruins to be discontinued." All repairs during the year 1815 were done by local contractors, except for the bastion platforms and the other repairs of a military nature.

Commanding officer Macdonell described Fort George in December 1815 in the following terms:

I conceive it my duty to state I have found in a most incomplete and inefficient State of Defence and very defective in point of comfort to the Troops...Fort George is so unfinished, has such indifferent cover for Troops, is particularly exposed to a Concentric Fire of which (we have had experience) the Americans so well know the range, affords so much cover to an Enemy's advance in the remains of the old more extensive Work - has so poor a Magazine, that is not shellproof tho' containing Three Hundred Barrels of Powder within 700 Yards of the other Shore - has no crenaux towards the Rampart in its splinter proof Barracks, which from some defect in the Chimneys were lately on Fire and one of which is nearly falling down - and is withal so extensive for its Garrison that I would not well know what to do with it in the event of Attack altho' it must be defended.

The Fort George garrison in May 1815 consisted of 884 men divided over the regional territory. This involved the 1st Battalion of the 90th Regiment, which relieved the de Watteville Regiment. In July, the Canadian Fencibles took responsibility for the fort's defense. In August 1816, the 99th Regiment replaced the Canadian Fencibles.

One building inside the fort was used as an armoury in 1816: "A small Hut situated in Fort George has been hitherto used by the Ser8 Armourer of the Regt as his Working Shop, it is however, so wretched a place that it is impossible he can brown the arms of the Regiment therein." Unfortunately we do not know where this building was located.
Repairs were made to the powder magazine by virtue of an estimate of £12/1/0 dated September 23, 1816. The estimate does not describe the nature of the repairs. Repairs were also made to the barracks. An estimate dated September 30, 1816 provides for £19/4/8 to remove the clay behind the barracks, which was making them very damp, and to fill in the cracks of the outside walls as well as repair the roofs that were leaking. The following materials were required:

- 2,650 feet of one inch pine
- 11,500 pine shingles, 18 inches
- 51 pounds of 20d nails
- 78 pounds of 12d nails
- 66 pounds of 6d nails
- 38 pairs of large HL hinges
- 62 "sliding bolts"
- 18 latches and catches
- 5,000 bricks
- 50 barrels of lime
- 10 bushels of hair
- 120 pounds of iron
- 6 bushels of charcoal

The estimate mentions that the two barracks had a total surface area of 180 by 120 feet, and that the largest measured 110 by 20 feet. Possibly the smaller of the two barracks was 70 by 20 feet.

By 1815 Fort George was considered to be inefficient and very uncomfortable. In 1816, the buildings were so dilapidated that a recommendation was made to use Fort George as a depot and to construct a better fortification at Mississauga, which offered better defence advantages.

An inspection committee observed in 1820 that conditions were unhealthy at Fort George:

The left Wing of the Barracks wanted glass in the Windows of the first building. House no 2 in the same way occupied as orderly room & Guard House Wants several panes of Glass. A Board wanting to the Guard Rest. Front Division of the Barracks occupied as Taylor's Shop & Store Room was very much out of repair - the Floor much broken and the side of the House not water proof.

The right Wing of the Barracks occupied by the Men as Barracks Rooms and School Room, was found to admit the Water in many Parts of the Roof, the Floors of the Rooms in Wet Weather are overflowed & several boards wanting to complete the Floors. The loop holes want Glass throughout this Wind - The Centre Building in a bad state and only kept up by props....Several doors lying on the Ground for Wnt of Hinges. No locks in the doors.
Fort George Abandoned, 1817-28

The commanding officer of Fort George, Colonel Grant of the 70th Regiment, (which replaced the 99th Regiment in May 1817) mentioned only Butler's Barracks, which were also in ruins, in his description of the buildings. He drew the conclusion that "the buildings are of that kind that I would not recommend any more being done to them than what is absolutely necessary."31

The second fort did not have an officers' mess either; in fact, the mess was to be constructed out of the supply depot at Navy Hall.32 A "Parade Ground" was not established at Fort George until June 1817. At that time there was some military activity, because powder was sent from Kingston.34 However the fort's barracks had rotted to such an extent that it was decided to use the house of the "Fort Major" as staff quarters.35 There were no doors or windows in the barracks; the soldiers' barracks had no bedsteads or straw for mattresses.36

The privy located behind the officers' barracks was repaired in 1818. According to a letter written by Sherbrooke, "the Barracks at Fort George are in so ruinous a state that they cannot possibly be habitable for the troops much longer;" at any rate consideration was already being given to reducing the Fort George garrison.37 Nevertheless an estimate was approved in September 1818 for the repair of the fort's barracks and the construction of a privy.

The following materials were needed to repair the barracks:

5,000 bricks
280 bushels of lime
2,000 feet of wooden laths
10 bushels of hair
10,000 shingles
150 pounds of 6d nails
30 pounds of 12d nails
95 pounds of 20d nails
30 lbs of 7 inch nails (spikes)
3,000 feet of 1-1/2 inch boards
2,000 feet of 1 inch boards
50 pairs of 2-1/2 inch Butt Hinges with Screws
6 pairs of Strap Hinges

The following materials were needed for the construction of the privy:

4 toises of stone
24 barrels of lime
1,000 feet of lath wood
10 pieces of pine, 20 feet long and 6 inches square (Scantling)
6 pieces of pine, 14 feet long and 6 inches square (Scantling)
30 pieces of pine, 10 feet long and 6 inches square (Scantling)
20 pieces of pine, 10 feet long and 6 by 5 inches (Scantling)
700 feet of pine boards, 1-1/2 inches
600 feet of 1 inch pine boards
1,000 feet of 3/4 inch pine boards
26 lbs of 20d nails
40 lbs of 12d nails
70 lbs of 6d nails
3 pairs of strap hinges, 18 inches
16 window panes, 7-1/2 by 8-1/2 inches
2 lbs of putty
3 sets of latches and catches

On the basis of this estimate it would appear that there was a stone foundation, that the interior was lathed and that there may have been two windows. The floor seems to have been made of 1-1/2-inch boards, the roof of 1-inch boards and the partitions of 3/4-inch boards. There were three doors in the building and apparently the roof was not shingled.

It is difficult to establish the nature of the repairs to the barracks. The work was executed by civilian labour, perhaps during the spring of 1819.

The fort's commanding officer suggested a few solutions in February 1819 to remedy the situation of the barracks:

I have had a diligent examination made...into the state of the two Log Barracks (for Men) in Fort George - one 110 feet long, the other 75 feet and each 20 feet wide. The principal and only Complaints which ever have been made against these Barracks are their dampness and their being so low as only 7 feet within - Their dampness proceeds from their floors being below the level of the ground.  

Grant suggested the following:

To raise the floor by one foot - To raise the side walls so as to make the height of the rooms 10 feet within - To take away two crumbling brick partitions which now divide the Building into 4 rooms [the 110-foot barracks] and to leave only the center partition dividing it into two - To erect a roomy porch at each door to protect from bad weather and to contain moveable Barrack entries. The present roof can be made to suffice and all the lumber which will be wanted...can be obtained from the Logs now forming the Splinter proof roof of the present Building - I look upon it that this alteration will give a Barrack of a superior description capable of containing about 90 or 100 men and likely to last for 12 years to come at least. I would much recommend that similar improvements might be considered if practicable to be made on all Log Barracks of squared Logs at this post before they are either decided to be pulled down, or it be decided a matter of necessity to replace them with others.

Figure 23 indicates the required repairs. This plan shows that the heat was supplied by stoves.

An estimate for the construction of 12 guard boxes was accepted in February 1819. Two estimates for protection of the guns were accepted in May 1819. It is not known whether this work was carried out. A list of repairs to be made to the buildings was drawn up in July 1819. According to this there were 13 buildings at Fort George at this time: an officers' quarters, a guard room and orderly room, a tailor's shop (to which the regimental depot was attached), another officers' barracks, a kitchen, the artillery quarters, six soldiers'
barracks and the commanding officer's quarters. It is unlikely that all these buildings were located inside the fort. On the whole, the required repairs were minor ones (to the chimneys, shutters, windows, doors and so on). However, a few repairs were more important: the guardhouse, the tailors' shop, the second officers' barracks, the kitchen, the artillery depot and the barracks required the construction of a new floor, while the barracks needed a new roof. Some of the buildings were to have porches, while the terrain was to be provided with a drainage system around the artillery building, and the entrance door was to be replaced.

According to Chief Engineer Durnford, 100 pounds should have been a sufficient sum for the various repairs in 1820. However, Engineer Vavasour, who was stationed at Fort George, said: "the log huts occupied by the soldiers are considered by the medical officers as the principal cause of the intermittent fever." Vavasour was of the opinion that the officers' and soldiers' barracks were "of a most temporary construction, and all of them requiring more repairs to render them in any degree comfortable than the buildings are worth, as the logs composing them are much decayed." He also recommended the construction of sentry boxes, a new kitchen and new privy. In December 1819, "the officers' quarters no 3 in Fort George is in so ruinous a state as to be considered no longer habitable - It was some time ago condemned by a board of survey." It was suggested that it be used as a regimental depot.

A change was made in the garrison in June 1819, when the 70th Regiment was replaced by the 68th Light Infantry. Nevertheless, 88 men of the 70th Regiment were still present on June 1. In August, the 68th Regiment was reduced by one-fourth (approximately 100 soldiers), and only 18 soldiers of the 70th remained.

It is quite clear that no major repairs were made to the barracks in 1819: Lieutenant Hinds of the 68th Regiment described as follows the barracks which he had to evacuate:

I conceive most of this may originate from the structure of the quarters, they are all sunk below the level of the ground. Many of them consequently are seldom dry - and as the roof is formed of Logs as to render it splinter proof a vast quantity of wet and damp must be observed during the winter.

New estimates for repairs to the barracks and the construction of sentry boxes, a kitchen and a privy at Fort George were submitted in January 1820. The sum of 76 pounds was spent for the repairs to the barracks in March and July.

It was decided in September of the same year to ship all the ammunition to Kingston, except the powder needed for the daily exercises, and then in November to get rid of the decayed and rotted equipment by means of an auction sale. The first decision was justified by the condition of the powder magazine, which was in ruins. The equipment auctioned off was made of wood which had decayed. The auction sale was held in April, 1821, and everything was sold.

Commanding Officer Wardlaw requested permission in May 1822 to fence in Butler's Barracks by using the palisade of Fort George.
However, the pickets were so rotted that the project could not be executed. Only the pickets in good condition were removed and placed in the wood-yard. An inspection report dated October 1822 mentioned that the Fort George barracks "are in bad repairs but I do not recommend that Expenses should be incurred on these old Buildings." However, an amount of 50 pounds was provided to repair the powder magazine in 1823.

In May 1822, a battalion of the 76th Regiment under the command of Major Coles relieved the 68th Regiment. The year 1823 saw few activities at Fort George: a minimal amount of 10 pounds was provided for the maintenance of the two powder magazines which, according to Durnford were "in very good repair." Durnford's report, concerning the fortifications in Canada in 1823, contained an assessment of Fort George. However, this report should not be trusted because it contains very little valid information concerning the fort itself. It seems that Durnford did not visit the fort on that date and that the report was written by assistants rather than by the chief engineer. The same generalization appears in this report as in the rest of the documentation, namely that the name "Fort George" is also used with reference to Butler's Barracks. This is confirmed by the enumeration of the buildings, which were all located outside the fort or at Butler's Barracks, except for the two powder magazines. Durnford stated that these two buildings were in excellent condition, but in 1820 the powder magazine inside the fort is known to have been condemned by an inspection committee.

In October 1823 the horses, carts and other equipment were sold by auction. The ammunition was still stored in the powder magazine in the fort in January 1824, because there was no room in Kingston to receive it. However, a start was made in December with the movement of the equipment to the river bank so that everything could be sent to Kingston when the shipping season opened.

The "Commission on the Defence of British North America" observed the following with respect to Fort George in its 1825 report:

This fort is in a complete state of ruins. The wooden buildings within it have not been habitable, nor in consequence, occupied for some time. There are two magazines, one without and one within the fort. They are both of them in want of repairs — when the powder as ordered in our Instructions shall have been removed to Kingston, these magazines will be evacuated.

It therefore seems that the Fort George barracks did not house a garrison for several months. The members of the committee suggested "that it would be highly for the advantage of His Majesty's Service to evacuate and destroy the remains of the five posts upon the Niagara River." The troops of the Royal Artillery left the Fort George region in the spring of 1826.

Amounts of six and three pounds were called for in an estimate for repairs to the two powder magazines in 1826, while the guardhouse was to be repaired at a cost of four pounds. The headquarters were moved to York in May 1826 and only a small detachment of the 70th Regiment was left in the Fort George region. All the furniture of the barracks had been removed by April, and all repair estimates were
refused. A farmer called Sam Chearnley requested permission in August 1827 to move into one of the empty barracks. The Royal Engineers moved from the Fort George region to York in the summer of 1828. One of the barracks of the fort was inhabited by T. Fitzgibbons and family in April of the same year, but they had to move out.
The breakup of the Military Reserve around Fort George began in 1826. One of the reasons given by Maitland to demand the departure of the troops from the region was dictated by an economic requirement, the human and industrial development of the town of Newark. After that date several parcels of land were ceded for industrial purposes, especially the land close to Navy Hall. Part of the Fort George property was transferred to the Niagara parish in February 1828.

Rental of the military buildings began in 1830. These included the guardhouse on the beach, the chief engineer's quarters and the assistant engineers' quarters. Mr. Telfer, the town doctor, was permitted in that same year to use the military hospital. A report dated October 1830 stated that the guardhouse inside the fort was still in existence and that the powder magazine, also inside the fort, measured 44 feet in length by 18 feet in width, with a height of 7 feet 6 inches: "A Stone Building lined inside with Brick having a Bomb Proof Arch; the Roof is covered with Tin."

Since the fort was no longer in use it was preferable to get rid of the buildings. After debating for one year between selling the buildings and renting them, Chief Engineer Nicolls opted for the latter solution. Thus in July 1836, 12 lots, each including a building, "have been directed...to be let for 7 years resumable only in case of war." On the same date the ammunition used for the daily salvo by the Mississauga soldiers was taken from the powder magazine.

In May 1837 Lieutenant Bonnycastle of the Royal Engineers submitted the idea that two-thirds of the reserve should be sold in order to permit the city to expand. An offer had already been made of 250 pounds per acre. In March 1853 the Fort George site was leased to John McNeill at an annual rate of 4 pounds 10 shillings starting on August 19, 1847.

Whether or not McNeill rented the Fort George land for a long period of time is not known. James Riley rented it as of April 1, 1873 for an annual fee of 16 dollars. Alexander Wright did likewise on April 1, 1882. In April 1911 the Wrights were still renting Fort George. The rental was free, provided Mrs. Wright's son acted as guardian and took care of the maintenance of the site. On June 1, 1912 the Wright family was no longer in charge of Fort George.

Were the Fort George lands rented again after the war? It seems that this was not the case. However the Department of Defence kept possession of the fort, "as it contains buildings required by this Department and is used during the annual training periods." Some of these buildings were constructed within the fort. However, it is impossible to state the date on which they were built. These buildings, located within the fort, consisted of a mess and a kitchen, the guards' buildings, hospital, toilets and another kitchen.
All these buildings were to be preserved by the Department of Defence and the land transferred to the Department of the Interior. On June 25, 1934 Order-in-Council PC 1248 permitted the rental of Fort George to the Niagara Parks Commission by means of a 99-year lease for the nominal sum of 1 dollar per year.

Maintenance of the Powder Magazines

The powder magazine located within the second fort still existed in 1892. However, the brick construction was not able to resist the ravages of weather and time, and on that date had been in ruins for two years. This powder magazine was located near the farmer's house (or the guardian's house, meaning close to the "Brock house" and the first blockhouse of the present fort). The powder magazine was inspected in October 1894 for purposes of restoration. It was observed that the arch at the extreme north end still existed, whereas only the lower part of the wall and the foundations remained of the munitions chamber. The entrance vault had also crumbled. The project was abandoned because repairs would cost too much.

The powder magazine situated outside the fort in 1892 (which had been built in 1796 and which was the only original structure still standing) was used as a house and later as a hayshed:

- This is a substantial structure of solid masonry: mostly of large stones but with some brick appearing on one side.
- The walls are from three to four feet thick...There are two chambers, the outer one about 9' by 10', the inner 28' by 14'. There were two perhaps three doors.

When it was inspected in September 1892 the following recommendation was made:

That the roof and walls be renovated where decayed and filled in with water proof cement. That a fresh roof be put on or the present one repaired and painted. That a strong door with proper inscription be placed at the entrance and windows with iron sashes at the two openings prepared therefore on the South side or that these windows be closed and narrow openings restored as they were until the Magazine was so alteres (sic) apparently without authority about thirty years ago. That a little drain be laid to run off the water which in wet weather covers the floor and injures the walls. It may be only necessary to open a drain which seems to have once existed.

The work was begun in the spring of 1893 by Thornton, a local contractor:

I have the roof repaired and all outside of walls filled up and all the corners built up and I am now building the butments...I will whitewash its outside...I will paint the roof to preserve the tim [sic] that will be all I can do except I put eave through [sic] to carry the water clear of the walls. I rebuilt four corners and slushed the walls...
all over and caltered and made the walls to look all the
same. I built six buttresses and copped them with portland
cement. I repaired the roof and painted the roof all over.
I put in new fram [sic] in front and put one foot of
carters in the side of buildings to keep the water
out.  

Before the transfer of Fort George, the Department of Defence
inspected the powder magazine in April, 1934:
This magazine is surrounded by an earthwork with no
drainage outlet, consequently water stands some two or more
feet deep all round the building...The building is of stone
with brick interior. The site requires drainage. The roof
may require complete renewal, though the condition of
framework under the present roof covering could not be
ascertained. Buttresses at the corners of the main portion
of the building require extensive repairs and the sill
stonework requires repointing.

The "Brock House" or Caretaker's House

This building was first mentioned in 1882. Mrs. Wright, who was
renting Fort George at the time, noted: "We really built all this house
except two rooms and only last year (1909). It took nearly one hundred
dollars as the entire roof had to be shingled and the ceiling in the
large room fell in and had to be all replastered." In 1898 Wright
constructed at least one building to house his horse and cow. In April
1921 only the caretaker's house was still being used by the Department
of Defense. Considerable repairs were made in 1935 by the Appleford and
Reid Company of Niagara-on-the-Lake, including "striping the old
shingles from the roof and covering the roof boards with 3-ply ready
roofing." It was estimated that the shingles had been on the roof for
some fifteen years.

This house was moved by the Niagara Parks Commission in 1938. It
was recommended at that time that a basement be dug to install a
furnace. Ronald Way, the historian-architect of the Fort George
reconstruction project, noted in a report that the house was moved to
the southeast a distance of 90 feet. Using this information to guide
them, the archaeologists retraced the original foundations of this
building in their excavations during the summer of 1973. The
measurements agree, meaning that the caretaker's house is clearly the
one now called "Brock House." An interesting detail is the fact that
the building which is presently at Fort George has only two rooms and
therefore has the same dimensions as it had prior to the changes made by
Wright. This building was in the fort around 1882, but whether it dates
back to 1815, as legend has it, is not known.
CONCLUSION

Fort George did not become a fort until 1799, when the palisade was built. The circumstances under which this military post was conceived account for the irregular nature of its outline. Its role was only to serve as a storage centre for the various army services, except, obviously, during the War of 1812-14.

This war played an important part in the history of the fort: after its end the military authorities realized the error that had been made in building it. Because of its geographic location, Fort George could not play a preponderant role in the defence of the Niagara frontier. Hence, after the war, all the defensive efforts centred on Fort Mississauga, which dominated the entrance to the Niagara River.

This analytical inventory of the buildings has shown the uses made of Fort George: before the war, almost all the blockhouses were employed as warehouses for rations, munitions and military equipment. Many of the officers of the garrison had to live at Navy Hall or in the town. After the war, reconstruction was carried out but slowly because the defensive weakness of the post was recognized. Few barracks were constructed, although several storehouses were built.

There was an appreciable difference between the building constructed before the war and postwar structures. With respect to the foundations, most were of stone. In the main, the same hardware items were used (H hinges, nails etc.).

After the war most of the buildings around Fort George were constructed by civilian labour and the military personnel performed only repairs or minor construction. This is explained by the military context of the period. How did this affect the quality of construction or the construction method? After 1815, the roofs of the barracks leaked. In 1817, Fort George was left to its fate.

The type of construction between the two periods differed greatly. This may be due to the role which Fort George was called to play. The architecture of the first fort was rigorously military, whereas the style of the second was more sober. No blockhouse was constructed in the second fort, but rather one-storey barracks. There were stone foundations framing the buildings in the structures of the first fort. These foundations generally varied between one foot and 1-1/2 feet in depth, and they rested directly on the ground. The sills, which in the first structures were usually hemlock or cedar and sometimes oak, rested on these foundations. Sleepers were joined to the sill, and to the former a pine floor of approximately 1-1/2 inches thickness was either nailed or pegged. The frame consisted of weatherboarded pine logs. The partitions were pine boards one or 3/4 of an inch thick.

The barracks of the first fort usually had two storeys. The stairway leading to the upper floor was usually made of pine boards of
1-1/2 inch thickness. The floor of the upper storey rested on pine beams and had a thickness of between 1-1/2 and 2 inches. The upper floors of the first buildings had the same construction as the lower.

All the materials for construction of the roof were identical: the rafters, tie beams and so on were pine. The roofing itself was usually pine boards 1 inch thick. Pine shingles were nailed onto these pine boards; after the war it was specified that the shingles must be 18 inches. Upon completion of the building ladders were installed on the roof to facilitate cleaning the chimneys.

There are certain questions that cannot be answered: what kind of windows were used between 1796 and 1812? Was it too early for sliding windows? Was the assembly system of vertical posts used for frames with a length of 70 to 100 feet? Furthermore, where did "Brock House" come from and when did it appear at Fort George?

One definite conclusion can be drawn from this analysis: the present Fort George corresponds very little with the Fort George of 1810-11. If the location seems to be the same as in 1799, many details differ, such as those pertaining to the construction of the blockhouses. There is no hospital, kitchen or bakery, but a tunnel has been built to the octagonal blockhouse.
APPENDIX A. CONSTRUCTION ESTIMATE FOR BLACKSMITH'S SHOP AND COAL SHED.

Estimate of the Expense of Necessary Services at Navy Hall as here-under mentioned. From the report of Lieutenant Pilkington Royal Engineer.

To erect a smiths shop and Coal House for the use of the Indian Department
Carpenters work £ 12..10..00
Masons do 2.. 8..10
Smiths do 0..15..00
Glaziers do 0.. 1..03
Labourers do 1..16..00 £ 17..10..3

Materials

three hundred feet run8 Scantling 7 in by 9
One hundred & twenty feet do 8 by 8
Eight hundred feet do 4 by 4
two hundred & forty Inch pine Boards
Four thousand shingles
three thousand Bricks
ten a toise of stone
twenty Barrels of Lime
two thousand shingle Nails
two thousand six hundred 20 Nails
four hundred 30d Nails
twelve panes of Glass
two pounds of putty
One stock lock
twenty eight pounds of Iron1
There was a wood-yard at Fort George in which construction materials were stored. An estimate submitted in September 1796 required that the wood-yards be enclosed. Part of the estimate of £57/17/6 was set aside in 1798 for enlargement of the wood-yard. Its area was increased in 1799. Bruyères observed in 1802: "The Wood Yard for the barrack department wants a new Inclosure. The present fence is decayed and very insecure for the safety of the Cord Wood." The pay lists indicate that the workers started on this task in the spring of 1803. The work must have been poorly executed, because Brock requested that it be done again in April 1804. In 1807 Commanding Officer Procter requested permission to erect a depot to safeguard the wood supplies. It is not known whether this project was executed or where the wood yard was located. The fact that there was said to be a need for an enclosure suggests that it was located outside the palisade, but there is no definite proof. The following is a list of materials stored in the wood-yard:

- 8,000 cubic feet of squared pine logs
- 1,500 cubic feet of squared oak logs
- 1,000 running feet of round cedar or hemlock with a diameter of from 9 to 16 inches
- 2,000 feet of 3 inch oak boards
- 3,000 feet of 2 inch oak boards
- 2,000 feet of 3 inch boards
- 6,000 feet of 2 inch pine boards
- 1,500 feet of 1-1/2 inch pine boards
- 15,000 feet of 1 inch boards
- 500 pickets, 12 feet long and from 5 to 8 inches in diameter.
APPENDIX C. CONSTRUCTION ESTIMATE FOR ORDNANCE SHED.

Estimate of the Expense to build a shed for the field Ordnance, and make an Inclosure for the Shot at Fort George. From the Report of Capt'n Pilkington Roy¹ Eng.

Carpenters Work £ 22: 7:6
Smiths do :17:6 23:5:0

Materials

three hundred feet run 8 pine 8 by 10
Six hundred & fifty feet do  8 inches square
Sixteen pieces of pine ea 20 feet long 7 by 9
Six hundred feet run 4 pine 4 by 6
Eight hundred feet do  4 by 4
five hundred feet do  4 by 3
three hundred & twenty Inch boards
three hundred & twenty 3/4 inch do
Sixteen 1-1/2 inch pine plank
Six thousand 20d Nails
One thousand 30d Nails
five hundred 40d Nails
twenty eight pounds of Iron¹
APPENDIX D. CONSTRUCTION ESTIMATE FOR CENTRE BLOCKHOUSE.

To build a Blockhouse on the High Ground behind Navy Hall, to have two Stories, the lower one to be 96 feet long and 26 feet wide, to stand on a stone foundation and to hold Ordnance Stores. The Upper Story to be 100 ft. long and 30 feet wide projecting 2 feet all round over the lower one, and to serve as Quarters for Officers and about fifty Men-

Carpenters work -- £255:17:6
Masons do..___ 31:12:6
Labourers do._____ 12: 0:0
Smith's do._____ 8:12:6
Glaziers do._____ 2: 6:0

310:8:6

Materials

two hundred & seventy feet run\&. Pine 9 in. by 12 Cills
five thousand four hundred ft. run\&. pine
10 in. to 15 in. in depth & 8 in. thick Log work
twenty pieces of Cedar
13 in. diam: hewed on One side Sleepers
twenty pieces pine 32 feet long 12 in. by 14 Projecting Beams
twenty pieces do. 32 feet long 12 by 8 Upper tye Beams
twenty pieces of Pine 20 feet long 8 by 5 at one end
6 by 5 at the other Rafters
four pieces pine 25 feet long 9 by 5 at one end
6 by 5 the other Hip: Rafters
Nine pieces pine 17 feet long 8 in. by 5 in. Collar Beams
seventeen hundred feet run\&. Pine 4-1/2 in. by 4-1/2 in. Purlines
small Rafters
Partitions & ca.
two thousand Nine hundred & twenty inch Boards - upper covering to 2d floor Upper floor, Partitions, Necessaries &ca.
five hundred and fifty 1-1/2 inch Boards under Cov\&. to 2d floor Stairs &ca.
four hundred and sixty 2 inch Plank Ground floor
two hundred 1/2 inch Boards lining Partitions of Officers Quarters &ca.
Eight thousand Bricks___
ten toises of stone
twelve thousand 20d Nails
Nine thousand ___ 30d Nails
two thousand seven hundred & sixty 40d Nails
twelve hundred 10d Nails
four hundred & eighty Panes of Glass 7-1/2 by 8-1/2
forty two pounds of putty
three hundred weight of Iron Hooks, Hinges, Chimney Bars
Hooks for Hammocks &c. a

One hundred & twelve Barrels Lime
six stock Locks
six Latches & Catches
six pair of Hook & strap Hinges
three pair of H Hinges
three pair of H Cupboard Hinges
three Iron rimmed Brass Knob Locks
tree Cupboard Locks
fifty Loads of sand— 1
APPENDIX E. CONSTRUCTION ESTIMATE FOR FIRST OFFICERS' KITCHEN.

To build a shed Kitchen for the Officers behind the Blockhouse 16 feet square 10 feet high

Carpenters Work £ 15:10:6
Masons do. 2:11:9
Smiths do. 11:6

18:13:9

Materials

One Hundred & twenty eight feet rung pine 8 in by 6 in. Cills & plates
One Hundred & ninety feet do. do. 6 by 6 Posts Braces and tye Beams
Eight pieces Pine 14 feet long 6 by 5 Rafters
three hundred & forty Inch Boards sides Roof &c
forty 1-1/2 Inch Boards Floor, Door, Window &c
three thousand Bricks
sixteen Barrels Lime
Eight Loads sand
two thousand 20d Nails
fifteen hundred 30d Do
twenty four panes of Glass 7-1/2 in. by 8-1/2
three pounds of Putty
One stock Lock
One pair strong H Hinges
One Latch and Catch
fifteen pounds of Iron
APPENDIX F. CONSTRUCTION ESTIMATE FOR BAKEHOUSE.

To Build a Bakehouse and Oven

Carpenters work £ 17: 5:0
Bricklayers do. 7: 3:9
Blacksmiths do. :11:6
Labourers do. 1:15:0

$26:15:3$

Materials

six thousand Bricks
Ninety Bushels of Lime
ten Loads of sand
two pieces 2-1/2 inch flat Iron each 6 feet long
six sheets of Iron
twelve pounds of Rod Iron
four pieces of Oak each 15 feet long 10 in. by 8
seven pieces of pine 9 feet do. 8 by 8
Nine hundred feet pine 7 in. thick 7 to 10 In. wide
two hundred feet running pine scantling 4 in. by 4 in.
two thousand five hundred shingles
fifty Inch Boards
forty 1-1/2 Inch Plank
five hundred 10th Nails
three hundred 20th Nails
three hundred 30th Nails
five thousand shingle Nails
twenty four panes of Glass 7-1/2 by 8-1/2
three pounds of putty
One stock Lock
two pairs of Hooks and straps
One pair of large do
two shutter Bolts
one Latch & Catch
APPENDIX G. CONSTRUCTION ESTIMATE FOR POWDER MAGAZINE.

To build a Powder Magazine in the rear of the Blockhouse on the High Ground behind Navy Hall to be 35 feet by 21 feet without, and 27 feet by 12 feet within in the clear the Walls to be of Masonry, and to be Arched with Brick work.

Masons Work __________ £ 84:10:6
Bricklayers do. __________ 35:18:9
Labourers do. __________ 15:14:3
Carpenters do. __________ 60: 7:6
Smiths do. __________ 14: 7:6
Painters do. __________ 2: 6:0

213:4:0

Materials

thirty eight toises of stone
thirty four thousand Bricks
two hundred & seventy Barrels Lime
One hundred & thirty five loads of sand
Ninety loads of Water
Eight pieces Cedar 13 in. diam. & 14 ft. long sleepers hewed on one side
seventy 2 inch Plank Oak __________ Floor & tree Nails
ten 3 in. Oak plank, breadth halved & built to receive lining in side walls
One hundred and twenty feet run8 Oak 6 in. by 6 in. door & window frames.
ten pieces Pine 36 feet long 8 in. by 8 in. __________ Purlines
two hundred & forty feet run8 Pine 7 in. by 7 in. Plates and Posts for centering
two hundred & sixteen feet run8. Pine 6 by 6 __________ Sleepers for Powder Barrels
two hundred & sixteen feet run8. Pine 4 by 4 __________ stanchions for do.
fifty 2 Inch pine plan __________ for Centering
twenty five 1-1/2 inch Pine Plank doors & window shutters
two hundred & eighty Inch Boards __________ 1st Cov8 to Magazine & Porch & lining for Magazine
five hundred & forty five sheets sheet Iron upper Cove for 
Roof
five thousand four hundred & fifty 6d shingle Nails for 
sheet Iron
Eight hundred 40d Nails _____ for Centering
Eighteen hundred & eighty 20d Nails for under Covering
fifty six pounds of white lead
Eight pounds of Black paint to paint the sheet
five Gallons of Linseed Oil Iron on both sides
two Quarts Spirits of turpentine for the Roof __
two Paint Brushes __
One hundred & ten square feet of sheet Copper
for outer Covering to
3 doors and 2 windows

sixteen hundred Copper Blout Nails
three Copper Locks & Keys
three pair Copper Hinges with screws for doors
two pair do do for windows shutters
APPENDIX H. CONSTRUCTION ESTIMATE FOR TWO BLOCKHOUSES.

Estimate of the Expense to Build Two Blockhouses at Fort George in Upper Canada as Quarters for about One hundred Men and three Officer: to be placed contiguous to the Blockhouse already erected on the High ground, the lower stories to be 41 feet by 25 feet to stand on stone foundations, the Upper stories to be 44 by 28 feet projecting 1 foot 6 Inches all round over the lower one also to build a detached Kitchen about 10 feet square.

<table>
<thead>
<tr>
<th>Materials</th>
<th>Quantity</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>Carpenters work</td>
<td>£ 337: 4:9</td>
<td></td>
</tr>
<tr>
<td>Masons do.</td>
<td>34: 4:9</td>
<td></td>
</tr>
<tr>
<td>Labourers do.</td>
<td>15:19:6</td>
<td></td>
</tr>
<tr>
<td>Smiths do.</td>
<td>12:13:0</td>
<td></td>
</tr>
<tr>
<td>Glaziers do.</td>
<td>1:17:6</td>
<td></td>
</tr>
<tr>
<td>Shinglers do.</td>
<td>18: 8:0</td>
<td></td>
</tr>
<tr>
<td>£ 424:7:6</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Carpenters work ____ £ 337: 4:9
Masons ___ do. _______ 34: 4:9
Labourers __ do. _______ 15:19:6
Smiths ____ do. _______ 12:13:0
Glaziers ___ do. _______ 1:17:6
Shinglers _ do. _______ 18: 8:0

£ 424:7:6

Materials

Six thousand feet run of pine 10 in to 15 in. deep 8 in thick Log work
Three hundred feet run of Oak or pine 9 in by 12 in. Cills
sixteen pieces Cedar or Hemlock 12 in. diam. 26 feet long
Sleepers
twelve pieces of pine 28 feet long 12 in. by 14 in. Projecting Beams
twelve do ____ 10 feet long 12 in. by 14 end __ do
thirty six ___ do 20 feet long 6 by 4 cross joists
fourteen __ do __ 28 feet long 8 by 10 Upper tye Beams
twenty ___do ___ 18 feet long 8 by 5 at bottom

Sixteen hundred feet run of pine 4-1/2 Purline Post
Eighty ft run of Oak or pine 8 in by 6 in Cill Kitchen
Eighty feet running Pine 8 by 6 Plates Kitchen
Eight hundred feet run of pine 6 in thick from 10 in to 12 in deep Log work do.
Eight pieces of pine 14 feet long 6 in by 5 in Rafters
twelve hundred Inch Boards 1st Covering Blockhouses &c
four hundred 1-1/2 inch Plank Upper floor, stairs &c
thirty thousand shingles
seven hundred 2 inch Plank 1st 7 2nd floors, Partitions etc.
three hundred 1/2 inch Boards Lining Partitions, Officers Quarters etc.
sixty thousand shingle Nails
twenty thousand Bricks
Fourteen toises of stone
four hundred & fifty bushels of Lime
seventy loads of sand
four thousand Laths Officers Quarters etc.
sixteen thousand Lath Nails Ceiling under
twenty pounds of Bullock Hair
four thousand 40d Nails
five thousand 30 Nails
Eight thousand 20d Nails
five thousand 10d Nails
three hundred panes of glass 7-1/2 by 8-1/2
thirty pounds of putty
twenty pounds of Glue
three hundred & thirty six pounds of Iron Chimney Barks
four stock Locks
four Latches & Catches
five Iron Rimed Brass Knob Locks
five pairs of HL Hinges
four pairs of Hook & Strap hinges
three pairs of Cupboard Hinges
three Cupboard locks
One hundred & sixty eight pounds of white paint
twenty Gallons of Linseed Oil
One Gallon of Spirits of turpentine
four paint Brushes
APPENDIX I. CONSTRUCTION ESTIMATE FOR TEMPORARY HOSPITAL.

Estimate of the Expense of fitting up part of the Temporary Shed at Fort George for the accommodation of the Sick with the requisite number of Cradles etc. From the Report of Lieutenant Pilkington Royal Engineer

Carpenters Work _______ £ 21: 2:6
Masons ____ do __________ 6:17:6
Labourers _ do __________ 4:10:0
Glaziers _ do _________ 0: 7:6
Smiths ____ do __________ 12:6

£ 33:10:0

Materials

One Toise of Stone
Six thousand Bricks
Thirty eight Barrels of Lime
Two hundred Inch Boards
Ninety six panes of Glass
Ten Pounds of Putty
Sixteen thousand shingle Nails
Six thousand 10d Nails
Four thousand 20d Nails
Twelve hundred 30d Nails
Two pieces of Flat Iron each 6 feet long 2-1/2 in. wide
Thirty Six pounds of Square Bar Iron
Two Latches & Catches
APPENDIX J. CONSTRUCTION ESTIMATE FOR HOSPITAL AND KITCHEN.

Estimate of the Expense of the undermentioned necessary Buildings proposed to be erected at Fort George in Upper Canada Viz.

To build an Hospital for the Troops having two rooms for the Sick; a Cooking Room; and other necessary conveniences

To be of Log Work standing on a Stone Foundation

<table>
<thead>
<tr>
<th>Description</th>
<th>Cost</th>
</tr>
</thead>
<tbody>
<tr>
<td>Carpenters Work</td>
<td>£ 156: 0:0</td>
</tr>
<tr>
<td>Masons</td>
<td>42: 0:0</td>
</tr>
<tr>
<td>Labourers</td>
<td>23: 5:0</td>
</tr>
<tr>
<td>Smiths</td>
<td>3: 7:6</td>
</tr>
<tr>
<td>Glaziers</td>
<td>4:12:6</td>
</tr>
<tr>
<td>Shinglers</td>
<td>8:15:0</td>
</tr>
<tr>
<td>Painters</td>
<td>4:16:0</td>
</tr>
<tr>
<td>Total</td>
<td>£ 242:10:0</td>
</tr>
</tbody>
</table>

Materials

Three thousand eight hundred feet Pine 10 in to 14 in and sawed to 6 inches thick
Four hundred & fifty feet run Oak 9 in by 12 in
Twenty six pieces of Oak each 26 ft long 9 in by 12 in
Ten pieces do 20 ft do 9 in by 12 in
Twenty six pieces of Pine each 28 ft long 8 by 10
Ten pieces do 23 ft do 8 by 10
Fifty two pairs of Rafters each 18 ft long 7 in by 5 in at one end 5 in by 5 in at the other
Two pairs of Hip do 21 ft do 8 by 6 do 6 by 6 do
Twenty pairs of Rafters 16 ft do 7 by 5 do 5 by 5 do
Four pairs of Hip do 19 ft do 8 by 6 do 6 by 6 do
One thousand feet run Pine 10 in by 10 in
Five hundred feet 8 by 10
Sixteen hundred feet do 4-1/2 Inches Square
Two hundred and eighty 1/2 Inch Boards
Five hundred 3/4 Inch do
Eight hundred Inch do
One hundred and eighty 1-3/4 Inch do
One hundred & eighty 1-1/2 Inch Plank
Two hundred & Sixty 2 Inch Pine Planks
Eighteen thousand Bricks
Eight Toises of Stone
One hundred & fifty four Barrels of Lime
Eighteen thousand Shingles
Thirty six thousand shingle Nails
Twenty thousand Lath Nails
Eight thousand 10d Nails
Ten thousand 20d Nails
Three thousand five hundred 30d Nails
Eighteen hundred 40d Nails
Twenty four Doz Inch Screws
Sixteen do 1-1/2 Inch do
Twelve do 3/4 Inch do
Five hundred & forty eight panes of Glass 7-1/2 by 8-1/2
Eight pairs of Brass Pullies
Three hundred & fifty Pounds of Lead
One hundred weight & a half of Iron
Twelve pairs of Hinges
Eight pairs of HL Hinges
Four Stock Locks
Four Cupboard Locks
Four strong Bolts
Four small do
Eight pairs of Cupboard Hinges
Ten Latches & Catches
One hundred & sixty eight Pounds of White Paint
Twenty eight Pounds of Spanish Brown do
Seventy five Pounds of Putty
Twenty four Gl's of Linseed Oil
Two Gallons of Spirits of Turpentine
Six Paint Brushes
Four Barrels of Hair
Eighty Loads of sand & Water ___
APPENDIX K. CONSTRUCTION ESTIMATE FOR OCTAGONAL BLOCKHOUSE.

To build a small Blockhaus and Artillery Store near the Powder Magazine

Carpenters Work _______ £ 38: 5:0
Masons __ do __________ 6:10:0
Smith __ do ___________ 2:12:6
Shingler __ do __________ 3:10:0
Glaziers __ do __________ 12:6
Labourers __ do __________ 5: 2:6

£ 56:12:6
Total £433: 9:6

Materials

Twelve Pieces of Oak 25 ft long 10 in by 12 in
Forty pieces of Pine 25 ft long 9 in by 12 in
Forty __ do 28 ft do 9 by 12
Ten __ do 30 ft do 11 by 13
Four __ do 30 ft do 9 in square
Eight __ do 30 ft do 8 by 10
Two hundred feet run8 Pine 7 by 6
Six hundred do _______ 4-1/2 by 4-1/2
One hundred & eighty Inch Boards
One hundred & fifty 1-1/2 Inch pine plank
One hundred & fifty 2 Inch __ do __
Six thousand Shingles
Twelve thousand shingle Nails
Twelve hundred 10d Nails
Two thousand 20d Nails
Sixteen hundred 30d Nails
Fifteen hundred 40d Nails
Seventy two panes of Glass
Eight pounds of Putty
One Stock Lock
One hundred weight of Iron
Two toises of stone
Sixteen Barrels of Lime
Sixteen Loads of sand & Water
APPENDIX L. CONSTRUCTION ESTIMATE FOR OFFICERS' QUARTERS

Estimate of the Expense of the undermentioned Services proposed to be performed at Fort George in Upper Canada.

To erect a Building as Quarters for Officers on the High Ground behind Navy Hall to be of Log work weather boarded & to stand on a stone foundation

<table>
<thead>
<tr>
<th>Description</th>
<th>Cost</th>
</tr>
</thead>
<tbody>
<tr>
<td>Carpenters Work</td>
<td>£347:17:6</td>
</tr>
<tr>
<td>Masons do</td>
<td>69:0:0</td>
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<tr>
<td>Labourers do</td>
<td>39:0:0</td>
</tr>
<tr>
<td>Glaziers do</td>
<td>4:17:6</td>
</tr>
<tr>
<td>Shingers do</td>
<td>16:10:0</td>
</tr>
<tr>
<td>Painters do</td>
<td>12:0:0</td>
</tr>
<tr>
<td>Smiths do</td>
<td>4:12:6</td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td>£493:17:6</td>
</tr>
</tbody>
</table>

**Materials**

- Two thousand five hundred feet rung of pine 12 in thick & from 10 in to 14 in wide to be sawed to 6 in thick
- One thousand feet running of pine 10 in square
- Fifty pieces of Oak each 30 feet long 9 by 12
- Five hundred feet rung of pine 8 by 10
- Fifty pieces of pine each 20 feet long 7 by 10
- Fifty pairs of rafters 16 feet long 7 by 5 at one end by 5 at the other
- Four pairs of Hip rafters 21 feet long 8 by 6 one end 6 by 6 the other
- Four thousand shingles
- Six hundred 1/2 inch Boards
- Seven hundred & fifty 3/4 inch Boards
- Nine hundred & twenty inch do
- Seven hundred & fifty 1-1/2 inch do
- Twelve hundred 1-1/2 inch plank
- One hundred & twenty 2 inch do
- Sixty thousand shingle Nails
Forty thousand lath Nails
Fourteen thousand 10\textsuperscript{th} Nails
Eighteen thousand 20\textsuperscript{th} Nails
Twelve thousand six hundred 30\textsuperscript{th} Nails
Two thousand 40\textsuperscript{th} Nails
Thirty six doz. 1-1/2 inch screws
Twenty four doz 3/4 inch screws
Seventy two doz inch screws
Six hundred & thirty panes of Glass
Twelve Barrels of Hair
Sixteen toise of stone
Thirteen thousand Laths
Thirty thousand Bricks
Two hundred & eighteen Barrels Lime
Three C\textsuperscript{wt} of Iron
Ten latches & catches
Twelve locks with Brass Knobs
Eighteen pairs of Cupboard Hinges
Eighteen pairs of Door Hinges
Twelve cupboard Locks
Six stock locks
Forty four pairs of shutter Hinges
Forty four flat shutter Bolts
Three hundred & ninety two pounds of white Paint
Twenty eight pounds of Black paint
Fifty six pounds of Brown paint
One hundred & twelve pounds of putty
Fifty Gallons of Linseed Oil
Four Gallons spirits of turpentine
Four large paint Brushes
Four small do
One hundred & eight loads of sand & water
APPENDIX M. CONSTRUCTION ESTIMATE FOR OFFICERS' KITCHENS.

To build detached Kitchens for the Officers Quarters to be of log work weather Boarded on a stone foundation.

<table>
<thead>
<tr>
<th>Work</th>
<th>Cost</th>
</tr>
</thead>
<tbody>
<tr>
<td>Carpenters</td>
<td>£ 46:-</td>
</tr>
<tr>
<td>Shinglers</td>
<td>4:-:</td>
</tr>
<tr>
<td>Glaziers</td>
<td>8:-</td>
</tr>
<tr>
<td>Smiths</td>
<td>2:0:-</td>
</tr>
<tr>
<td>Masons</td>
<td>22:2:9</td>
</tr>
<tr>
<td>Labourers</td>
<td>3:-:</td>
</tr>
</tbody>
</table>

£77:10:9

Materials

Five Toises of stone
Eleven thousand Bricks
One hundred & sixty eight bushels of Lime
Forty two loads of sand
Fourteen loads of water
Nine hundred feet running Pine 10 in to 14 in deep sawed to 6 in thick Log Work
One hundred & twenty feet run 8 Oak 9 in by 7 in Cills
One hundred & twenty feet run 8 Pine 9 by 7 Plates
Seven pieces Oak or Cedar 27 feet long 10 in Diam. Sleepers
Seven pieces Pine 6 by 10 tie Beams
Ten pairs of Rafters 18 feet long 8 by 6
Two pairs of Hip do 22 do 8 by 6
Eight hundred feet running 4-1/2 pine quartering - Purline & Partitions
Three hundred & eighty four inch Boards
Sixty 1-1/2 inch Boards
One hundred & forty 2 inch plank Floors
Six thousand shingles
Thirteen thousand shingle Nails
Two thousand 20d Nails
Three thousand 30d Nails
One thousand 40d Nails
Two cwt of Iron Chimney Bars etc.
Eighty panes of Glass
Twelve pounds of putty
Four pair of (HL) Hinges for Doors
Four latches & catches
Four stock locks
Eight pair small Hinges for Windows
Eight window Bolts
APPENDIX N. CONSTRUCTION ESTIMATE FOR FLAGSTAFF.

To erect a Flag Staff

Workmanship \[9:12:6\]

Materials

One piece of timber for the Staff
One hundred and sixty feet of Oak 12 in square
Two hundred 30\textsuperscript{d} Nails
APPENDIX O. CONSTRUCTION ESTIMATE FOR PALISADE.

Estimate of the Expense of Inclosing the Post of Fort George on the High Ground above Navy Hall, with a strong Picketing in circumference about Twelve Hundred Yards; and to Flank the same with small Works in which the Iron Ordnance at the Post are proposed to be placed in Battery.

<table>
<thead>
<tr>
<th>Materials</th>
<th>Quantity</th>
<th>Description</th>
<th>Price</th>
</tr>
</thead>
<tbody>
<tr>
<td>Twelve hundred feet runing Oak 14 in by 12 in Cills for the Scarp</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Twelve hundred feet do 12 by 6 cap for do</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Four thousand feet do 8 by 5 Ribband for Picketing</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Three thousand two hundred feet Cube of Oak Frames for Embrazures &amp; Parapets of Batteries</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Two thousand five hundred do Joists for Platforms, Hurtors etc.</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Seven hundred &amp; fifty do Gates, Pickets to Retain the Cills, for Trunails etc.</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Nine hundred &amp; sixty 2-1/2 Inch Oak Plank lining to Embrazures and Parapets</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Four hundred do Platforms</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Six thousand Pickets 12 feet long 12 feet long 7 in or 8 in Diam.</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>One thousand feet Cube of Cedar -- Framing Posts for Picketing</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>One thousand feet Cube of Cedar or Oak Sleepers under joists of Platforms</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Three thousand five hundred feet runing</td>
<td></td>
<td>Band Ties to Scarp</td>
<td></td>
</tr>
</tbody>
</table>

| Carpenters Work in Framing & putting up the Picketing the Scarp of the Batteries, laying Platforms; Lining the Embrazures and inside of the Parapet; making grates repairing Tools &c | £ 852:17:6 |
| Labourers Work in excavating 10,298 Cubic Yards of Earth, in forming Batteries, Trenches for the Picketing assisting Artificers &c | £ 386:3:6   |
| Sawyers Work | 85:5:0       |
| Smiths Work making Hinges | 60:7:6       |

£1384:13:6
Cedar or Hemlock 9 in Diam.

Fourteen hundred pieces of Cedar or Hemlock

about 14 feet long sawed to about 9 in

Two hundred feet Cube of Hickory

Repair of Gates

Seven Gwt of Iron

One Gwt & a half of Steel

Four thousand 7 Inch of Spikes

Two thousand 40d Nails

Four double padlocks
APPENDIX P. CONSTRUCTION ESTIMATE FOR FIRE ENGINE SHED.

Estimate of the Expense of erecting a Framed Building twenty four feet long by eighteen feet wide and making two Sleighs for the Fire Engines of this Garrison

Workmanship

140 days of a Carpenter at 1s/3d per day is 8:15:0
11 ditto of a Blacksmith at ditto per ditto 0:13:9
20 ditto of a Labourer at 0/9d per ditto 0:15:0

£10: 3:9

Materials

100 feet running of Oak 8 by 10 Inch for Cills
8 Pieces of Oak 10 by 10 Inch for Sleepers
200 feet running of Pine 8 by 8 Inch for Posts and Plates
8 Pieces of Pine 6 by 8 Inch for Tie beams
20 Pieces of ditto 5 by 4 Inch and 13 feet long for Rafters
300 feet running of ditto 4 by 4 ditto for Studs
40 Inch and half Pine Boards for floor
75 Inch ditto for to Shingle on & for Doors
60 3/4 Inch ditto for weatherboarding
3,500 Shingles
100 40d Nails
900 30d ditto
700 20d ditto
7,000 8d Shingle ditto
140 lbs of Iron
6 pairs of Hook and Strap Hinges
One Padlock
2 pieces of round Oak Timber Crooked for Sleigh runners
100 feet running of Oak 4 by 4 Inch for beams Nees etc for the Sleighs
APPENDIX Q. CONSTRUCTION ESTIMATE FOR WELL.

Estimate of the expense of making a Well for the use of the Troops Quartered in Fort George.

**Workmanship**

- 40 days of a Miner @ -1-3 per day £ 2:10:0
- 16 days of a Mason @ -1-3 do 1: 0:0
- 20 do of a Carpenter @ -1-3 do 1: 5:0
- 3 days of a Blacksmith @ 1/3 do 3:9
- 80 days of a Labourer @ 0-9 do 3: 0:0

**Halifax Currency**

**Materials**

- Five Toises of stone
- 16 feet white Oak 10 by 6 in
- 32 feet Oak Scantling 6 by 6 in
- 10 feet white Oak 10 by 10 in
- 128 feet 2 in Pine Plank
- 100 - 40d Nails
- 120 feet rope 1-1/2 in Diameter
- 120 feet Do 1 inch Do
- 50 pounds iron 1-1/2 inch square
- 20 - 6 in spikes


APPENDIX R. SURVEY OF STORES.

Report of a Board of Survey assembled on the First Day of December One thousand Eight hundred and Six and continued by Adjournment to the Eighteenth of the same Month at the Post of Fort George on the undermentioned Stores in charge of James Coffin Commissary of Stores and Provision in consequence of Colonel Brock's Orders dated Quebec 11th October 1800.

Lieutenant Colonel Proctor 41st Regiment President
Major Shortt 41 Regiment
Fort Major Campbell Members
Quarter Master Eagar 41st Regiment

The Board having met proceeded to the inspection of the following Stores produced to them and report thereon as follows:

<table>
<thead>
<tr>
<th>Articles</th>
<th>Serviceable</th>
<th>Repairable</th>
<th>Unserviceable</th>
</tr>
</thead>
<tbody>
<tr>
<td>Adzes</td>
<td>No Twenty One</td>
<td>12</td>
<td>-</td>
</tr>
<tr>
<td>Augers of Sorts</td>
<td>do Ninety Three</td>
<td>85</td>
<td>-</td>
</tr>
<tr>
<td>Axes Broad</td>
<td>do Thirty One</td>
<td>9</td>
<td>11</td>
</tr>
<tr>
<td>English</td>
<td>do Twenty One</td>
<td>21</td>
<td>-</td>
</tr>
<tr>
<td>Axes Felling</td>
<td>do One hundred and Fourteen</td>
<td>101</td>
<td>4</td>
</tr>
<tr>
<td>Pick</td>
<td>do Sixty three</td>
<td>59</td>
<td>-</td>
</tr>
<tr>
<td>Anchors</td>
<td>do Three</td>
<td>3</td>
<td>-</td>
</tr>
<tr>
<td>Axe Trees for Grindstones</td>
<td>do Eleven</td>
<td>11</td>
<td>-</td>
</tr>
<tr>
<td>Large Scows</td>
<td>do Two</td>
<td>-</td>
<td>1</td>
</tr>
<tr>
<td>Batteaux Common</td>
<td>do Seven</td>
<td>4</td>
<td>1</td>
</tr>
<tr>
<td>Haulyards</td>
<td>do Ten</td>
<td>4</td>
<td>-</td>
</tr>
<tr>
<td>Masts</td>
<td>do Four</td>
<td>4</td>
<td>-</td>
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<tr>
<td>Oars</td>
<td>do One hundred and Ninety</td>
<td>114</td>
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<td>Setting Poles</td>
<td>do Forty Three</td>
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<td>-</td>
</tr>
<tr>
<td>Bars Iron Crow</td>
<td>do Ten</td>
<td>10</td>
<td>-</td>
</tr>
<tr>
<td>Batteaux Painters</td>
<td>do Twenty</td>
<td>5</td>
<td>-</td>
</tr>
<tr>
<td>Tackle Sails</td>
<td>do Fifteen</td>
<td>9</td>
<td>-</td>
</tr>
<tr>
<td>Scoops</td>
<td>do Fifteen</td>
<td>6</td>
<td>-</td>
</tr>
<tr>
<td>Paddles</td>
<td>do Twenty Five</td>
<td>7</td>
<td>-</td>
</tr>
<tr>
<td>Batteaux Painters</td>
<td>do Twenty</td>
<td>5</td>
<td>-</td>
</tr>
<tr>
<td>Tackle Sails</td>
<td>do Fifteen</td>
<td>9</td>
<td>-</td>
</tr>
<tr>
<td>Scoops</td>
<td>do Fifteen</td>
<td>6</td>
<td>-</td>
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<tr>
<td>Setting Poles</td>
<td>do Forty Three</td>
<td>20</td>
<td>-</td>
</tr>
<tr>
<td>Bars Iron Crow</td>
<td>do Ten</td>
<td>10</td>
<td>-</td>
</tr>
<tr>
<td>Barrows Wheel</td>
<td>do Sixty Five</td>
<td>30</td>
<td>19</td>
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</table>

Six
<table>
<thead>
<tr>
<th>Item</th>
<th>Quantity</th>
<th>Unit</th>
<th>Total</th>
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</thead>
<tbody>
<tr>
<td>Bellows Smiths</td>
<td>do</td>
<td>Two</td>
<td>1</td>
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<tr>
<td>Boxes for Pitsaws</td>
<td>do</td>
<td>Sixteen</td>
<td>12</td>
</tr>
<tr>
<td>Bill Hooks</td>
<td>do</td>
<td>Forty</td>
<td>40</td>
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<tr>
<td>Bills Hand</td>
<td>do</td>
<td>Sixty Three</td>
<td>60</td>
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<tr>
<td>Buckets for Engine</td>
<td>do</td>
<td>Twelve</td>
<td>12</td>
</tr>
<tr>
<td>Buckets Water</td>
<td>do</td>
<td>Nineteen</td>
<td>19</td>
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<tr>
<td>Bells of Sorts</td>
<td>do</td>
<td>Thirty Seven</td>
<td>37</td>
</tr>
<tr>
<td>Blocks</td>
<td>do</td>
<td>Four</td>
<td>4</td>
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<tr>
<td>Paint</td>
<td>do</td>
<td>Thirty Two</td>
<td>9</td>
</tr>
<tr>
<td>Brushes Whitewash</td>
<td>do</td>
<td>Thirteen</td>
<td>5</td>
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<tr>
<td>2 Inch Feet</td>
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<td>2374</td>
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<tr>
<td>1-1/2 Feet</td>
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<td></td>
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<td>Boards 1</td>
<td>do</td>
<td>Eighty</td>
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<tr>
<td>and 3/4 Plank</td>
<td>do</td>
<td>Eleven thousand Six hundred and Ninety Nine</td>
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<tr>
<td>1/2 Plank</td>
<td>do</td>
<td>Three thousand Eight hundred and Sixty Four</td>
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<td>3 Inch Plank</td>
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<td>2 Inch Plank</td>
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<td>Caulking Irons</td>
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<td>Compasses Carpenters Pairs</td>
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<td>Chains Drag</td>
<td>No</td>
<td>Eleven</td>
<td>8</td>
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<td>Canlhocks</td>
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<td>2</td>
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<tr>
<td>Canteens Tin</td>
<td>do</td>
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<td>1,000</td>
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<td>Chalk</td>
<td>Lbs. Forty two</td>
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<td>3 Inch</td>
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<tr>
<td>4 Inch</td>
<td>do</td>
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<td>Cordage 5</td>
<td>do</td>
<td>Nine hundred and Eighty</td>
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<td>2-1/2</td>
<td>do</td>
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<td>1</td>
<td>do</td>
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<td>do</td>
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<td>Mortice</td>
<td>do</td>
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<tr>
<td>Cocks Brass</td>
<td>do</td>
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<td>2</td>
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<tr>
<td>Crosscut saw</td>
<td>do</td>
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<td>219</td>
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<tr>
<td>Tennon saw</td>
<td>do</td>
<td>One hundred and Fifty</td>
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<tr>
<td>Files Pitsaw</td>
<td>do</td>
<td>Two hundred and Eight</td>
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</tr>
<tr>
<td>Round &amp; 1/2 Round One</td>
<td>do</td>
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</tr>
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<tr>
<td>Flat</td>
<td>do</td>
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<tr>
<td>Three Square</td>
<td>do</td>
<td>Eighteen</td>
<td>18</td>
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<tr>
<td>Files Handsaw</td>
<td>do</td>
<td>Five hundred and eight</td>
<td>305</td>
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<tr>
<td>Item</td>
<td>Quantity</td>
<td>Notes</td>
<td></td>
</tr>
<tr>
<td>-------------------------------</td>
<td>----------</td>
<td>-----------------</td>
<td></td>
</tr>
<tr>
<td>Square</td>
<td>do Five</td>
<td>5</td>
<td></td>
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<tr>
<td>Smiths Rubbers</td>
<td>do Ten</td>
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</tr>
<tr>
<td>Fachine Chokers</td>
<td>do Eleven</td>
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<tr>
<td>Gimlets of Sorts</td>
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</tr>
<tr>
<td>Glass</td>
<td>Panes Three thousand</td>
<td>3,011</td>
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<td>Gouges</td>
<td>No One hundred and</td>
<td>111</td>
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<td>Grease</td>
<td>Lbs Five hundred</td>
<td>500</td>
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<td>Glue</td>
<td>do Sixteen</td>
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</tr>
<tr>
<td>Claw</td>
<td>No Forty three</td>
<td>13</td>
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<tr>
<td>Hammers Masons</td>
<td>do Ten</td>
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<tr>
<td>Hook &amp; Strap</td>
<td>Pairs Seventy five</td>
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<td>Cupboard</td>
<td>do Twenty one</td>
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<td>Hinges HL</td>
<td>do One hundred Forty</td>
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<td>No One hundred and</td>
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</tr>
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<td>Hammers Masons</td>
<td>do Ninety Two</td>
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</tr>
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<td>Jack Screw</td>
<td>do Five</td>
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</tr>
<tr>
<td>Iron Squares</td>
<td>do Fifteen</td>
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<td></td>
</tr>
<tr>
<td>Bushel</td>
<td>Lbs Five thousand and</td>
<td>5,037</td>
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</tr>
<tr>
<td>Iron Flat &amp; Square</td>
<td>do Five thousand Seven</td>
<td>5,710</td>
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<tr>
<td>Rod</td>
<td>do Two hundred and</td>
<td>205</td>
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<tr>
<td>Iron Flat &amp; Square</td>
<td>do Five hundred and</td>
<td>568</td>
<td></td>
</tr>
<tr>
<td>Sheet</td>
<td>No Four hundred and</td>
<td>451</td>
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</tr>
<tr>
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<td>do Twelve</td>
<td>12</td>
<td></td>
</tr>
<tr>
<td>Ladles</td>
<td>do One</td>
<td>1</td>
<td></td>
</tr>
<tr>
<td>Liquid for Engine</td>
<td>Gals Five</td>
<td>5</td>
<td></td>
</tr>
<tr>
<td>Sheet</td>
<td>Lbs One hundred and</td>
<td>161</td>
<td></td>
</tr>
<tr>
<td>Lead Pig</td>
<td>do One hundred and</td>
<td>159</td>
<td></td>
</tr>
<tr>
<td>Iron Rimmed</td>
<td>No Thirteen</td>
<td>13</td>
<td></td>
</tr>
<tr>
<td>Brass knobed</td>
<td>do Six</td>
<td>4</td>
<td></td>
</tr>
<tr>
<td>Stock</td>
<td>do Twenty two</td>
<td>18</td>
<td></td>
</tr>
<tr>
<td>Locks Chest &amp; Desk</td>
<td>do Thirteen</td>
<td>13</td>
<td></td>
</tr>
<tr>
<td>Splinter</td>
<td>do Fourteen</td>
<td>13</td>
<td></td>
</tr>
<tr>
<td>Pad</td>
<td>do Eleven</td>
<td>6</td>
<td></td>
</tr>
<tr>
<td>Latches Brass</td>
<td>do Eight</td>
<td>7</td>
<td></td>
</tr>
<tr>
<td>Catches Iron</td>
<td>do Twenty two</td>
<td>22</td>
<td></td>
</tr>
<tr>
<td>Chalk</td>
<td>do Three hundred and</td>
<td>397</td>
<td></td>
</tr>
<tr>
<td>Deep Sea</td>
<td>do Ten</td>
<td>10</td>
<td></td>
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APPENDIX S. SOURCES OF ILLUSTRATIONS.

1 Canada. Public Archives (hereafter cited as PAC), Map Collection, negative No. C-53153.
2 Ibid., C-29167.
3 Toronto. Metropolitan Toronto Central Library. J. Ross Robertson Collection, no. 1213.
4 PAC, Map Collection, Neg. No. C-52834.
5 Ibid., C-53154.
6 Ibid., C-52839.
7 Ibid., C-30387.
8 Ibid., C-52849.
9 Ibid., C-47336.
10 Ibid., C-52838.
11 Ibid., C-52836.
12 Ibid., C-52840.
13 Ibid., C-52851.
14 PAC, RG8, C969, p. 75.
15 PAC, Map Collection, Neg. No. C-52843.
16 Ibid., C-52848.
17 Washington, D.C. National Archives, RG77, Fortifications Map File, Dr. 113, Sh. 5-1/2.
18 PAC, Map Collection, Neg. No. C-30389.
19 Ibid., C-52842.
20 Ibid., C-52851.
21 PAC, RG9, IIA1, Vol. 386, No. 14255.
22 PAC, Map Collection, Neg. No. C-52843.
23 Ibid., C-52848.
Construction of Fort George, 1796-1811

1 Public Archives of Canada (hereafter cited as PAC), RG8, C381, pp. 23-25.
3 Ibid., ser. 3, Vol. 11, p. 106.
6 PAC, MG23, HI(1), ser. 3, Vol. 8, p. 201.
7 Ibid., p. 120.
8 PAC, MG23, GII(17), ser. 1, Vol. 17, p. 25.
9 PAC, RG8, C1206, pp. 4-6.
11 Ibid., Vol. 23, p. 17.
12 PAC, RG8, C1207, p. 177.
13 Ibid., C546, p. 132.
14 Ibid., C547, p. 20.
15 Ibid., C546, p. 189.
16 Ibid., C383, p. 6b.
17 Ibid., p. 24.
18 Ibid., pp. 89-90.
19 PAC, RG8, C1160, p. 148.
20 Ibid., C384, p. 147.
21 Ibid., C548, p. 30.
24 There were probably two chimneys with double fireplaces to heat the two soldiers' dormitories and the officers' quarters.
26 Ibid., Vol. 23, pp. 17-18.
27 PAC, RG8, C110, p. 147.
28 Ibid.
30 PAC, RG8, C792, p. 16.
31 Ibid., C1208, pp. 139-40.
32 Ibid., C911, p. 51.
34 PAC, RG8, C792, pp. 18-19.
35 Ibid., C547, pp. 21-22.
36 PAC, MG23, GII(17), ser. 1, Vol. 17, pp. 333-34.
37 Ibid., Vol. 23, p. 119.
38 PAC, RG8, C1153, p. 94.
39 Ibid., C1212, p. 158.
40 Ibid., C384, pp. 1-2.
Fort George and its Complements
1 PAC, MG23, GII(17), ser. 1, Vol. 21, p. 11.
2 PAC, RG8, C1207, pp. 266-67.
3 Ibid., p. 294.
4 PAC, RG8, C383, p. 6b.
5 Ibid., C513, p. 92.
6 Ibid., C1214, p. 132.
7 Ibid., pp. 336-37.
9 PAC, RG8, C1206, p. 172.
10 Ibid., pp. 4-6.
12 PAC, RG8, C547, p. 24.
13 Ibid., C794, p. 39.
15 PAC, RG8, C677, pp. 198-201.
16 Ibid., C1207, pp. 202-3.
17 Ibid., C384, p. 147.
18 Ibid., C383, p. 7.
20 PAC, RG8, C115B, p. 5.
22 PAC, RG8, C546, p. 87.
25 PAC, RG8, C794, p. 92.
26 PAC, MG24, A5, Military Letter Books, p. 244.
27 Ibid., p. 211.
28 Ibid., p. 279.
29 Ibid., p. 341.
30 Ibid., p. 423.
32 Ibid., pp. 32-33.
33 Ibid., pp. 60-61.
34 Ibid., p. 85.
35 Ibid., p. 133.
36 Ibid., p. 245.
38 PAC, RG8, C112, pp. 179-80.
39 Ibid., C384, pp. 2-3.
40 Ibid., C1153, p. 92.
41 Ibid., C546, p. 79.
42 Ibid., C1014, p. 109.

Fort George During the War of 1812-14
1 PAC, RG5, A1, Vol. 15, p. 5965.
2 PAC, RG8, C676, p. 106.
William L. Clements Library. Christopher Van Deventer Papers, Vol. 1; Washington, D.C. National Archives, RG77, Fortifications Map File, Dr. 113, Sh. 5-1/2.


Ibid., p. 37.


Ibid., p. 131.

Ibid., C1707, p. 61.

Ibid., p. 73.

Ibid., pp. 124-25.

PAC, MG23, HI(4), Vol. 1, p. 103.


PAC, MG23, HI(4), Vol. 1, p. 82.

PAC, MG24, F70, p. 9.

PAC, RG8, C690, p. 41.

PAC, MG12B, W017, Vol. 1517, p. 36.

PAC, RG8, C1707, p. 167.

Ibid., C1700, p. 33.


Ibid., p. 228.

PAC, RG8, C678, p. 303.

Ibid., C387, pp. 48-50.

Ibid., C729, p. 155.

Ibid., C678, pp. 311-13.

PAC, MG19, Fl, Vol. 10, p. 89.

PAC, RG8, C678, pp. 318-26.


PAC, RG8, C679, p. 389.

Ibid., C1201, pp. 54-55.

PAC, RG8, C678, p. 341.


Ibid., Vol. 4, p. 146.

PAC, RG8, C679, p. 91.

Ibid., p. 82.

Buffalo Gazette, 6 July 1813, cited by Ernest A. Cruikshank, ed., op. cit., Vol. 4, p. 188.


53 PAC, RG8, C679, p. 368.
55 PAC, RG8, C730, p. 131.
56 The New York State Militia, under the command of Brigadier-General McClure, PAC, RG8, C680, p. 124.
57 PAC, RG8, C680, p. 137.
62 A detachment of the Royal Artillery, 25 soldiers from the 19th Light Dragoons, 14 soldiers from the Provincial Dragoons and 340 soldiers from the 100th Regiment; along with 20 volunteers and 70 Indians from the West: PAC, RG8, C681, p. 237.
63 Ibid., pp. 217-18.
64 Ibid., p. 232.
65 Ernest A. Cruikshank, ed., op. cit., Vol. 7, p. 27.
66 PAC, RG8, C681, p. 275.
67 Ibid., C1222, p. 9.

The New Fort George, 1814-28
1 PAC, MG12B, W040, Bundle 32.
2 PAC, RG8, C682, p. 266.
3 Ibid., C684, p. 86.
4 Ibid., C1708, p. 43.
6 PAC, RG8, C1708, p. 77.
7 Ibid., p. 87.
8 Ibid., p. 118.
10 Ibid., p. 178.
11 PAC, RG8, C683, pp. 62-63.
12 Ibid., C684, p. 134.
13 Ibid., C388, p. 139.
14 Ibid., C684, p. 135.
15 Ibid., C389, pp. 26-27.
16 Ibid., C1234, p. 41.
17 Ibid., C1325, p. 36.
18 Ibid., C1230, pp. 50-51.
19 Ibid., C1325, p. 76.
20 Ibid., C393, pp. 60-61.
22 Ibid., p. 138.
23 Ibid., vol. 1520, p. 147.
24 PAC, RG8, C394, p. 141.
25 Ibid., C397, p. 182.
26 Ibid., C399, p. 45.
27 Ibid., C969, p. 75.
28 Ibid., C393, p. 52.
29 Ibid., C399, pp. 41–42.
31 PAC, RG8, C399, pp. 31–33.
32 Ibid., C1237, pp. 275–76.
33 PAC, RG5, AI, Vol. 32, p. 15421.
34 PAC, RG8, C398, p. 238.
35 PAC, RG5, AI, Vol. 33, p. 16056.
36 PAC, RG8, C562, p. 81.
37 Ibid., C565, pp. 6–7.
39 Ibid., C969, p. 72.
40 Ibid.
41 PAC, RG8, C1327, p. 254.
42 Ibid., C405, p. 99.
43 Ibid., C570, pp. 27–28.
44 Ibid., C408, p. 54.
45 Ibid., C404, p. 175.
46 Ibid., C403, p. 173.
48 Ibid., C1910, p. 34.
49 Ibid., p. 42.
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In writing this work mainly handwritten sources in the Public Archives of Canada, the Ontario Archives and the Metropolitan Toronto Library were consulted. Very little use was made of printed sources or studies, because the purpose of this work was not to narrate events that happened at Fort George but rather to study the structure of the buildings.

These printed sources, however, were useful in dealing with the period from 1812 until 1814, because it was not possible to consult handwritten American sources. However, the importance of consulting these American documents should be emphasized, because the Americans had possession of Fort George for a period of six months. There is at present very little information about the American occupation of the fort and the structural changes made during that period.

Furthermore, time did not permit an analysis in detail of all the official Colonial Office correspondence. This correspondence offers little possibility of retracing a useful and comprehensive structural documentation.

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Figure 1. Plan showing layout for centre blockhouse, 1796. (Public Archives of Canada.)
Plan and Elevation of an Ordnance Storehouse and Blockhouse erected at Fort George, Amherstburg.

References:
- A. Ordnance Stores
- B. Small Store Room for Troops
- C. Rooms for Soldiers
- D. Rooms for Officers

Scale of feet: 2 to 1.
Figure 2. Plan indicating the proposed layout for the palisade and the interior arrangement of the fort 1799. Note, there is only one main gate in the northern area, although the plan suggests that there are two passages behind the powder magazine communicating with the octagonal blockhouse located outside the fortification and protected by a redan. Note also that there are footpaths or roads crossing the palisade. Perhaps there were gates also. One of the paths runs between Bastion 3 and Bastion 4, which could explain the presence of the guardhouse at this location. Another runs between Bastions 1 and 2 and a third between 1 and 6. This is the basic plan for this study, because it locates all the buildings constructed between 1796 and 1799 at Fort George (except the bakery). Bruyères used this numbering system in 1802. (Public Archives of Canada.)
Figure 3. Painting by Ackerman (1805) confirming the 1796 construction plan of the centre blockhouse. This plan also gives us an idea of the levelling of the Fort George terrain. (J. Ross Robertson Collection, Metropolitan Toronto Central Library.)
This 1796 plan presents certain interpretation problems, as some details do not agree with the historical documentation. Thus it seems that the fortification had been planned somewhat farther to the northwest, because the term "situation for fort" is used. The site of the powder magazine does not agree with the site shown on several other plans, since it is located a bit further to the south. The officers' kitchen is located between the powder magazine and Navy Hall, whereas the construction estimate puts it behind the centre blockhouse. (Public Archives of Canada.)
Figure 5. Plan dated 1800 showing the construction and arrangement of the powder magazine. This powder magazine is still in existence at Fort George. It is the only original building still standing. (Public Archives of Canada.)
PLAN Elevation and Section of a Powder Magazine

erected at Fort George, Amherstburg.

Scale 8 feet to an inch

[Diagram of a powder magazine with annotations]

Gatherman
Cor. Command W.B.N.
Figure 6. Plan dated 1793 by the Public Archives of Canada but which in reality dates from either 1803 or 1804, since the octagonal blockhouse (located outside the fort) is connected to the fort by a palisade. This work is known to have been done in 1803 and 1804. (Public Archives of Canada.)
Figure 7. Plan (1799) - this plan is identical to Figure 2 except for one detail: there is only one gate leading to the octagonal blockhouse. We do not know which is the correct plan. (Public Archives of Canada.)
References
a Blockhouse
b Magazine
c Hospital & Kitchen
d Officers' Quarters & Kitchens
e Guard House
f Set of Blockhouses
g Storehouses
h Wharf
Figure 8. Construction plan and arrangement of the officers' barracks. (Public Archives of Canada.)
Figure 9. Drawing of the Fort George parade square, by James Walsh, surgeon of the 5th Regiment, probably dated 1805. Note difference in level of land between blockhouse and officers' quarters. Change made in the main doors of the officers' quarters by the addition of a porch and a gable roof; windows have four horizontal and five vertical panes. Three steps seems to indicate that the building's foundation was raised. There may have been a fence, but whether the trees were actually there is not known.

Note the location of the guardhouse, the hospital and its kitchen, the powder magazine, the octagonal blockhouse and numerous sentry boxes. Part of a window frame, the siding and the corner assembly of the blockhouse on the left are illustrated. (William L. Clements Library, Ann Arbor, Michigan.)
Figure 10. Plan dated 1810. This plan is lacking in certain details: neither the guardhouse nor the palisade uniting the octagonal blockhouse with the fort enclosure are indicated, and two soldiers' barracks have been added. (Public Archives of Canada.)
Figure 11. Plan of a section of the palisade forming the curtains. (Public Archives of Canada.)
Section through the Picketing forming the Curtains

Ground View

Scale 6 Feet to an Inch.
Figure 12. Plan of a section of the palisade forming the bastions. (Public Archives of Canada.)
Section through the Batteries of the Fort

Scale 8 Feet to an Inch.
Figure 13. Uniforms of the 5th Regiment, officers' on the left and soldiers' on the right. (J. Ross Robertson Collection, Metropolitan Toronto Central Library.)
Figure 14. Uniforms of the 41st Regiment, officers' on the left and soldiers' on the right. (J. Ross Robertson Collection, Metropolitan Toronto Central Library.)
Figure 15. Uniforms of the 49th Regiment, officers' on the right and soldiers' on the left. (J. Ross Robertson Collection, Metropolitan Toronto Central Library.)
Figure 16. Plan (1790) showing the expected location for the construction of the fortification. (Public Archives of Canada.)
Figure 17. American plan of the new Fort George, drawn in September or October 1812. This plan shows the state of the English fortifications on the eve of their capture by the Americans. The southeastern part of the fortification has been cut and new barracks constructed. All this work was executed by the British. (National Archives, Washington, D.C.)
Figure 18. Sketch showing the encampment of the American troops at Fort George in the summer of 1813; the American camp is located outside the fort's enclosure on the right, as was indicated by a deserter. (Taken from Cruikshank, *op. cit.*, Vol. 4, p. 55.)
Figure 19. Plan dated June, 1814 describing the condition of Fort George on that date and including the modifications made by the Americans and subsequently by the British. The Americans only completed the work started by the British; constructing a bastion on the southwest flank and strengthening the defence system on the southwest and southeast sides by building a parapet and digging a moat. The Americans did not build any structures within the fortifications, so that all the buildings indicated on the plan are of British construction. (Public Archives of Canada.)
Figure 20. This plan dated 1816 indicates the location of the second British fortifications and the American alterations made to the original fort. Note the trenches dug by the Americans in 1813 on the northwest side. This second fort was begun by the British. (Public Archives of Canada.)
References: Fort George
The blue lines show the walls of the Fort at the beginning of the war.
The black lines indicate the fortifications.
All other buildings were built in the 18th century.
Magazines and Barracks.

Part of the Military Reserve.
Figure 21. Uniforms of the 70th Regiment: officers' on the left, soldiers' on the right. (J. Ross Robertson Collection, Metropolitan Toronto Central Library.)
Figure 22. Overall plan of Fort George in 1819, showing the buildings inside the fort as well as outside. Traces of the former American trenches can also be observed on the northwest side. It seems that a road crossed the old fort. (Public Archives of Canada.)
Figure 23. Sketch of the main barracks of Fort George in 1819. (Public Archives of Canada.)
Elevation of proposed building consisting of 1 story, only feet high, with 2 doors on ground, which occasion the Beaumont to be added to uncomfortable. Proposed that the two inside partitions, which are decaying be removed and the building made into one room intake of 2. The floor be raised 2 feet and raised 3 feet from the ground and the side walls raised 3 feet higher, according to the elevation here stated.

55 feet x 20

55 feet x 20
Figure 24. Plan of the two permanent powder magazines of Fort George, according to a report by Chief Engineer Durnford in 1823. A very interesting detail is the buttresses around the original powder magazine. Buttresses were added in 1893: what became of the set shown here? (Public Archives of Canada.)
1. Plan, Section, and Elevation of the Commissariat Store at Navy Hall
   Scale 20 feet to an inch

2. Plan, Section and Elevation of the Guard House at Fort George

3. Plan, Section and Elevation of the Magazine inside Fort George

   Signed:
   [Signature]

   24 June 1825

4. Plan and Elevation of the Magazine outside Fort George

   Signed:
   [Signature]

   24 June 1825
Figure 25. Plan of Fort George in 1853 indicating the state of deterioration of the two forts at that date. Some unidentifiable buildings were still standing. (Public Archives of Canada.)
Figure 26. Sketch of the foundations of the second brick powder magazine as they existed in 1895. This magazine was located near the custodian's house, or the "Brock House." (Public Archives of Canada.)
Figure 27. Photo of the second powder magazine taken at the turn of the century. The arch is beginning to crumble. (Metropolitan Toronto Central Library.)
Figure 28. Sketch of the first powder magazine made in 1893. The buttresses added during the summer of the same year can be seen. The drawing also provides a good idea of the terrain around the powder magazine: there is a slight slope toward the rear of the powder magazine. (Toronto and Early Canada Collection, Metropolitan Toronto Central Library.)
Figure 29. Photo of the first powder magazine, taken around 1913. The roof is covered with tar paper rather than iron sheeting. (Source unknown.)
Figure 30. Photo of the first powder magazine at Fort George around 1934-35. This powder magazine is still in existence. There is a small shed behind the building. (Old Forts in Upper Canada, University of Toronto School of Architecture, 1935, p. 7.)
Figure 31. Photo of the second powder magazine at Fort George around 1920-30. This powder magazine was later destroyed. (Toronto and Early Canada Collection, Metropolitan Toronto Central Library.)
Figure 32. Undated photo of the first powder magazine at Fort George. Note that there is no shed behind the building. (Metropolitan Toronto Central Library.)
Figure 33. Undated photo of the first powder magazine. (Metropolitan Toronto Central Library.)
Figure 34. Undated water colour of the first powder magazine. A door between the second and third buttresses is shown, plus perhaps a window between the first and second. (J. Ross Robertson Collection, Metropolitan Toronto Central Library.)
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