

Project Registration Number (office use only) _____

Niagara River Greenway Commission

Consultation and Review Form

Type of Review Required: Mandatory Consultation
 Voluntary Review and/or Endorsement

PROJECT SPONSOR INFORMATION

Name: Old Fort Niagara Association

Mailing Address: P.O. Box 169 Youngstown

State: New York Zip Code: 14174

Federal ID# 16-0768721 Charities Registration # 01-25-05

PROJECT TYPE

Check all that apply: Environmental Cultural/Heritage Land or Water Public Access
 Cultural Trail Educational/Interpretive
 Waterfront or Land Based Development Signage
 Recreational Other

Funding Committee Request:

- Host Community Standing Committee
- Buffalo and Erie County Standing Committee
- Ecological Standing Committee
- State Parks Standing Committee
- Unsure at this time

Amount requested: \$75,000.00

Matching funds: \$865,000.00

PROJECT INFORMATION

Project Name: Old Fort Niagara Historic Structures Preservation Project

Location: _Old Fort Niagara_____

Site Address: _____102 Morrow Plaza Youngstown_____

State: _____NY_____ Zip Code: _____14174_____

Minor Civil Division(s): ____Village of Youngstown, Town of Porter____

County: ____Niagara_____

Project Proponent Property Interest (own, lease, easement or other): _Lease in cooperation with NYS Parks Office of Parks, Recreation and Historic Preservation

AUTHORIZED OFFICIAL

Name: _Robert Emerson_____ Title: Executive Director

Business Address: P.O. Box 169 Youngstown

State: ____NY_____ Zip Code: _____14174_____

Telephone Number: _716-745-7611 x228_____ Cell Number: _____

Fax Number: _____

E-Mail Address: remerson@oldfortniagara.org

PROJECT POINT OF CONTACT

Name: _Robert Emerson_____ Title: _Executive Director

Organization/Firm: _Old Fort Niagara Association_____

Business Address: _P.O. Box 169 Youngstown_____

State: _____NY_____ Zip Code: _____14744_____

Telephone Number: 716-745-7611 x228_ Cell Number: ____

Fax Number: _____

E-Mail Address: ____remerson@oldfortniagara.org_____

PROJECT NARRATIVE

Please attach material which responds to the following six items in the order that they are presented.

1. In a brief paragraph, describe the project and its purpose, how and when it will be accomplished, and why it is important.

Three historic buildings at Old Fort Niagara stand in dire need of masonry restoration. The French Castle (1726), The South Redoubt (built 1770) and North Redoubt (1771) are iconic structures that date prior to the American Revolution. These buildings are unique not only to the Niagara Region, but to all of North America. Significant mortar cracks and losses are currently evident in over 48% of the exterior surface area of the South Redoubt and over 26% of the exterior surface area of the North Redoubt. There are also mortar losses and serious cracks in the buildings' interiors. Masonry deterioration is also evident in the French Castle, where stones are falling out of chimneys. These defects grow worse every year and threaten the structural integrity of these irreplaceable historic structures.

In addition to their historical, educational and cultural value, these stone, three-story buildings are prime attractions at Old Fort Niagara. Over 200,000 visitors from throughout the world tour the fort annually. These visitors make a significant economic impact on our region. Should the Castle and the redoubts fall into further disrepair, the community would lose a vital educational and economic resource.

Old Fort Niagara proposes a masonry restoration project to repoint the Redoubts and repair damaged masonry in the French Castle. The Castle would also receive a new roof as serious leaks have appeared in the 30+-year-old roof. Contractor estimates for this work are currently \$828,000.00 for all three buildings. This estimate will increase by at least 5% for every year the project is delayed. The redoubts would take about 4-5 weeks for completion while castle repairs would take four months. Work would be scheduled spring and fall of 2022 to avoid the busy summer season.

2. Referring to the Niagara River Greenway Plan, clearly document and describe how the proposed project will advance the Niagara River Greenway vision including the goals, principles, and criteria that define that vision.

The French Castle, North and South Redoubts stand as a testament to the strategic importance of the Niagara Region during the formative years of the United States and Canada. During the 17th and 18th centuries, the world's great superpowers, France and Britain, struggled to control the globally significant Niagara Portage. During this time, the most efficient way to travel was by water, and the Great Lakes offered a water superhighway to the interior of the continent. Whoever controlled the mouth of the Niagara River could block rivals from entering the upper Great Lakes.

France was the first European power to explore and fortify the region. After two futile attempts to construct a fort at the mouth of the Niagara River, the French established Fort Niagara in 1726 with the erection of the French Castle. The fort quickly became a cultural crossroads as Europeans and Native Americans met to trade, negotiate and form alliances with one another.

During the French and Indian War, the British captured Fort Niagara with the assistance of almost 1,000 Haudenosaunee warriors. After hostilities ended, Native Americans became disenchanted with British frontier policies, attacking British posts throughout the Great Lakes. When peace was restored in 1766, British planners searched for ways to bolster Fort Niagara's defenses without requiring a large and expensive garrison. British engineer Captain Thomas Sowers supervised the construction of "two large block - houses of stone" which incorporated both Georgian and Asian architectural styles; features that were popular in the 1770s. The

buildings became known as the North and South Redoubts. They were built at the salient angles of the fort's main wall, are thirty-six feet square, five feet thick at the base, and stand twenty-seven feet high with three floors. From these strongholds, a small number of soldiers could defend the much larger fort.

During the War of 1812, American soldiers defended the French Castle and stone redoubts during several artillery bombardments and in December 1813, the Castle and both redoubts were attacked and taken by British troops during a daring pre-dawn assault. The capture of Fort Niagara opened the door for British troops to destroy all of the settlements along the eastern shore of the Niagara River from Youngstown to Buffalo. The United States Army returned to Fort Niagara in 1815 and thereafter occupied the fort as a peaceful border outpost.

By the 1920s, the fort began to deteriorate and local citizens organized the Old Fort Niagara Association to work with the War Department to restore the historic fort. The collaborative effort between the United States government and the not-for-profit Association was well ahead of its time as a successful public-private partnership.

The restoration of the French Castle and North and South redoubts will promote the vision of the Niagara River Greenway by preserving three iconic 18th century buildings at the region's most prominent historical attraction, insuring that they are not lost to future generations.

Over 200,000 visitors from all over the world visit Old Fort Niagara annually. Virtually all of these visitors enter the fort through the South Redoubt. They visit the French Castle and the North Redoubt a little later in their tour of the site. Should these buildings be closed to the public due to structural issues, the value of the fort experience would be greatly diminished. This would result in declining visitation and a greatly reduced economic impact on the region.

Principles

The restoration of the French Castle and the North and South Redoubts will meet the guiding principles of the Niagara River Greenway Commission as follows:

Excellence

Old Fort Niagara is a world class historic site, as evidenced by its popularity among visitors from all over the world. There are many historic forts in North America, but Old Fort Niagara stands out because of its originality. While many such sites are reconstructions, Old Fort Niagara boasts original 18th century buildings.

This proposed restoration project will adhere to the Secretary of Interior's Standards for Historic Preservation, regarded as the national standard for such projects. The project will also be designed and supervised by preservation experts from the New York State Office of Parks, Recreation and Historic Preservation, who have developed state of the art standards for masonry restoration.

Restoration of the iconic French Castle and North and South Redoubts will play a significant role in the ongoing efforts to rejuvenate, protect, and preserve the New York State Parks System in Western New York. With our diverse staff, Board of Directors, volunteers, and reenactors, we can continue to use the Castle and both redoubts as venues for educating the public about the early history of our region.

Sustainability

This project will continue the work of generations of preservationists who rescued Fort Niagara from falling into rubble. The redoubts underwent two preservation efforts during the 19th century: once in 1837 and another in 1868. Those restoration efforts were funded by Congress who found it vital to preserve these structures. The formation of the Old Fort Niagara Association led to the final overhaul of the French Castle and the redoubts' between 1929 and 1934, when the fort opened as a museum.

Restoration of the Castle and the Redoubts will insure the buildings' physical sustainability by repointing masonry inside and out and by installing a new roof on the Castle. By replacing missing mortar and repairing cracks, the project will eliminate the insidious infiltration of water into the stonework. During winter months, ice formation behind the stones forces them apart threatening the structural integrity of all three buildings. In addition, leaks in the Castle roof allow freezing water to run down interior walls of the building.

The project will also support the economic sustainability of the Old Fort Niagara Association, which operates the historic site under license from the New York State Office of Parks, Recreation and Historic Preservation. The Castle and the redoubts, which have been restored to their 18th century appearance, are popular destinations for visitors and important venues for Old Fort Niagara's acclaimed living history programming. Old Fort Niagara operates the site without significant operating funds from government. The Association relies on admission fees, shop sales and community support to sustain its operations. The loss of any of these historic structures would render the site much less attractive to visitors and would result in substantially reduced revenues.

This project will insure the continued physical and economic sustainability of Old Fort Niagara.

Accessibility

Old Fort Niagara is located at the northern end of the Niagara corridor; easily accessible by the Niagara Scenic Parkway and secondary roads. The Discover Niagara Shuttle also accesses the fort, providing both travelers and local residents with convenient, free transportation from Niagara Falls to the fort. In addition to highways, the fort can be accessed by a walking and biking pathway (the Shoreline Trail) that runs along the Niagara River. These trails will be augmented and improved in the coming years, making the preservation project an integral part of efforts to strengthen the recreational value of the region.

Once onsite, visitors access the fort through the South Redoubt. The ground floor of this building has recently been resurfaced to facilitate easier access to the fort's interior. In both Redoubts, visitors can ascend to the third floor for spectacular views of the Niagara River and Lake Ontario.

The fort is open extended hours to facilitate access to the Castle and the two redoubts as well as other historic buildings at the site. The fort is closed only three days per year and operates from 9:00 am to 5:00 pm with extended hours to 7:00 pm in the summer months. (Please note- these hours are currently curtailed due to Covid-19, but the fort plans to return to traditional extended hours in the future.)

Ecological Integrity

This project involves restoration of existing historic structures and will pose no adverse ecological impact or ground disturbance.

Public Well-Being

Old Fort Niagara promotes both physical and emotional well-being among its guests and in the community. The fort offers visitors plenty of open space, well-ventilated buildings (including the Castle and redoubts), fresh air and exercise. During normal times, many of the programs conducted by the fort are interactive, offering visitors the opportunity to take part in military drills, period games and other physical activities.

Perhaps the fort's greatest contribution is its impact on emotional wellness of its visitors and of the community. The fort's original buildings provide visitors with a tangible link to the past that helps develop perspective and wisdom. Daily interpretive programming that takes place in and around these buildings help visitors understand the lifestyles of the past and how people overcame great challenges to build the society we enjoy today. The fort offers cooking demonstrations, period appropriate games, music, clothing, and artillery demonstrations as well as laundry demonstrations, which showcase women's roles at Fort Niagara. The fort hosts several large reenactment events where members of the living history community from all over the world come to participate. These events let visitors witness historical events pertinent to their community in real time.

For area residents, the fort provides a unique sense of place and an understanding that our region was important on a global scale. Many other regions cannot claim this distinction, so the fort's presence engenders community pride.

In addition to general visitors, the fort hosts about 12,000 school children each year. Visiting the fort's buildings and experiencing its school programs reinforces school curricula and literally brings history alive for these students.

The fort also offers programs about Native Americans both onsite and through outreach. These programs help to increase public knowledge about the Native community, its history and philosophies. This in turn creates greater understanding of challenges in contemporary Native society.

If the Castle and redoubts cease to exist, so do these educational opportunities. Education is not just a part of our mission statement but also a part of the community and family values.

Connectivity

The fort, and especially the Castle and redoubts, provide connectivity in both a physical and intellectual sense. All three buildings offer incredible views of the Niagara River, Lake Ontario and Canada. From the third floors of the redoubts, a visitor can see all the way up the Lower Niagara River, and on a clear day, see the mist from Niagara Falls. The redoubts are one of the best places along the entire Niagara River for the public to gain an overview of this historic corridor and its geography. The view from the Redoubts includes many Canadian historic sites including Fort George and Fort Mississauga.

Intellectually, the fort provides a link between the past and the present and between American and Canadian history. The site was home to a Native fishing village prior to the coming of the Europeans. French, British and American soldiers served at the fort, and the fort played a critical role in the founding of Upper Canada in the years following the American Revolution. In fact, the fort's history is just as much Canadian as it is American. It provides a vital cultural link between two nations.

Restoration

The French Castle was built in 1726 and is the oldest building in the Great Lakes Basin. The South Redoubt was built in 1770 and marked its 250th birthday last year. The North Redoubt was constructed in 1771, so it turns 250 this year. Over the years, both the Castle and the redoubts underwent several changes as the needs of the fort's garrisons changed. However, the basic structures from the 18th century remained. Repointing of the redoubts was accomplished in 1837 and 1868 and all of the buildings were restored to their 18th century appearance during the restoration of the fort between 1929 and 1934. The purpose of this project is to repoint masonry to preserve these buildings as restored almost a century ago.

Authenticity

As original structures, the Castle and the redoubts stand in the same location where they were erected 250 – 300 years ago. They remain a distinctive feature of the Niagara River corridor and are not duplicated elsewhere. Moreover, the buildings reflect the unique international character of the Niagara Frontier. The Castle was built by the French. Following their capture of the fort in 1759, the British built the redoubts to shore up their defenses during years of peace. All three buildings served during the American Revolution, War of 1812, American Civil War and more modern conflicts such as World War One and World War Two. They serve as venues for living history programming which adheres to the highest standards of authenticity.

Celebration

These buildings celebrate the rich influence of French, British and Native American presence in the Niagara region during colonial times. The Castle celebrates the rich interaction between Native Americans and Europeans. The redoubts are known as “forts within a fort” built for the purpose of protecting the inner workings of Fort Niagara. The North and South redoubts served as protective guardians to thousands of loyalists and Native refugees. Restoration correlates with our efforts in commemorating the upcoming 250th anniversary of the American Revolution in 2025 and 2026; and preserving the French, British, American and Native influence in the region.

Partnerships

Old Fort Niagara partners with many organizations to preserve and interpret the site to the widest possible audience; The Old Fort Niagara Association is a not-for-profit organization licensed by the New York State Office of Parks, Recreation and Historic Preservation to operate the site. Parks supports the site by providing technical assistance (such as design for this project) and funding for major capital projects. Currently, Parks is providing several million dollars in support of shoreline stabilization in concert with the United States Army Corps of Engineers, preservation of the fort's brick walls and chimney and roof preservation of the French Castle will happen as part of the proposed preservation project.

Another important partnership is the fort's relationship with the Niagara Falls National Heritage Area. In addition to working together to promote the Discover Niagara Shuttle, the heritage area has partnered with Old Fort Niagara to sponsor fall school programs that underwrite admission fees for school students.

The Fort also works very closely with Destination Niagara USA, Niagara County's tourism promotion agency. Destination Niagara promotes the fort, along with the rest of the region, and the fort provides special programming for travel writers, tour operators and convention planners. The Fort makes every effort to sell the Niagara region to prospective visitors, thereby promoting the economic well-being of our region.

We also maintain partnerships with the U.S. military. Army personnel frequently conduct staff rides to the site to train soldiers in military history and tactics.

Most recently, the Fort partnered with four other organizations to commemorate the 300th anniversary of the establishment of the Magasin Royal, an early French trading post located where Artpark stands today. The day-long program was a collaborative effort of the Historical Association of Lewiston, Artpark, the Niagara Falls National Heritage Area, the Tuscarora Nation and the Niagara County Historian's Office.

Community Based

Old Fort Niagara is located inside Fort Niagara State Park. The not-for-profit Old Fort Niagara Association operates the site under long-term license from the New York State Office of Parks, Recreation and Historic Preservation. Parks has a long history of supporting the Association in the preservation and development of the site. In recent years Parks has completed the following major capital projects at the site:

- *New roofs on five historic structures
- *New security and fire alarm systems
- *Seawall masonry restoration
- *Brick restoration on the fort's main walls in concert with support from the Save America's Treasures program.
- *New HVAC system in the site's Collections Center
- *New fencing along the Lake Shore
- *Shoreline protection with the U.S. Army Corps of Engineers

The historic structure preservation project began with an internal report in 2019, submitted to Parks and approved as part of the site's annual plan in 2020.

The project also has support from:

New York State Office of Parks, Recreation and Historic Preservation

John Percy - Destination Niagara

Town of Porter

Village of Youngstown

Irene Myers - Niagara County Legislator

Niagara Falls National Heritage Area

Senator Robert G. Ort

Assemblyman Angelo Morinello: 145th District NY State Assembly

Assemblyman Mike Norris: 144th District NY State Assembly

Goals

The preservation of the French Castle and the North and South Redoubts will meet the goals of the Niagara River Greenway as follows:

Improve Access

Old Fort Niagara is the anchor at the northern end of the Niagara River Greenway. As such it is the destination for over 200,000 visitors a year. In addition to providing these visitors with physical access to the fort interior (South Redoubt) both redoubts offer spectacular views of the Niagara River and Lake Ontario. The South Redoubt is the first historic building visitors enter when they come to the fort and it is the last one they visit as they depart. In fact, the South Redoubt is the only ADA complaint access point to the fort interior. Closure of the redoubts due to structural issues would curtail access to both the fort interior and unique views of the river and lake.

Make Connections

In 1759, British writer Arthur Young shared his view of Niagara's importance. Young wrote "The importance of this place is inconceivable; it is the key to the whole continent." When you climb to the top of either redoubt you can quickly grasp the truth in Young's statement. A 360 degree panorama unfolds before your eyes. Behind you, the waters of Lake Ontario lap against the shore. It is easy to imagine sailing vessels and birchbark canoes bringing people and trade from the St. Lawrence River or from Oswego, headed south and then west to the distant corners of the upper Great Lakes. Turning your gaze to the south, the Niagara curves upriver toward Niagara Falls; from this perspective you can easily understand why the Niagara was considered so vitally important to early explorers, traders and soldiers.

Reinforcing the stories of these intrepid adventurers, the Castle and the Redoubts provide the venues for guided tours, living history programs and reenactments. They also provide birds-eye views of the fort's extensive outer earthworks and help explain the Siege of 1759, when British and New York Provincial soldiers with Haudenosaunee allies captured the fort from the French during the French and Indian War.

Protect and Restore Environmental Systems

The Castle and the redoubts have become a part of the forts historical environment; although they may not be an organic piece of nature, they are a key component to Old Fort Niagara's story. Without them, a piece of the historical environment would be lost.

Celebrate History and Heritage

In addition to the previously mentioned connections to history and heritage, the Castle and the Redoubts serve as venues for interpretive activities. Most basic of these is the guided tour. The fort offers guided tours on a daily basis during the summer months and groups (including schools) can arrange their own tour guide year round. These tours, which use the Castle and both Redoubts, explain why the Niagara was such a strategically important place in North America. They detail the use of the fort and the Niagara portage road by Native American, French, British and American soldiers and civilians over the course of four centuries. The Redoubts also serve as venues for living history programming. One program in particular, soldier life, allows visitors to experience what life was like for common soldiers and women of the garrison during the 18th and early 19th centuries. The Castle and the Redoubts also host reenactment units who set up period rooms and bring to life the living conditions of the fort's early garrison. All of these activities are highly interactive. Finally, from the redoubts, staff and volunteers can point out other points of interest along the Niagara corridor. These points include the Battle of La Belle Famille (Youngstown) Le Magasin Royale and the Cradles (Lewiston) and Niagara Falls itself.

Sparks Revitalization and Renewal

As the revitalization of the Niagara Region moves forward, it is imperative that one of the area's key historical attractions, Old Fort Niagara, is preserved to the highest possible standard. Recent improvements to Fort Niagara State Park include a new bathhouse for the Fort Niagara pool and the restoration of the post theater (current). There are also other proposals on the table that hope to adaptively reuse other former military buildings in Fort Niagara State Park. The creation of a new bicycle path, integrated into the statewide system, will further strengthen the region's tourism economy.

Promote Long Term Sustainability

A decade ago, Old Fort Niagara received support from the John R. Oishei Foundation and the Margaret Wendt Foundation to implement a strategic plan that sought to revitalize the site and increase public support. Initiatives included new exhibits inside the fort's historic buildings, expanded interpretive programming, construction of a working blacksmith shop and bake oven, acquisition of canoes and batteaus for water-based programming, landscaping improvements, new uniforms and equipment and other developments that re-invented interpretive programming.

The results of these initiatives were dramatic. Between 2011 and 2019, visitation to the site increased from 70,000 visitors a year to over 200,000. Part of this success was providing a sufficient level of programming to attract international travelers.

This track record demonstrates that investment in Old Fort Niagara's physical plant and programs pays sustainable dividends for years to come. Economic benefits include strengthening the fort's annual operating budget from merely surviving to possessing the resources to greatly improve the site and its programming. Another benefit in increasing visitation was a dramatic increase in economic impact. Not only did visitors spend more in hotels, restaurants and retail shops, a fort visit also extended their stay in the region. Estimated economic impact of 200,000 visitors is \$16 million. As in the past, investment in Old Fort Niagara is sustainable as site and programming improvements attract more visitors.

Extend the Legacy of Fredrick Law Olmstead

Part of Olmstead's vision was to preserve restorative scenery to counteract the stresses of modern life. While the landscapes at Old Fort Niagara were crafted by military engineers centuries ago, they have now become a place to reflect on the past. Visitors come to Old Fort Niagara to learn about history but also as an escape from the 21st century. They are interested in learning about how people lived when the pace of the world was much slower.

Olmstead also believed that special places should be set aside for preservation and be protected from destruction and commercial exploitation. In this respect the restoration of the Castle and redoubts extends Olmstead's legacy by saving three vital parts of Old Fort Niagara's military landscape for visitors and the community.

Criteria

Through preservation of the French Castle and North and South Redoubts at Old Fort Niagara, the project meets the criteria of the Niagara River Greenway plan in the following ways:

Consistency with the Niagara River Greenway Principles

The preservation of the Castle and North and South Redoubts embodies the principles set by the Niagara River Greenway Action plan, by insuring that three of the region's most historic buildings continue to be accessible to the public. The project will directly guarantee the sustainability of these three buildings and restore them to good condition. The public will benefit from this project through the ability to tour the buildings and enjoy interpretive programming in and around them.

Priority Status

The project will offer improved access to waterfront resources by allowing visitors to view both the Niagara River and Lake Ontario from an elevated vantage point in the North and South Redoubts. In so doing, the Redoubts will offer the public a better understanding of the Niagara River's unique and strategically vital geography. This view will also visually link the fort to other parks and cultural resources along the Niagara.

Education and interpretation stand at the core of Old Fort Niagara's mission. For over 87 years, the Old Fort Niagara Association has planned and implemented public education programs at the site. Since 1979, all programs have been based upon solid historical research and high standards of authenticity. Public programs focus on the history of the fort and the Niagara Region. They include the Native American occupation of the site, the coming of the French, the French and Indian War, the American Revolution and the War of 1812; all are seminal events in the early history of our region.

In addition to political and military activity, the fort played a major role in the economic development of the area. From the early fur trade to the development of Youngstown as a town outside an Army base, to the advent of mass tourism in the mid-twentieth century, Fort Niagara has played an important part in the economic development of our region.

The fort's creation and development also impacted the environmental history of the area. In the 17th century, The Seneca used the site as hunting and fishing camp. As Europeans moved in, the need for firewood as well as military imperatives converted the area around the fort from woodland to cleared fields. In the 19th century, when firewood was no longer used to heat the fort's buildings and the post converted from a defensive work to a training base, trees that are now mature were planted throughout the base. Educational and interpretive programming includes a discussion of these environmental changes brought about by the evolution of the fort.

Focus Area

The Castle and the Redoubts are directly adjacent to the Niagara River and Lake Ontario. In 2019, Old Fort Niagara prepared a condition report detailing the deteriorating masonry on the redoubts. This report was submitted to the New York State Office of Parks, Recreation and Historic Preservation and the Town of Porter. Concurrently, Parks conducted a thorough study of the French Castle and noted the need to restore masonry and replace the leaking roof. In the past five years, Parks has invested \$1.9 million in restoration projects at the site. These have included extensive masonry restoration, roofing and seawall stabilization. An additional \$2.3 million in investment is expected in the next several years to fund chimney repair and reroofing the French Castle and shoreline stabilization in concert with the United States Army Corps of Engineers. In spite of this generous investment, needs exceed available funds, hence Old Fort Niagara is applying to the Niagara River Greenway to support this phase of the fort's restoration and preservation. Both NYS Parks and the Town of Porter support this project.

Environmental Soundness

In restoring historic structures that have stood for 250 years, this project will have no adverse environmental impacts.

Implementable

In 2019, the fort's Curator, Jerome Brubaker, prepared a detailed condition report on the North and South Redoubts, documenting significant mortar loss and cracks in both buildings. In September of 2019, International Chimney Corporation developed a written report on the French Castle. The implementation timetable for this project is as follows:

October-November 2021 Design Development and Specifications

January-February 2022 Project Bidding/Contract Award

April-May 2022 Repointing of the South Redoubt

September-November 2022 Repointing of the North Redoubt, Masonry Preservation and repair and new roof on the French Castle.

This timetable is appropriate in order to avoid construction work during the fort's busy summer season.

Economic Viability

The Old Fort Niagara Association has maintained and operated the historic site since 1934. The Association is a not-for-profit organization licensed by The New York State Office of Parks, Recreation and Historic Preservation. The Association has been self-sustaining since its inception almost a century ago. Through admissions revenue, museum shop sales, memberships and community support, the Association has successfully expanded its physical plant and public programming. Restoration of the Castle and the redoubts will add no ongoing operating costs to the organization. Indeed action now will avoid the need for more costly repairs in the future.

Local Sponsors or Partners

The project sponsor is the Old Fort Niagara Association. The Association has successfully operated Old Fort Niagara since 1934, consistently improving and expanding the site. The Association is governed by a 25-member community-based board of directors. Ten full time professional staff and 24 part time seasonal staff operate the site. The staff coordinating this project has a cumulative 75 years of administrative, curatorial and conservation experience. Primary staff involved will be Robert Emerson, Executive Director; Jerome Brubaker, Curator and Steve Olay, Buildings and Grounds Manager. Staff will be assisted by architects, engineers and conservators from the New York State Office of Parks, Recreation and Historic Preservation.

Old Fort Niagara partners with the New York State Office of Parks, Recreation and Historic Preservation; the Association is responsible for operating the fort and supplying the annual operating budget. Parks lends technical expertise and capital support.

This project also has the support of local elected officials including Senator Robert Ortt, Assemblymen Norris and Morinello, Niagara County, the Town of Porter board and the Village of Youngstown.

The fort works closely with Destination Niagara USA and the Niagara Falls National Heritage Area to attract visitors to the region.

Matching funds/Leverage

New York State Parks will contribute \$112,000.00 in design and project management services; monetary support in the amount of \$753,000 will come from New York State Parks capital budget as well as additional grants prepared by the Old Fort Niagara Association. Parks also plans to spend \$1.5 million in the next five years on other projects including shoreline stabilization. Greenway support will help to leverage these funds just like a Save America's Treasure's grant several years ago kicked off a multi-year brick restoration project funded by the state.

Consideration for other Planning Efforts

Approximately every 5-7 years, Old Fort Niagara develops a new strategic plan that is reviewed and approved by Parks. Within each strategic plan are annual plans that lay out goals and objectives and assign financial resources to various projects. Restoration of the Redoubts was included in the Association's 2020 annual plan, but temporary closure due to Covid has delayed the project into 2021-22.

The Castle is included in the 2021 annual plan. Parks' review of strategic and annual plans insures that Old Fort Niagara's plans are consistent with other planning efforts in the region. In addition, this project will be consistent the U.S. Army Corps of Engineers Shoreline Protection Project Plan.

Clear Benefits

Restoration of the Castle and North and South Redoubts will preserve three of the most iconic structures on the Great Lakes and insure that Old Fort Niagara continues to serve as an anchor for heritage tourism in the region.

3. Define the budget for the total proposed project and include costs for the following:

Expenses

Design/Engineering	\$92,000
Admin & Site Inspection	\$20,000
Construction	\$828,000
Total	\$940,000

Support

OFN Match	\$414,000
NYS Parks	\$414,000
In kind engineering and management	\$112,000
Total	\$940,000

Identify all sources of funding and the amount of funding expected from each source. Identify and quantify funds that are already on hand or have been allocated for the proposed project. Explain how the project will be operated and maintained.

The New York State Office of Parks, Recreation and Historic Preservation has committed \$92,000 for design and engineering services for the design stage of the project as well as \$20,000 for contract administration and inspection. Parks has also committed \$414,000.00 from their capital budget. Old Fort Niagara will apply for an additional \$414,000.00 in grant support for this project.

4. Describe the measures taken at the local level to gain community and government support for this project (hearings, petitions, public surveys, resolutions of support or other methods). If this project has been cited or described in a local planning document or some equivalent thereof, attach copies of that documentation highlighting the sections that are relevant to the proposed project. Describe the role of municipal agencies, stakeholder groups, consultants, volunteers or others who will be involved in the proposed project.

Old Fort Niagara's curator and assistant director, Jere Brubaker conducted a report of both redoubts in May of 2019. Concurrently, Parks conducted a thorough study of the French Castle and noted the need to restore masonry and replace the leaking roof. These reports were submitted to Parks and approved as part of the site's annual plan for 2020. In March of 2020, Old Fort Niagara was selected as one of nine finalists for the 21st century fund at the Community Foundation for Greater Buffalo. This grant is highly competitive; the foundation gives \$100,000.00 to one project per year; although the association was not selected as the finalist, the Community Foundation did recognize the importance of the preservation project.

5. Describe and document the environmental setting and existing conditions at the proposed project site. If you are not the owner of the property include a letter(s) or resolution(s) evidencing support for the project by the owner. Provide photographs, conceptual plans and drawings that show the site as it presently exists and how the site will change with the addition of the proposed project. Describe how your project will comply with the State Environmental Quality Review Act (SEQRA). The existence of wetlands, significant upland and aquatic habitats, and plant or animal species that are classified as rare, threatened, or endangered should be noted. Explain how such natural resources will be protected and/or enhanced. Cite any relevant project-related studies.

Standing near the mouth of the Niagara River, in the Town of Porter, Niagara County, New York, the French Castle (north facing), the North (northeast) and South (south facing) Redoubts are three of the six original eighteenth century masonry military structures situated within the walls of historic Old Fort Niagara. Old Fort Niagara is a New York State Historic Site and is listed on the National Register of Historic Places. Old Fort Niagara is a twenty two acre historic site located within a two hundred and eighty four acre State Park; maps of both sites can be seen in appendix B. The fort is located at the end of Scott Avenue which is an active walking and biking path inside Fort Niagara State Park. For those that visit the fort by car, bus or shuttle can access the site via the Niagara Scenic Parkway, Main Street and Lake Road located in Youngstown NY. All three roads lead to the North and South entrance points to Fort Niagara State Park. Preservation of the structures will not harm any existing wetlands, significant upland and aquatic habitats, and plant or animal species that are classified as rare, threatened, or endangered. A letter of support of New York State Parks can be seen in appendix A while the full report – including more photos- can be seen in appendix D and F.

6. Please attach the proposed project timeline, identify any relevant milestones, and provide an estimated date for project completion/opening. If funded, it is expected that the project sponsor or point of contact will notify the Commission of the project opening date as it nears completion. (Note: This addition to the application was made September 2018. All projects submitted for reviews after the November 20th meeting are to include a project timeline.)

Preservation work is planned for spring/fall of 2022; work on each redoubt is estimated to take 4 to 5 weeks. The South Redoubt would be scheduled for repointing between April-May of 2022 to ensure a safe visiting environment from June 2022-September 2022. While the South Redoubt is being restored, the public would enter through the postern gate or sally port; these entrance points can be seen in appendix B. The North Redoubt would be repointed between October-November of 2022 and completed before winter. The French castle will be repointed and reroofed between September and November of 2022. During the preservation, the

interpretive staff will educate visitors on the historical & military significance of the structures, how they would have been built 250 years ago, and how this project stabilizes the structures existence for future visitors.

Appendix A- Support Resolutions

Property Landlord - Parks Operations Manager, Western District: NYSOPRHP – Ron Peters

Senator Robert G. Ort

Assemblyman Angelo J. Morinello

Assemblyman Michael Norris

Irene Myers - Niagara County Legislator

John Percy - Destination Niagara

Town of Porter

Niagara Falls National Heritage Area

Village of Youngstown



**Parks, Recreation
and Historic Preservation**

ANDREW M. CUOMO
Governor

ERIK KULLESEID
Commissioner

MARK V. MISTRETTA
Director

April 21, 2021

To: Niagara River Greenway Commission

Dear Commission members,

I am writing in support of Old Fort Niagara's application to the Niagara River Greenway Commission for the Redoubt Restoration project. The North and South Redoubts are unique structures built 250 years ago. Along with other buildings at Old Fort Niagara, the redoubts are among the oldest buildings in the Great Lakes Basin. Each year, over 200,000 visitors pass through these venerable fortifications to learn about the Niagara region's early history. The buildings stand as tangible reminders of Niagara's global significance in an era when the world's great superpowers vied for control of the region.

The Old Fort Niagara Redoubt Restoration Project will address serious masonry deterioration on these two historic structures. Significant mortar cracks and losses are currently evident in over 48% of the exterior surface area of the South Redoubt and over 26% of the exterior surface area of the North Redoubt. There are also mortar losses and serious cracks in the buildings' interiors. These defects grow worse every year and will ultimately threaten the structural integrity of both structures. State parks has invested over \$1.9 million in restoration efforts at this site since 2015, with an additional capital investment exceeding \$2.3 million anticipated by 2024. Community support through the Greenway fund would greatly help to achieve this most critical remaining restoration need.

This project will restore both buildings by utilizing the latest techniques available. Both buildings will be repointed to insure that they are preserved for future generations. I(we) respectfully request that the Commission consider supporting this important restoration project.

Appreciatively,

Ron Peters
Deputy General Manager
NYSOPRHP, Western District
PO Box 1132
Niagara Falls, NY 14303
716-278-1799

ALBANY OFFICES
ROOM 909 LEGISLATIVE OFFICE BUILDING
ALBANY, NEW YORK 12247
(518) 455-2024

ROOM 315 STATE CAPITOL
ALBANY, NEW YORK 12247
(518) 455-2070



THE SENATE
STATE OF NEW YORK
ALBANY 12247

ROBERT G. ORTT
62ND SENATE DISTRICT
SENATE MINORITY LEADER

DISTRICT OFFICE
175 WALNUT STREET
SUITE #6
LOCKPORT, NEW YORK 14094
(716) 434-0680

E-MAIL
ORTT@NYSENATE.GOV

WEBSITE:
ORTT.NYSENATE.GOV

Robert Emerson
Old Fort Niagara
102 Morrow Plaza,
P.O. Box 169
Youngstown, NY 14174

Dear Mr. Emerson,

As the State Senator representing the 62nd Senate district, I am writing in support of Old Fort Niagara's application to the Niagara River Greenway Commission for the Redoubt Restoration project. The North and South Redoubts are unique structures built 250 years ago. Along with other buildings at Old Fort Niagara, the redoubts are among the oldest buildings in the Great Lakes Basin. Each year, over 200,000 visitors pass through these venerable fortifications to learn about the Niagara region's early history. The buildings stand as tangible reminders of Niagara's global significance in an era when the world's great superpowers vied for control of the region.

The Old Fort Niagara Redoubt Restoration Project will address serious masonry deterioration on these two historic structures. Significant mortar cracks and losses are currently evident in over 48% of the exterior surface area of the South Redoubt and over 26% of the exterior surface area of the North Redoubt. There are also mortar losses and serious cracks in the buildings' interiors. These defects grow worse every year and will ultimately threaten the structural integrity of both structures.

This project will restore both buildings by utilizing the latest techniques available. I urge the Commission to support this important restoration project. Please do not hesitate to reach out to my office if you have any questions.

Sincerely,

A handwritten signature in black ink that reads 'Rob - G. Ortt'. The signature is stylized and cursive.

Rob Ortt
State Senator, 62nd District



ANGELO J. MORINELLO
Assemblyman 145th District

THE ASSEMBLY
STATE OF NEW YORK
ALBANY

RANKING MINORITY MEMBER
Committee on Veterans' Affairs

COMMITTEES

Codes
Economic Development, Job Creation,
Commerce and Industry
Labor
Tourism, Parks, Arts and
Sports Development

April 20, 2021

Niagara River Greenway Commission
2136 West Oakfield Road
Grand Island NY 14072

To Whom It May Concern:

I am writing in support of Old Fort Niagara's application to the Niagara River Greenway Commission for the Redoubt Restoration Project. The North and South Redoubts are unique structures built 250 years ago.

Along with other buildings at Old Fort Niagara, the redoubts are among the oldest buildings in the Great Lakes Basin. Each year over 200,000 visitors pass through these venerable fortifications to learn about the Niagara region's early history. The buildings stand as tangible reminders of Niagara's global significance in an era when the world's great superpowers vied for control of the region.

The Old Fort Niagara Redoubt Restoration Project will address serious masonry deterioration on these two historic structures. Significant mortar cracks and losses are currently evident in over 48% of the exterior surface area of the South Redoubt and over 26% of the exterior surface area of the North Redoubt. There are also mortar losses and serious cracks in the buildings' interiors. These defects grow worse every year and will ultimately threaten the structural integrity of both structures.

This Project will restore both buildings by utilizing the latest techniques available. Both buildings will be repointed to insure that they are preserved for future generations.

I urge the Commission to support this important restoration project. Thank you so much for your consideration in this matter.

Very truly yours,

ANGELO J. MORINELLO,
Assemblyman, 145th District

AJM/cld



THE ASSEMBLY
STATE OF NEW YORK
ALBANY

CHAIRMAN OF THE
MINORITY CONFERENCE
RANKING MINORITY MEMBER
Election Law Committee
COMMITTEES
Judiciary
Rules
Transportation
Ways and Means

April 26, 2021

Gregory D. Stevens, Executive Director
Niagara River Greenway Commission
Beaver Island State Park
2136 West Oakfield Road
Grand Island, New York 14072

Dear Mr. Stevens:

I am writing to express my support of the Old Fort Niagara's application to the Niagara River Greenway Commission for the Redoubt Restoration project. I appreciate your consideration on this matter.

As you know, Old Fort Niagara is a regional asset that offers a historic destination for tourists, educational resource for not only students in Western New York, but students from across the nation and in an economic driver for the Niagara River region.

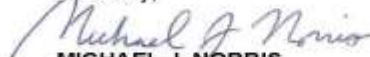
The North and South Redoubts are unique structures built 250 years ago. Along with other buildings at Old Fort Niagara, the redoubts are among the oldest buildings in the Great Lakes Basin. Each year, over 200,000 visitors pass through these venerable fortifications to learn about the Niagara region's early history. The buildings stand as tangible reminders of Niagara's global significance in an era when the world's great superpowers vied for control of the region.

The Old Fort Niagara Redoubt Restoration Project will address serious masonry deterioration on these two historic structures. Significant mortar cracks and losses are currently evident in over 48% of the exterior surface area of the South Redoubt and over 26% of the exterior surface area of the North Redoubt. There are also mortar losses and serious cracks in the buildings' interiors. These defects grow worse every year and will ultimately threaten the structural integrity of both structures.

As the Assembly Representative for the Village of Youngstown, and Old Fort Niagara, I know personally the benefit that funding for this project would have on our growing community and the expansion of youth and family activities.

I respectfully request that Old Fort Niagara's Redoubt Restoration Project application be given every consideration by the Niagara River Greenway Commission. Please do not hesitate to contact me if I can be of any assistance to you or answer additional questions that you may have. Thank you for your consideration.

Sincerely,


MICHAEL J. NORRIS
Member of Assembly
144th District



THE LEGISLATURE NIAGARA COUNTY

LEGISLATOR IRENE M. MYERS
1ST DISTRICT
NIAGARA COUNTY LEGISLATURE

April 22, 2021

Niagara County Ad Hoc Committee
Attn: Chairman Richard Andres
Attn: Thomas Burgasser, Ad Hoc Attorney
Niagara County Greenway
Lockport, NY 14094

Dear Legislator Andres:

I am submitting this letter on behalf of Old Fort Niagara, a historic "gem" in the Town of Porter with history and structures that are irreplaceable.

Two historic buildings at Old Fort Niagara stand in dire need of masonry restoration. The South Redoubt (built 1770) and North Redoubt (1771) are iconic structures that date prior to the American Revolution. These buildings are unique not only to the Niagara Region, but to all of North America. Significant mortar cracks and losses are currently evident in over 48% of the exterior surface area of the South Redoubt and over 26% of the exterior surface area of the North Redoubt. There are also mortar losses and serious cracks in the buildings' interiors. These defects grow worse every year and threaten the structural integrity of these irreplaceable historic structures.


In addition to their historical, educational and cultural value, these stone, three-story buildings are prime attractions at Old Fort Niagara for the over 200,000 visitors from throughout the world that visit the fort annually. These visitors create a significant economic impact on our region. Should the redoubts fall into further disrepair, the community would lose a vital educational and economic resource.

Old Fort Niagara proposes a masonry preservation project to repoint both structures. Contractor estimates for this work are currently \$150,000.00 for both buildings. The contractor states the estimate will increase by at least 5% for every year the project is delayed. Each building would take about 4-5 weeks for completion. Work would be scheduled spring and fall to avoid the busy summer season.

On behalf of the Fort I am asking the Niagara River Greenway Commission and the Niagara County AD HOC Committee to consider funding for this project. I understand that this is a large request, but these structures are priceless in their value of history. There are the two structures in need of repair at that cost. I am asking for your consideration to provide funding for one of the structures at a cost of \$75,000. Fort Niagara would then match that with the funds necessary to restore the other structure.

As Legislator representing this district having such historic significance, I would ask that you please consider funding this project. I support this mission 110% as these structures are a piece of our nation's history and can never be replaced. Your support in helping us preserve a piece of history that we are so fortunate to have in our backyard and share with the world, is very much appreciated!

Sincerely,


Irene M. Myers
1st District Legislator

Cc: Robert Emerson, Executive Director of Old Fort Niagara
Bernie Rotella, Rotella Grant Management

125 HAWLEY STREET

LOCKPORT, NEW YORK 14094

(716) 439-7177



North Redoubt



South Redoubt

125 HAWLEY STREET

LOCKPORT, NEW YORK 14094

(716) 439-7177



April 21, 2021

Niagara River Greenway Commission
PO Box 1132 Niagara Falls NY 14303

On behalf of Destination Niagara USA, I am writing in strong support of Old Fort Niagara's Niagara River Greenway Commission application for the Redoubt Restoration project. The North and South Redoubts are unique structures built 250 years ago. Along with other buildings at Old Fort Niagara, the redoubts are among the oldest buildings in the Great Lakes Basin. Each year, over 200,000 visitors pass through these venerable fortifications to learn about the Niagara region's early history. The buildings stand as tangible reminders of Niagara's global significance in an era when the world's great superpowers vied for control of the region.

The Old Fort Niagara Redoubt Restoration Project will address serious masonry deterioration on these two historic structures. Significant mortar cracks and losses are currently evident in over 48% of the exterior surface area of the South Redoubt and over 26% of the exterior surface area of the North Redoubt. There are also mortar losses and serious cracks in the buildings' interiors. These defects grow worse every year and will ultimately threaten the structural integrity of both structures. This project will restore both buildings by utilizing the latest techniques available. Both buildings will be repointed to insure that they are preserved for future generations.

Our organization has a long and extremely positive relationship with Old Fort Niagara and we admire their commitment to preserving our history so that we can continue to market and promote this cultural gem to the world. I urge the Commission to support this important restoration project.

Thank you for your consideration of this request.

Sincerely,

A handwritten signature in black ink that reads "John Percy". The signature is fluid and cursive, with a large, sweeping flourish at the end.

John Percy
President & CEO





TOWN OF PORTER

3265 Creek Road • Youngstown, New York 14174 • (716) 745-3730 • Fax (716) 745-9022

April 16, 2021

I am writing in support of Old Fort Niagara's application to the Niagara River Greenway Commission for the Redoubt Restoration project. The North and South Redoubts are unique structures built 250 years ago. Along with other buildings at Old Fort Niagara, the redoubts are among the oldest buildings in the Great Lakes Basin. Each year, over 200,000 visitors pass through these venerable fortifications to learn about the Niagara region's early history. The buildings stand as tangible reminders of Niagara's global significance in an era when the world's great superpowers vied for control of the region.

The Old Fort Niagara Redoubt Restoration Project will address serious masonry deterioration on these two historic structures. Significant mortar cracks and losses are currently evident in over 48% of the exterior surface area of the South Redoubt and over 26% of the exterior surface area of the North Redoubt. There are also mortar losses and serious cracks in the buildings' interiors. These defects grow worse every year and will ultimately threaten the structural integrity of both structures.

This project will restore both buildings by utilizing the latest techniques available. Both buildings will be repointed to insure that they are preserved for future generations. I urge the Commission to support this important restoration project. Old Fort Niagara is the major tourist destination in the Town of Porter. The visitors to the Old Fort help sustain our businesses in the Town and the Village of Youngstown.

Thank You, Porter Supervisor J Duffy Johnston



**NIAGARA FALLS
NATIONAL HERITAGE AREA**

119 TIMON HALL / P.O. Box 1932
NIAGARA UNIVERSITY, NY 14109
(716) 286-8579

Niagara River Greenway Commission
P.O. Box 1132
Niagara Falls, NY 14303

May 11, 2021

To Whom It May Concern:

I am writing in full support of Old Fort Niagara's application to the Niagara River Greenway Commission for the Redoubt Restoration project. The North and South Redoubts are unique structures built 250 years ago. Along with other buildings at Old Fort Niagara, the redoubts are among the oldest buildings in the Great Lakes Basin. Each year, over 200,000 visitors pass through these venerable fortifications to learn about the Niagara region's early history. The buildings stand as tangible reminders of Niagara's global significance in an era when the world's great superpowers vied for control of the region.

The Old Fort Niagara Redoubt Restoration Project will address serious masonry deterioration on these two historic structures. Significant mortar cracks and losses are currently evident in over 48% of the exterior surface area of the South Redoubt and over 26% of the exterior surface area of the North Redoubt. There are also mortar losses and serious cracks in the buildings' interiors. These defects grow worse every year and will ultimately threaten the structural integrity of both structures.

This project will restore both buildings by utilizing the latest techniques available. Both buildings will be repointed to ensure that they are preserved for future generations. The Niagara Falls National Heritage Area urges the Commission to support this important restoration project.

Old Fort Niagara, located within the Niagara Falls National Heritage Area, is a vital historic site of great cultural significance. Through the past decade, the Niagara Falls National Heritage Area has worked to provide grant support, technical assistance and connectivity via the Discover Niagara Shuttle to bring visitors and local residents to the Fort. It is a National Historic Landmark deserving of funding to support this critical preservation work.

Thank you for your sincere consideration of this urgent matter.

Warmly,

Sara Beilein Capen
Executive Director



IN PARTNERSHIP WITH THE
National Park Service
U.S. Department of the Interior



Village of Youngstown

VILLAGE CENTER • 240 LOCKPORT STREET
P. O. Box 168
YOUNGSTOWN, NEW YORK 14174-0168

TELEPHONE:
(716) 745-7721
FAX:
(716) 745-3400

April 26, 2021

TO: Niagara Greenway Commission

We are writing in support of Old Fort Niagara's application to the Niagara River Greenway Commission for the Redoubt Restoration project. The North and South Redoubts are unique structures built 250 years ago. Along with other buildings at Old Fort Niagara, the redoubts are among the oldest buildings in the Great Lakes Basin. Each year, over 200,000 visitors pass through these venerable fortifications to learn about the Niagara region's early history. The buildings stand as tangible reminders of Niagara's global significance in an era when the world's great superpowers vied for control of the region.

The Old Fort Niagara Redoubt Restoration Project will address serious masonry deterioration on these two historic structures. Significant mortar cracks and losses are currently evident in over 48% of the exterior surface area of the South Redoubt and over 26% of the exterior surface area of the North Redoubt. There are also mortar losses and serious cracks in the buildings' interiors. These defects grow worse every year and will ultimately threaten the structural integrity of both structures.

This project will restore both buildings by utilizing the latest techniques available. Both buildings will be repointed to insure that they are preserved for future generations. I(we) urge the Commission to support this important restoration project.

Village of Youngstown Board of Trustees

Mayor Raleigh Reynolds
Deputy Mayor Mark Fox
Trustee Stuart Comerford
Trustee Nicole Quarantillo
Trustee Rob Reisman

Appendix B – Maps

B1 - Location of Fort Niagara State Park in Niagara River Greenway

B2- Ariel image of Old Fort Niagara within state parks; including locations of both redoubts and French Castle

B3- View of Old Fort Niagara within parks (street view)

B4 – Niagara Greenway Boundary including Old Fort Niagara

B5- Entrance point preservation work

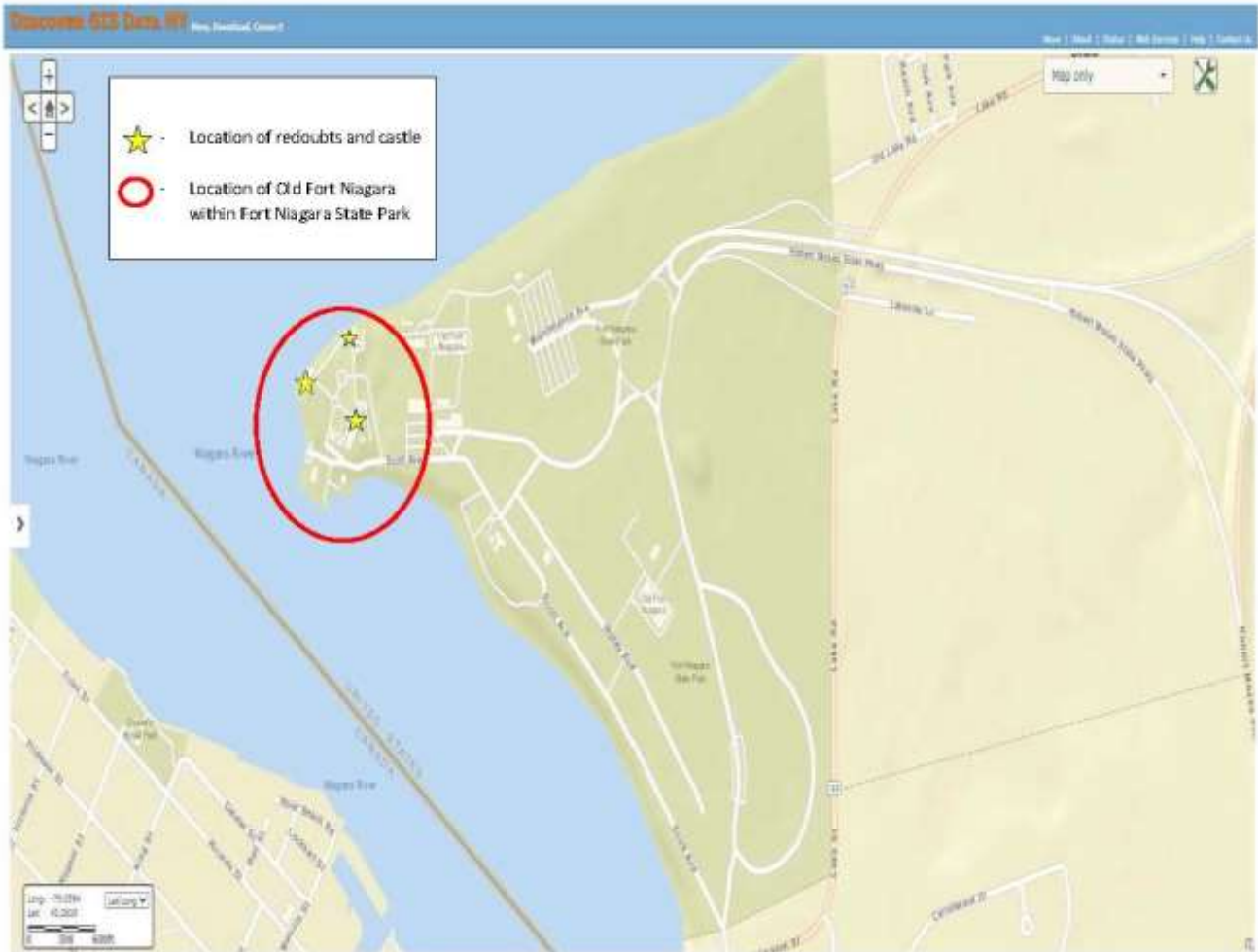
B1 - Location of Fort Niagara State Park in Niagara River Greenway



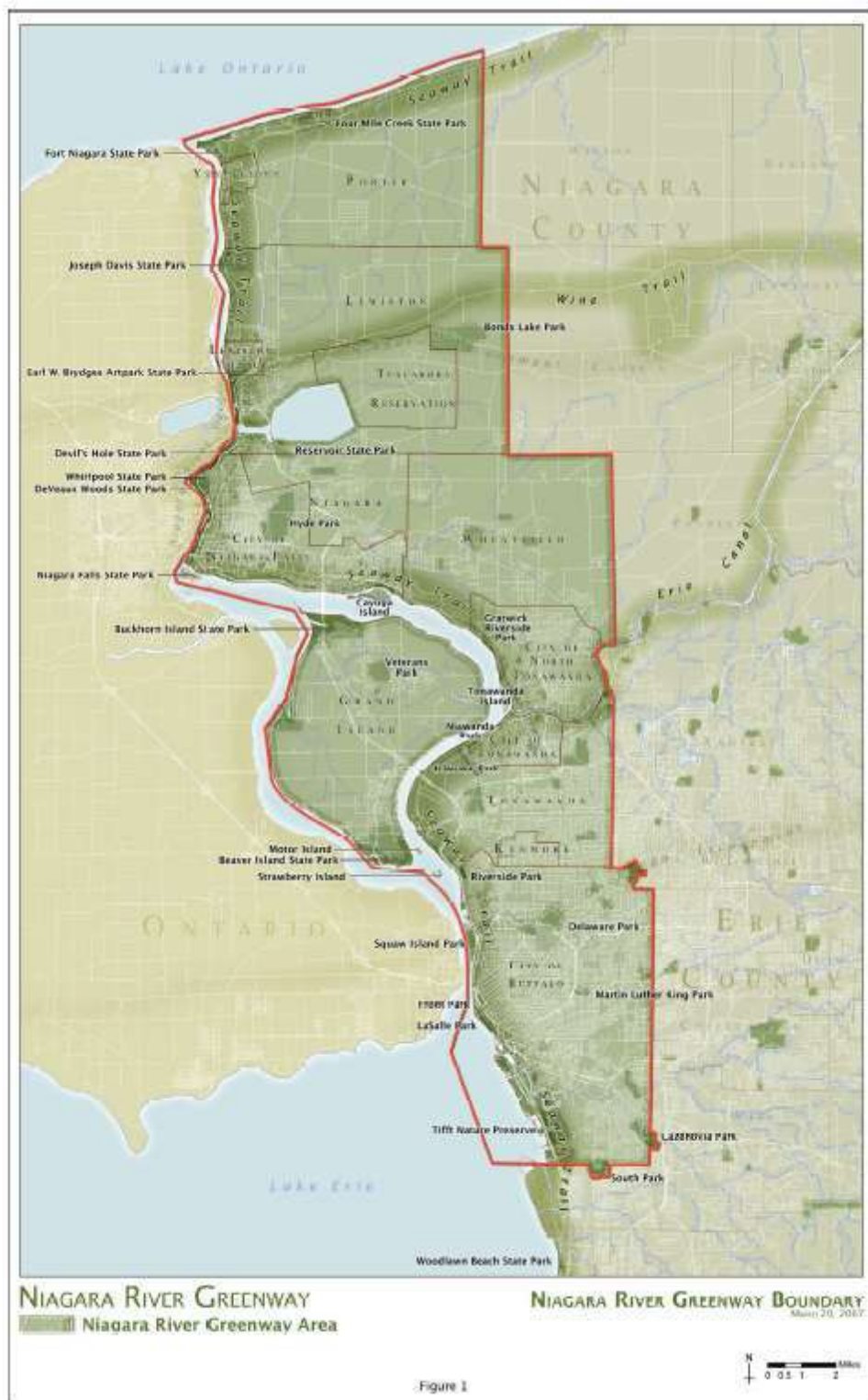
B2- Ariel image of Old Fort Niagara within State Parks; including locations of both redoubts and French Castle



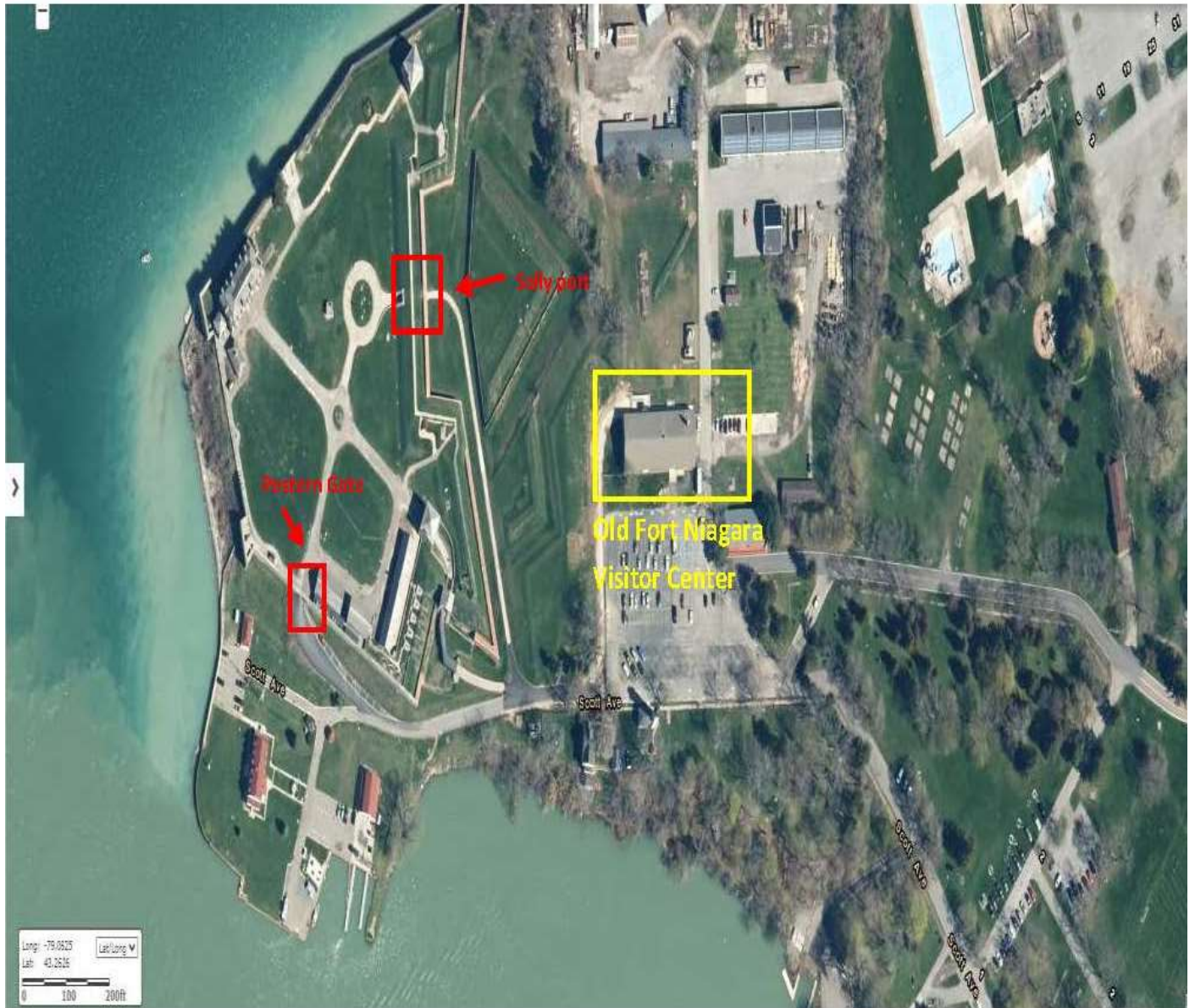
B3- View of Old Fort Niagara within parks (street view)



B4 – Niagara Greenway Boundary including Old Fort Niagara



B5- Entrance points during preservation work



Entrance via sally port and postern gate during South redoubt repointing.

Appendix C1- North Redoubt pictures

N1- East facing detail 07, foundation 05

N2 – North Redoubt interior 01, first floor West wall

N3- North Redoubt interior 02, first floor Northwest corner

N4- North Redoubt interior 06, first floor South wall

N5- North Redoubt North facing

N6- North Redoubt North foundation 01 lower left corner

N7- North Redoubt South facing

N8- North Redoubt South facing detail upper middle



N1- East facing detail 07, foundation 05



N2 – North Redoubt interior 01, first floor West wall



N3- North Redoubt interior 02, first floor Northwest corner



N4- North Redoubt interior 06, first floor South wall



N5- North Redoubt North facing note foundation



N6- North Redoubt North foundation 01 lower left corner



N7- North Redoubt South facing



N8- North Redoubt South facing detail upper middle

Appendix C2- South Redoubt Pictures

S1- South Redoubt east facing

S2- South Redoubt east facing detail 02

S3- South Redoubt east facing detail 06

S4- South Redoubt first floor interior 05 west wall

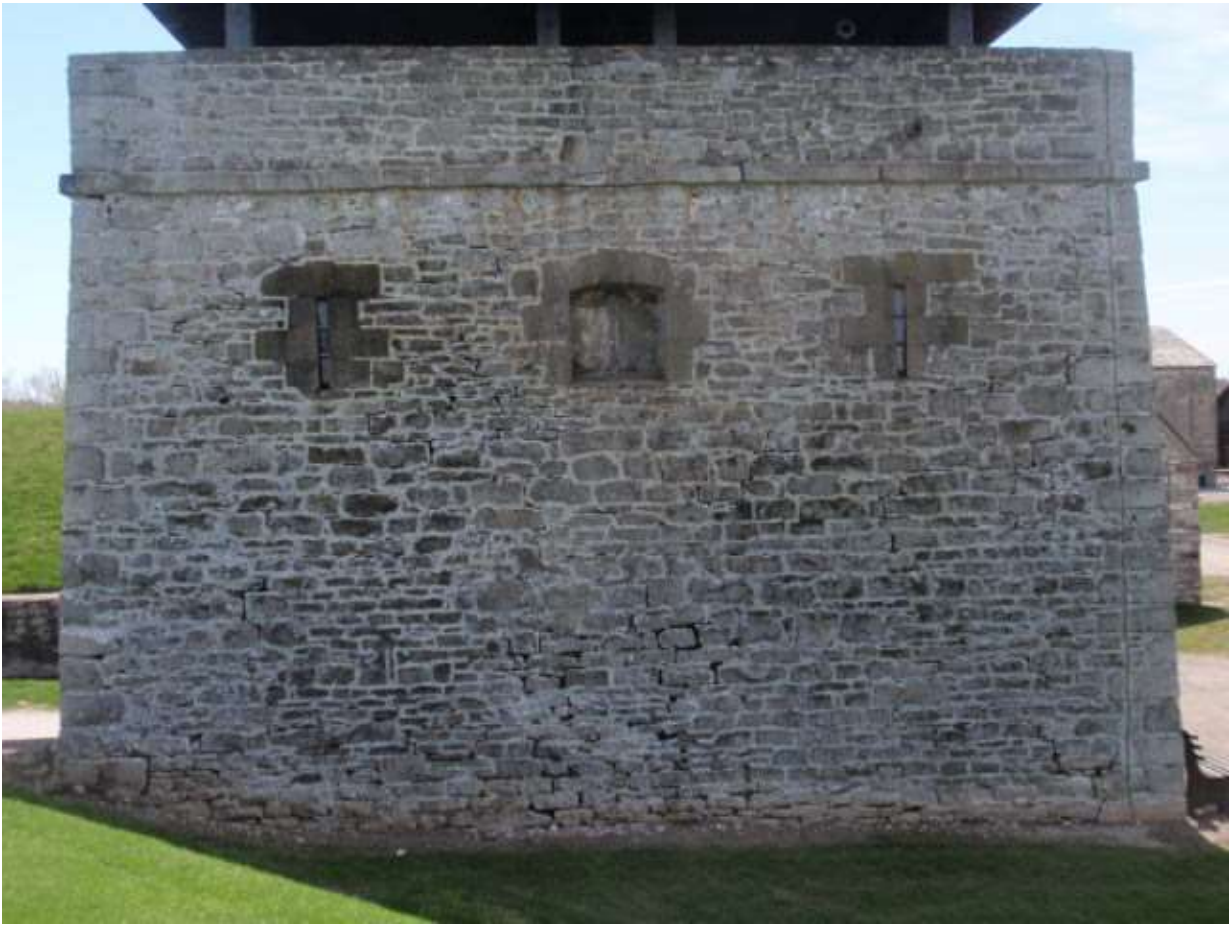
S5- South Redoubt first floor interior 07 northwest corner

S6- South Redoubt first floor interior 08 northeast corner

S7- South Redoubt first floor interior 10 east wall

S8- South Redoubt north facing detail 03

S9- South Redoubt south facing detail 02



S1- South Redoubt east facing



S2- South Redoubt east facing detail 02



S3- South Redoubt east facing detail 06



S4- South Redoubt first floor interior 05 west wall



S5- South Redoubt first floor interior 07 northwest corner



S6- South Redoubt first floor interior 08 northeast corner



S7- South Redoubt first floor interior 10 east wall

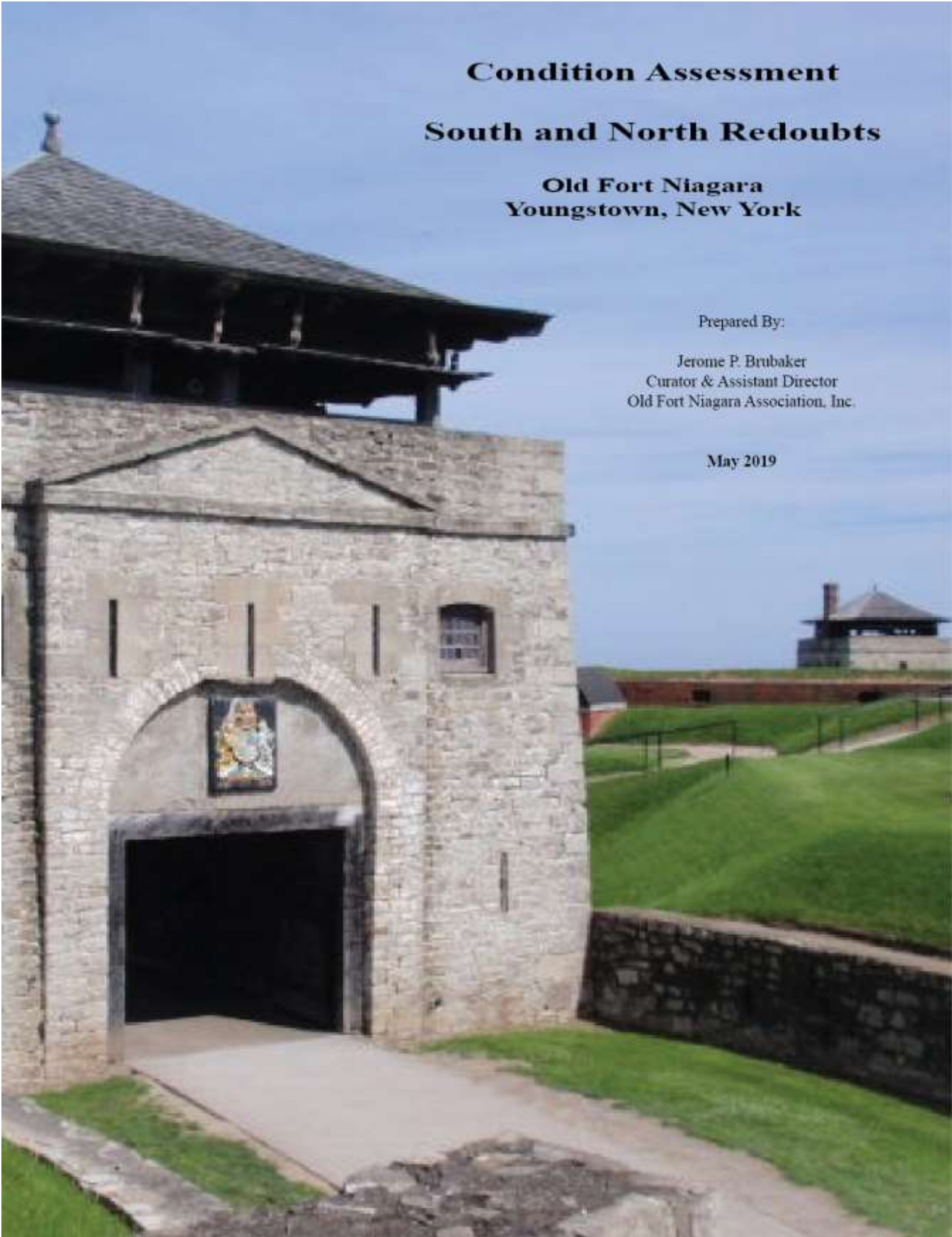


S8- South Redoubt north facing detail 03



S9- South Redoubt south facing detail 02

Appendix D- Condition Assessment of the North and South Redoubts by Jere Brubaker; Old Fort Niagara curator and assistant director.



**Condition Assessment
South and North Redoubts**

**Old Fort Niagara
Youngstown, New York**

Prepared By:

Jerome P. Brubaker
Curator & Assistant Director
Old Fort Niagara Association, Inc.

May 2019

INTRODUCTION

Standing near the mouth of the Niagara River, in the Town of Porter, Niagara County, New York, the North and South Redoubts are two of the six original eighteenth century masonry military structures situated within the walls of historic Old Fort Niagara. Old Fort Niagara is a New York State Historic Site and is listed on the National Register of Historic Places. Old Fort Niagara is maintained and operated by the Old Fort Niagara Association, Inc., a 501(c)(3) not-for-profit corporation, under license from the New York State Office of Parks Recreation and Historic Preservation.

HISTORICAL BACKGROUND

Old Fort Niagara was established by the French in 1726 with the construction of the large, stone, “machicolated house” which they called the House of Peace and which today is typically referred to as the French Castle. The building was designed by the chief engineer of New France, Gaspard-Joseph Chaussegros de Léry and completed over a period of about nine months between June 1726 and early 1727. From 1727 until the 1740s, the Castle, surrounded by a wooden stockade, comprised the extent of the fort.

Renewed colonial conflict between 1744 and 1748 (King George’s War) led to minor alterations Castle’s surroundings, including improvement of the stockade and erection of several small wooden buildings thought to be for additional storage or housing, but it was not until rising tensions between France and England in the 1750s that more dramatic and lasting changes occurred to the fort. Beginning in September of 1755, under the direction of Captain Pierre Pouchot, Fort Niagara was dramatically expanded to cover an area of roughly 22 acres, enclosing 23 buildings and including a sophisticated Vauban-style system of defenses on its east-facing landward side.

In July of 1759, following a 19-day siege, control of the fort passed from the French to the British. The British initially saw no immediate need to alter the former French fortifications and, following the surrender of New France to British control in September of 1760, the British began looking to downsize their garrisons on the Great Lakes. Reminded of the need for continued defensibility by the Native uprisings of Pontiac’s Rebellion in the early 1760s, a solution was sought that would provide an effective defense against any further Native threat while at the same time being manageable with fewer personnel.

DESIGN AND CONSTRUCTION OF THE SOUTH AND NORTH REDOUBTS

In 1768 British engineer, Captain Thomas Sowers, proposed several defensive improvements, including erection of a “large block-house of stone” in the salient angle of each of the fort’s two bastions. The primary purpose of these two “block-houses” was to enable the garrison, in case of attack, to be defended by as few as 40 men. Each of the buildings featured a guard room on the second floor and a gun deck for light artillery on the top floor, with the artillery having the ability to provide flanking fire for the earthworks. Ultimately, construction of these buildings (now the South and North Redoubt) would not be completed until 1770 and 1771 respectively, with their actual design being attributed to noted British engineer, Captain John Montresor, and the construction work overseen by Sowers and, Lt. Francis Pfister of the 60th (Royal American) Regiment.

“As constructed, each of the redoubts was a thirty-six-foot square limestone tower of two full stories with a roughly three-foot high parapet extending above the third floor. The buildings stood twenty-seven feet high. Their walls battered or tapered inward slightly from bottom to top so that, at parapet level each building was thirty-four feet square. The stone walls were nearly five feet thick at the base and four feet thick at the parapet level. The top floor was intended to support cannon and was covered by a tall wooden roof raised well above the parapet by square posts. The open space thereby created between the top of the parapet and the eaves allowed the guns to be fired in all directions. These openings were closed by thick wooden shutters which could be raised and lowered by ropes and pulleys to provide protection from the weather and,

during military action, small arms fire. The roofs were topped with round finials and weather vanes. Each redoubt also had a tall brick chimney to ventilate a single fireplace on the second floor. The walls of the two buildings were pierced with loopholes for musketry. Most tapered from inside the structure to a narrow slit on the exterior, although the loopholes of the northwest façade of the North Redoubt appear to have been wider on the outside. Four small windows were placed in the second story of each building to provide light to the guard rooms.”¹

In addition to the preceding description, the first floor of the South Redoubt (located in close proximity to the fort’s main gate) was designed to be passed through as a secondary gateway to the fort. The first floor of the North Redoubt, on the other hand, included an additional powder magazine due to its distance from the fort’s main magazine.

Aesthetically, the exteriors of both redoubts incorporate classical Georgian design features, such as temple fronts, pediments over the door and gateway openings, rounded arches above second floor window openings, and a belt course of stone encircling the buildings at the third floor level. In addition, the buildings reflect the popularity of Chinese designs in the late eighteenth century by their inclusion of “battered” walls tapering upward and upturned “pagoda style” roofs. This combination of classical Georgian and Chinese design elements in Fort Niagara’s redoubts makes them unique among other Georgian military buildings.²

NOTABLE HISTORICAL INCIDENTS AND MAINTENANCE EVENTS

- John Carroll, a fifer serving at Fort Niagara between 1800 and 1812, spends a period of time under disciplinary confinement in the South Redoubt. While there, he composes a number of original tunes including “Carroll’s Thoughts on Eternity”. Although unpublished during his lifetime, his manuscript collection of tunes survives in the collection of the Newberry Library, Chicago.
- October 13, 1812: Fort Niagara bombards Fort George (across the river from Youngstown) as part of a diversion from the planned American invasion of Upper Canada being launched from Lewiston, New York, seven miles to the south. During the bombardment, a cast-iron twelve-pounder atop the North Redoubt burst, killing one and fatally wounding another of the 1st Regiment of Artillery gun crew. After seven hours of exchanged fire between the two forts, American gunners are forced to abandon their posts and temporarily evacuate the fort until the firing from Fort George ceases. Americans reevaluate Fort Niagara’s defenses.
- Similar to what had been done to the Castle in September of 1812, November 14 (or soon thereafter) the roofs are removed from both redoubts to prevent the possibility of their being ignited by “hot shot” from Fort George.³ On top of each tower new artillery batteries of sod are built and mounted with guns.
- November 21, 1812: Artillery from Fort George opens fire on Fort Niagara in what would become an eleven-hour bombardment back and forth. Again a gun in the North Redoubt bursts, this time killing one and wounding four of the men from the gun crew.
- May 27, 1813: Combined US naval and land forces assault and capture Fort George. Artillery from Fort Niagara (including guns in the redoubts) participate in the pre-landing bombardment of Fort George.
- December 19, 1813: British forces succeed in capturing Fort Niagara in a brief and daring early morning assault. Official reports note the South Redoubt as among one of the last US troop positions to surrender.
- The redoubts were probably among the Fort Niagara structures to receive some repairs in the summer of 1814, following British occupation of the place in December of 1813, however, Brian Dunnigan in his book, *Forts Within a Fort: Niagara’s Redoubts*, estimates that the redoubts were probably not reroofed until 1817.⁴

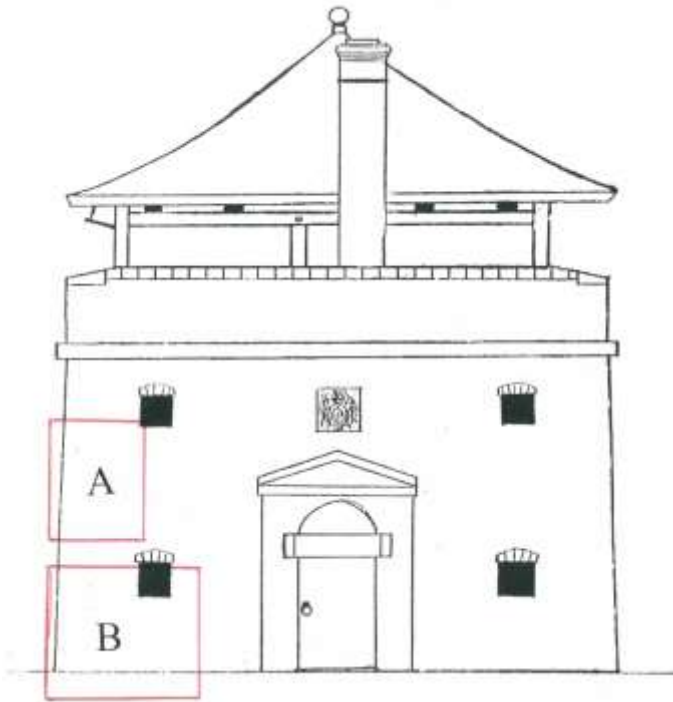
- The garrison flagpole was located on North Redoubt from about 1813 to 1816 and on the South Redoubt from 1817 to about 1841.⁵
- The redoubts appear to have received new roofs in November of 1828.⁶
- Some repairs, including repointing, occurred in 1837.⁷
- The redoubts received new roofs in 1838.⁸
- In September of 1838, Captain William D. Smith reported the redoubts in need of additional repair, primarily repointing, “their mortar in some places having fallen out leaving the stones loose.”⁹
- Between 1841 and 1843, on the recommendation of Captain William D. Fraser (nee Smith), both of the large doorway openings in the “south block house” were eliminated, leaving only a man-sized door on the side facing the parade ground, and the masonry was repaired “wherever defective.”¹⁰
- Lightning rods were added to the redoubts in 1843.¹¹
- The Niagara Gazette reported that a storm on April 18, 1855 blew the roof off the North Redoubt and “partially displaced” the roof of the South Redoubt. By October the roofs were repaired or replaced.¹²
- In 1868, as part of alterations made to the redoubts to improve their functionality as storehouses, some repointing likely occurred.¹³
- Except for a few periods when troops were temporarily withdrawn from Fort Niagara (1846-48, 1854-1861 and 1863-65) the North and South Redoubts remained in use in some function or another, including as guardhouses, barracks, storehouses or service buildings at least up through World War I. However, few resources were allocated toward their maintenance between 1868 and the buildings’ restoration.¹⁴
- Restoration of the South Redoubt began in 1929 and was completed in the spring of 1930. Restoration of the North Redoubt subsequently got underway in November of 1930 and concluded in the Spring of 1931. This work included comprehensive patching and repointing of the masonry walls.
- We have not been able to document any significant repointing activity having occurred to either of the redoubts between the 1930s and the 1970s. Lead plates tapped into the mortar in some areas of both redoubts indicate that a limited degree of repointing occurred in August of 1987. No repointing activity has occurred on either redoubt between 1991 and the present.

EXISTING CONDITIONS

The following photographs document the fact significant mortar cracks and losses are currently evident in over 48% of the exterior surface area of the South Redoubt and over 26% of the exterior surface area of the North Redoubt.

THE NORTH REDOUBT

NORTH REDOUBT — Southwest Face



Detail A — 7.5' x 10.5' area of masonry showing part of a rambling vertical crack in mortar which generally follows the quoins nearly from the third floor level to the ground and extends a distance of nearly 25 linear feet

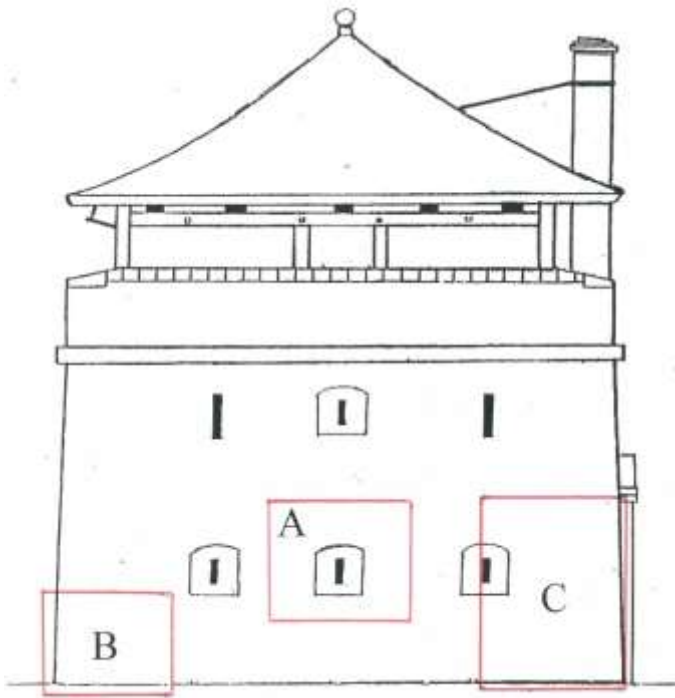


North Redoubt, Southwest Face, Overall View.



Detail B — 11' x 6' area of masonry showing several small mortar losses ranging from 4" to 10" each.

NORTH REDOUBT — Northwest Face



North Redoubt, Northwest Face, Overall View



Detail A — 11' x 8' area showing over two dozen small mortar losses ranging from 3" to 8" in length each.

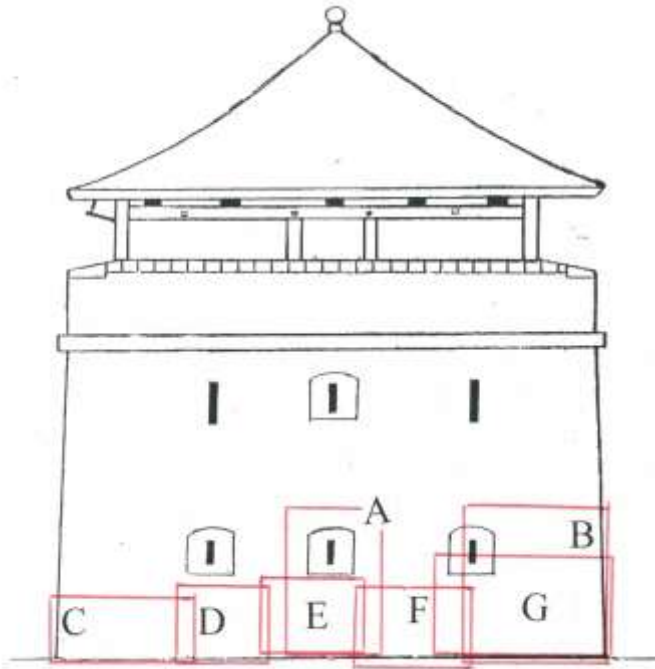


Detail C — 10' x 12' area of masonry showing about a dozen small mortar losses ranging averaging 5" in length, and a rambling vertical crack extending approximately 6.5 linear feet overall.



Detail B — 8.25' x 6.25' area of masonry showing several cracks and missing stone along the building's foundation.

NORTH REDOUBT — Northeast Face



North Redoubt, Northeast Face, Overall View



Detail A — 9' x 10.5' area showing approximately two dozen small mortar losses, ranging in length from 2.5" to 19.5".



Detail B — 10' x 11.5' area of masonry showing several mortar losses along the building foundation and a rambling vertical crack extending approximately 8 linear feet overall.



Detail C — 8.5' x 4.75' area of masonry showing mortar losses along the building's foundation ranging in length from 4" to 8".



Detail D — 8.5' x 5.25' area showing mortar losses along the building's foundation ranging in length from 4" to 29".



Detail E — 7' x 4.25' area showing mortar losses along the building's foundation ranging in length from 3" to 26".

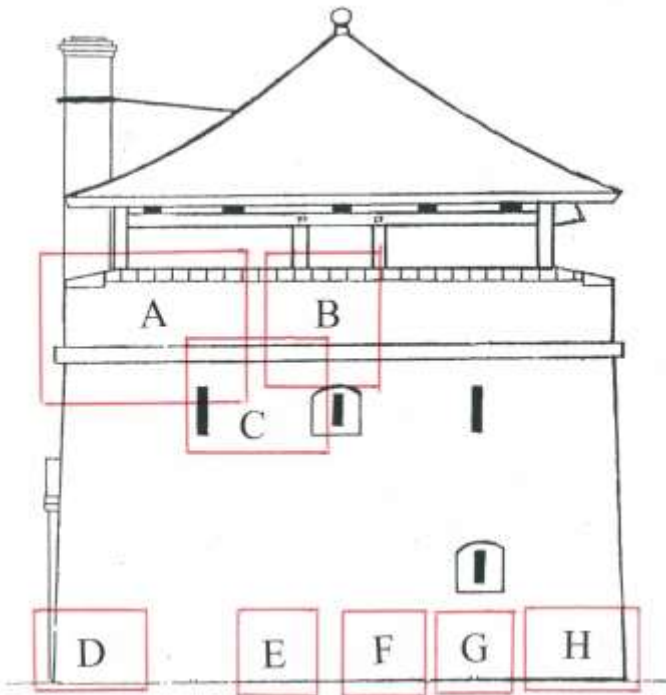


Detail F — 7.5' x 4.75' area showing mortar losses along the building's foundation ranging in length from 3" to 3 linear feet.



Detail G — 13' x 7.5' area of masonry showing a rambling vertical crack extending approximately 7 linear feet overall, and various mortar losses along the building's foundation ranging from 6" to 3 linear feet.

NORTH REDOUBT — Southeast Face



North Redoubt, Southeast Face, Overall View



Detail A — 13' x 10' area of masonry showing several rambling mortar losses with a total of approximately 16 linear feet, plus other small areas of loss.



Detail B — 6' x 6.25' area of masonry showing mortar losses totaling approximately 9 linear feet.



Detail C — 10' x 6' area showing numerous small areas of mortar loss totaling together approximately 6 linear feet.



Detail D — 5.5' x 3.25' area of masonry showing a rambling vertical crack extending approximately 3.5 linear feet overall, and various mortar losses along the building's foundation ranging from 3 to 6 inches in length.



Detail E — 6' x 3.25' area showing about 1 square foot of missing stone and/or mortar along the building's foundation.



Detail F — 4.5' x 1.75' area showing about 6 square inches of missing stone and/or mortar along the building's foundation

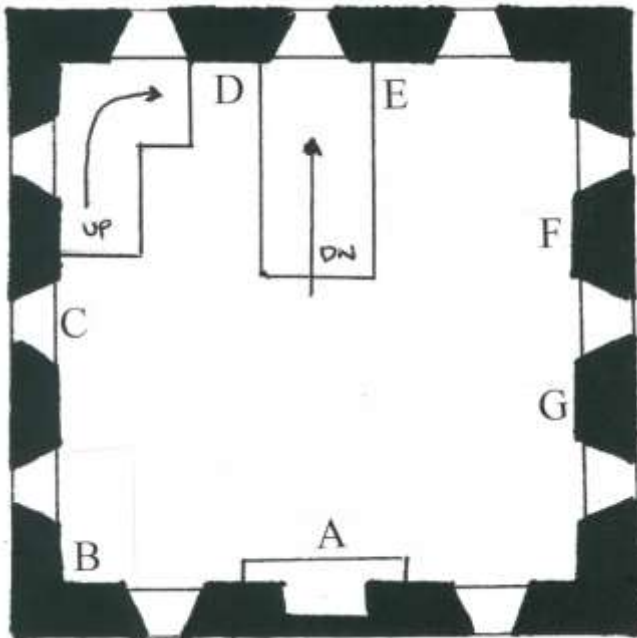


Detail G — 4.5' x 2' area of masonry showing several rambling mortar losses totaling approximately 3 linear feet, plus other small areas of loss up to 2 feet in length each.



Detail H — 5' x 2.5' area of masonry showing loose stones and mortar losses ranging from 2" to 2' in length.

NORTH REDOUBT — Interior Details, 2nd Floor Guardroom



Detail A — General view showing typical interior conditions of spalling plaster and extensive mortar losses.



Detail B — 4' x 6' area of masonry showing general interior conditions of spalling plaster and extensive mortar losses.



Detail C — 4' x 6' area of masonry showing general interior conditions of spalling plaster and extensive mortar losses.



Detail D — 2' x 2.5' area showing a pair of rambling vertical cracks extending approximately 5 linear feet overall plus additional signs of water infiltration.



Detail E — 3.5' x 5' area showing various small cracks, areas of mortar loss, and signs of water infiltration.



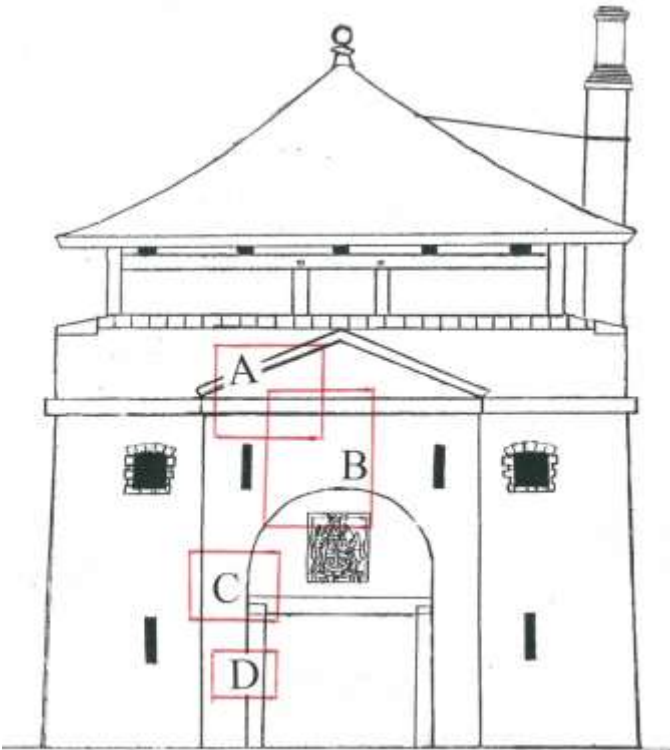
Detail F — 6.5' x 6' area of masonry showing several prominent, rambling vertical cracks and other areas of loss.



Detail G — 6.5' x 6' area of mortar showing several prominent areas of mortar loss.

THE SOUTH REDOUBT

SOUTH REDOUBT — Northwest Face



Detail A — 6.5' x 3' area of masonry showing approximately 4 linear feet of various small mortar losses.



Detail B — 8.5' x 11' area showing a rambling vertical crack extending for approximately 8 linear feet, plus numerous small mortar losses throughout. Note that the stucco façade lining the arch behind the coat of arms is also universally covered with hairline cracks.



South Redoubt, Northwest Face, Overall View

SOUTH REDOUBT — Northwest Face [continued ...]

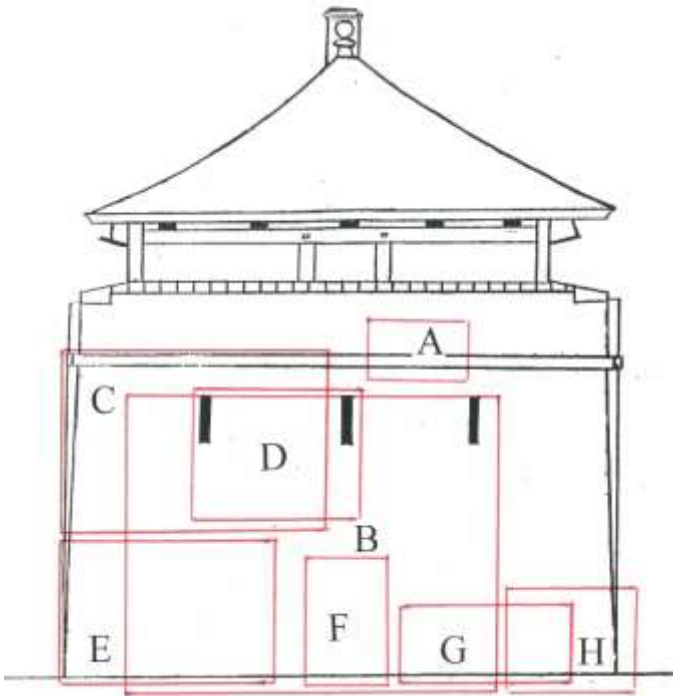


Detail C — 5' x 3.75' area of masonry showing approximately 4 linear feet of mortar losses, plus another partial view of the universally cracked stucco façade lining the arch behind the coat of arms.



Detail D — 4' x 4' area of masonry showing approximately 14 linear feet of large mortar cracks — and potential for loss of limestone blocks — associated with the iron pintles securing the gateway arch. There are a total of six similar pintles on the South Redoubt's gateway arches. All of them have a similar situation.

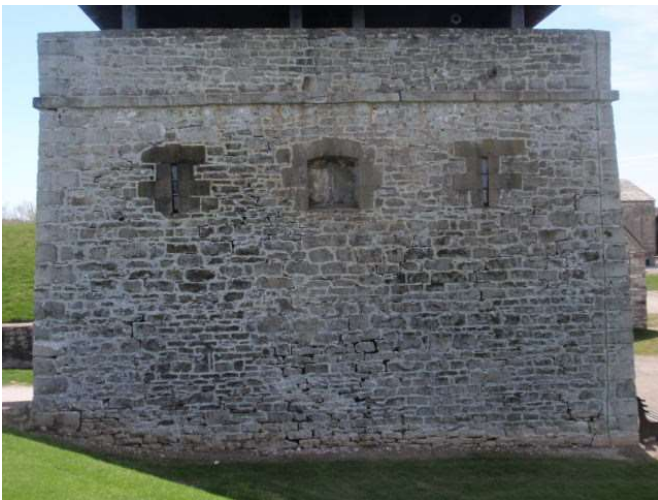
SOUTH REDOUBT — Northeast Face



Detail A — 6' x 4.5' area of masonry showing numerous small areas of mortar loss totaling approximately 6.5 linear feet, plus a loss of mortar between the stones of the belt course.



Detail B — 25' x 18.5' area of masonry including two different 154 sq. ft. areas of significant and widespread mortar loss.



South Redoubt, Northeast Face, Overall View



Detail C — 14' x 10.5' area of masonry showing two large areas of mortar loss totaling about 10 square feet, plus other smaller losses.



Detail D — 11' x 8.5' area of masonry showing a 28 square foot area of significant mortar loss, plus other smaller losses.



Detail E — 13' x 11' area of masonry showing a roughly 27 square foot area of significant mortar loss, plus several other smaller losses.



Detail F — 14' x 8.85' area of masonry showing a roughly 80 square foot area of significant mortar loss, plus several other smaller losses.

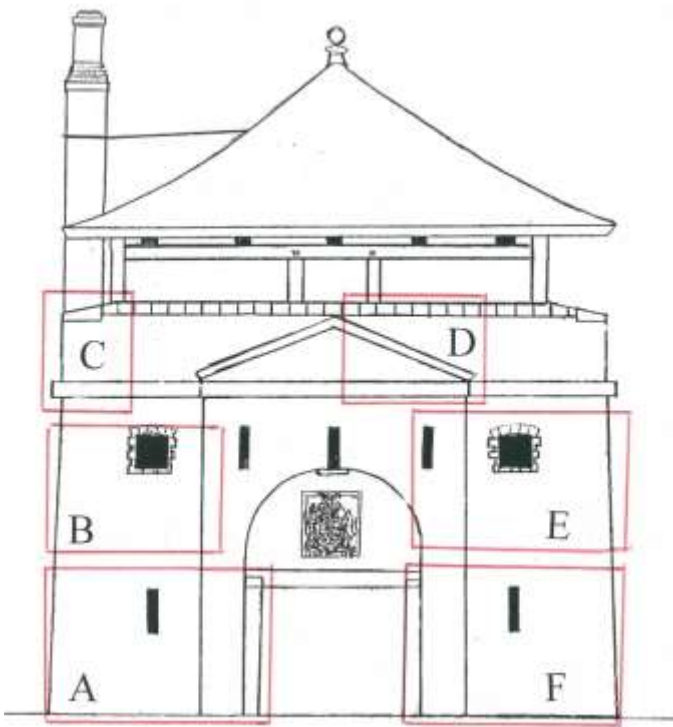


Detail G — 13' x 5.5' area showing a large, rambling area of loss (lower rt) extending 7 linear feet, a 12 sq. ft. area of loss along the foundation (lower left), plus several smaller losses.



Detail H — 8' x 5' area of masonry showing a closer view of the area in the lower right of Detail G.

SOUTH REDOUBT — Southeast Face



Detail A — 13' x 10.75' area of masonry showing several small areas of mortar loss totaling approximately 30 linear feet.



Detail B — 10' x 8.75' area of masonry showing a 45 square foot area of significant mortar loss, plus several other smaller losses.



South Redoubt, Southeast Face, Overall View



Detail C — 6' x 4.5' area of masonry showing rambling mortar losses extending approximately 11 linear feet.



Detail D — 5' x 3' area of masonry showing rambling mortar losses extending approximately 5.5 linear feet.

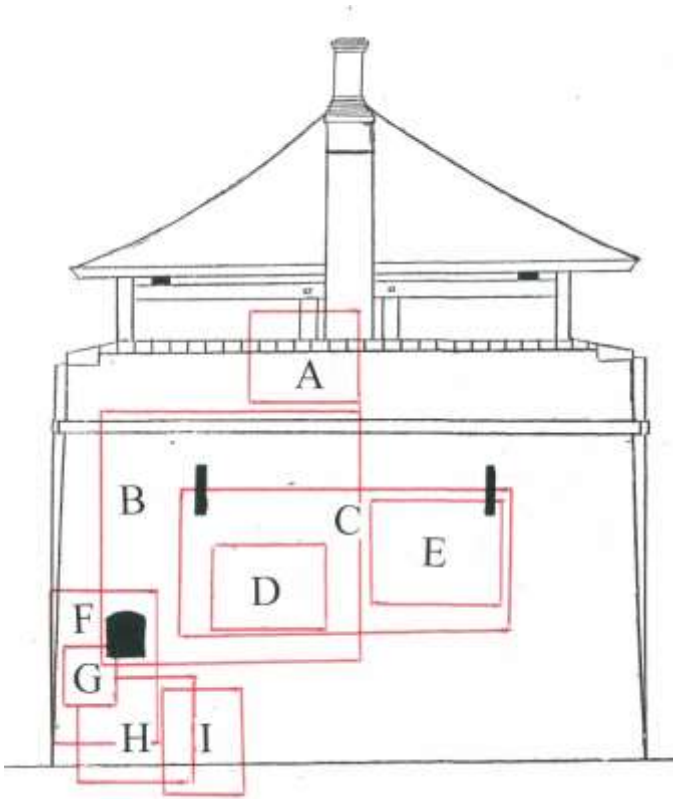


Detail E — 13.5' x 11' area of masonry showing numerous small areas of mortar loss totaling about 13 linear feet.



Detail F — 13' x 10.75' area of masonry showing numerous small areas of mortar loss totaling approximately 40 linear feet.

SOUTH REDOUBT — Southwest Face



Detail A — 3' x 5' area of stone masonry showing mortar losses totaling about 2 linear feet, plus a 4 square foot area probably repointed in 1987.



Detail B — 13.5' x 18' area showing numerous small mortar losses totaling approximately 30 linear feet.



South Redoubt, Southwest Face, Overall View



Detail C — 19' x 14' area of masonry showing two expansive areas of mortar loss (vertical on the left and horizontal on the right) totaling approximately 228 square feet.



Detail E — 8' x 10' area of masonry showing numerous small areas of mortar loss totaling approximately 9 linear feet.



Detail D — 5' x 7' area of masonry showing numerous small areas of mortar loss totaling approximately 13 linear feet.



Detail F — 9' x 12' area of masonry showing a rambling vertical crack in mortar which generally follows the quoins nearly from the second floor level to the ground and extends a distance of nearly 20 linear feet overall, plus numerous other small areas of loss.

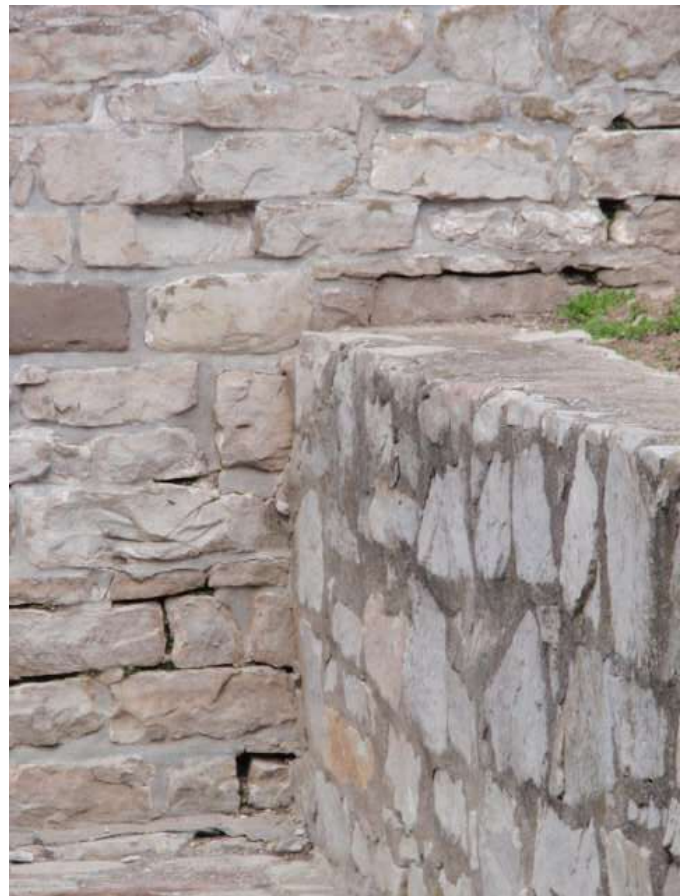
SOUTH REDOUBT — Southwest Face (continued...)



Detail G — 5.5' x 4' area showing a meandering vertical crack and/or loss of mortar totaling approximately 6 linear ft.

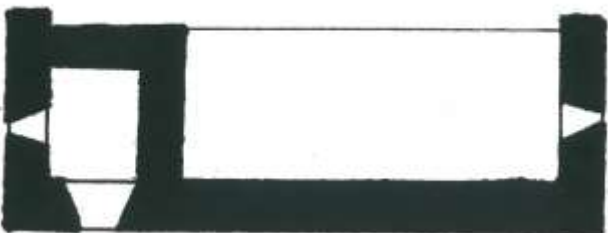
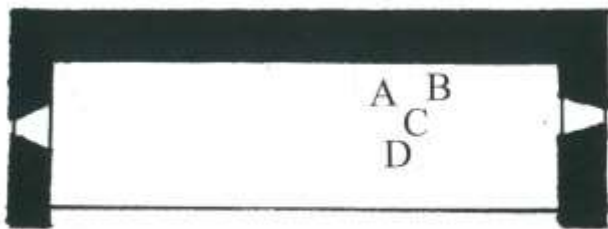


Detail H — 12' x 5.5' the continuation of the crack from Detail G, plus various other small losses totaling approximately 14 linear feet.



Detail I — Irregular 5' x 6' area of masonry showing a close-up view of the several small mortar losses on the right half of Detail H.

SOUTH REDOUBT — Interior Details, 1st Floor



Detail B — Close up of 3' x 5' area at the upper right of Detail A.



Detail C — Close up of 3' x 5' area at the lower middle of Detail A.

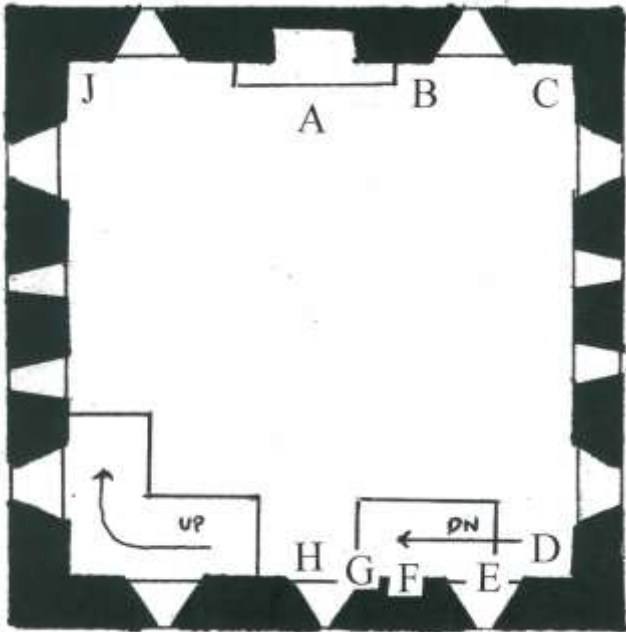


Detail D — Close up of 1.5' x 3' area of masonry at the bottom middle of Detail A.



Detail A — 9' x 11'xxx area of masonry showing two rambling areas of cracked and/or lost mortar — one running from top to bottom on the right, and one from the middle of the image to the bottom — together totaling approximately 21 linear feet, in addition to other random small losses.

SOUTH REDOUBT — Interior Details, 2nd Floor Guardroom



Detail B — 3.25, x 1.75' area of masonry showing an approximate 1' loss of rock and mortar.



Detail Area A — 8.5' x 10' area of masonry showing a large rambling vertical crack extending from the fireplace to the ceiling, and another long vertical crack to the right of the fireplace.



Detail C — Approximately 6' x 8' area of masonry significant losses of mortar and some lost and/or cleaving stone.



Detail D — 6' x 5' area of masonry showing significant areas of lost mortar and cleaving stones.



Detail E — Roughly 4' x 3' area of masonry showing various mortar losses totaling approximately 7' linear feet, in addition to signs of water infiltration.



Detail F — Roughly 9' x 6' area of masonry showing significant areas of lost mortar and cleaving stones, plus a partial view a long vertical crack (right, see Detail G).



Detail G — Better view of vertical crack from Detail F, extending approximately 8.5 linear feet overall.



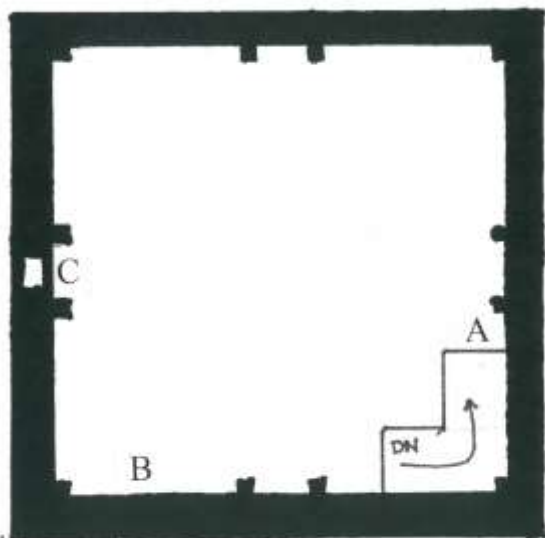
Detail H — 3' x 4' area of masonry numerous instances of lost mortar and/or cleaving stones.

SOUTH REDOUBT — Interior Details, 2nd Floor Guardroom (continued...)



Detail J — Roughly 8' x 4.5' area of masonry showing significant cracks, mortar losses, cleaving and/or delaminated stones.

SOUTH REDOUBT — Interior Details, 3rd Floor Covered Gun Deck



Detail A — 7.5 square foot area of severe mortar loss on covered gun deck.



Detail B — 9 square foot area of severe mortar loss on covered gun deck



Detail C — 4.5 square foot area (center) of severe mortar loss on covered gun deck.

CONCLUDING REMARKS

Old Fort Niagara has been an important place in the history of relations between French, British, American and Indigenous peoples for almost 300 years. Today the site is home to New York State's premier collection of original eighteenth century military buildings and landscape, as well as many nineteenth and twentieth century military buildings and features. Of leading importance among original eighteenth century military buildings are the South Redoubt (1770) and the North Redoubt (1771).

As demonstrated by the preceding set of documentary photographs, significant mortar cracks and losses are currently evident in over 48% of the exterior surface area of the South Redoubt and over 26% of the exterior surface area of the North Redoubt. Both structures are in need of repair.

NOTES

1 Brian Leigh Dunnigan, *Forts Within a Fort – Niagara's Redoubts*. (Youngstown: Old Fort Niagara Association, Inc., 1989), p. 25.

2 Ibid., p. 27.

3 Ibid., p. 40.

4 Ibid., p. 53.

5 Ibid., p. 55.

6 Ibid., p. 55.

7 Ibid., p. 56.

8 Ibid., p. 56.

9 Ibid., p. 57.

10 Ibid., pp. 58-60.

11 Ibid., p. 59.

12 Ibid., p. 62.

13 Ibid., pp. 64-65

14 Ibid., p. 65; Maj. W. A. Danielson, et. al., *Fort Niagara Post Engineer's Record Book*. (Youngstown: Fort Niagara Office of the Quartermaster, 1905-1940).

REFERENCES

Fort Niagara Post Engineers Record Book. Maj. W. A. Danielson, et al., Youngstown: Fort Niagara Office of the Quartermaster, 1905-1940.

Forts Within a Fort – Niagara's Redoubts. Brian Leigh Dunnigan. Youngstown: Old Fort Niagara Association, Inc., 1989.

A History and Guide to Old Fort Niagara. Brian Leigh Dunnigan. Youngstown: Old Fort Niagara Association, Inc., 2007.

Old Fort Niagara in Four Centuries – A History of its Development. Brian Leigh Dunnigan and Patricia Kay Scott. Youngstown: Old Fort Niagara Association, Inc., 1989.

Appendix E: French Castle photos

E1 - Photo Documentation /noting structural concerns and aesthetic deficiencies:

E2 - Chimney #4 cracked parging / open joints at cap

E3 - Chimney #2 North Side -Loss of flashing

E4- Deteriorated parging and mortar joints -East Elevation

E5 - staining from previous leaks

E1 - Photo Documentation /noting structural concerns and aesthetic deficiencies:



E2 - Chimney #4 cracked parging / open joints at cap



E3 - Chimney #2 North Side -Loss of flashing



E4- Deteriorated parging and mortar joints -East Elevation



E5 - staining from previous leaks



Appendix F: French Castle Report by International Chimney Corporation, LLC.



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Fort Niagara French Castle – Fort Niagara State Park, Youngstown, NY

Written Examination Report, Photographic Documentation & Recommendations for Treatment

Field Inspection: September 30th, 2019
ICC File # CH-45421-C

Introduction:

The following is a report of an onsite inspection by International Chimney (ICC) that will identify the areas of concern with the current conditions of the French Castle roof, eave and chimneys.

ICC was retained by New York State Office of Parks, Recreation and Historic Preservation to perform an inspection of the French Castle chimneys and roof. The overall guideline for the treatment of historic fabric at the French Castle will be the Secretary of the Interior's Standards for the Treatment of Historic Properties. It is preferential to repair and preserve original materials in place whenever possible. When replacement is warranted due to structural deficiencies, the Standards call for *in kind* replacement. However, material substitutions may be permitted if the appearance is maintained. Understand that ICC's guiding principles are in line with the Standards in that we operate under the precept of "do no harm."

This report will outline our observations of any defects noted during the site visit and provide recommendations for repairs accompanied by an estimate for the necessary work as per our mandate. The estimate is comprehensive, however we can work with you to develop priority phases of work if so desired. Philosophically, historic structures are in a constant state of upkeep and full restoration may take a generation to accomplish. Your goals may be tailored to ensure that existing deficiencies do not worsen.

I Structure Description:

Built in 1726, the French Castle is the oldest surviving / occupied building in the Great Lakes Basin. The building envelope is comprised of randomly placed rubble and angular stone presumably indigenous. The mansard roof is cedar shake with a modern EPDM semi-flat roof down the center. With nine roof dormers on the south, one each west and east and seven to the north.



II Inspection Procedure:

The writer, Mr. Tyler Finkle, Historic Preservation Division Manager performed the inspection along with Mr. Jason Sutor, Project Manager. The Castle was observed at all sides from the ground level, interior by foot and exterior and roof via 125' Manlift on the West, South and East elevations. Starting on the exterior, a full circumferential walk was performed. The exterior of the building was observed and the current conditions noted. Each interior level was inspected for any deficiencies or irregularities starting from the bottom and ascending to the top. Finally, the manlift was used to inspect all of the chimney heads above the roofline. Each chimney was numbered running clockwise from the Northeast corner as numbers 1-8. While in the lift, the eaves, cornice and fascia were observed and noted. We also noticed a chimney on the building just north of the drawbridge building and noted its significant state of deterioration.

III Observations:

This section serves as documentation of the current conditions of the historic structure and establishes a baseline for future repairs and maintenance campaigns. Any observed component of the structure that appears to be deteriorating was noted and photographed. Noted conditions / defects are listed below.

General Observation Notes Taken:

Chimneys:

- Five (5) of the eight (8) chimneys are currently closed off leaving three open to allow moisture and wildlife inside the flue and fire box.
- Each of the chimneys have some level of deterioration of mortar and some dislodged stones.
- Inconsistent mortars were utilized in color, composition and presumably strength.



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- Hairline cracks, separation and voids in mortar joints are apparent on all chimneys to varying degrees.
- Closed flue chimneys have failing parge coats and open joints on the cap.

Cedar Roof:

- The cedar shingles are laid at 7 1/2" exposure.
- All shingles are beyond their lifespan with feathering/split edges.
- The north and east exposures have a significant amount of organic growth.
- There are many missing shingles on the roof and dormers.
- The fascia and eave trim are showing levels of decay.
- Flashing is inconsistent and allows daylight to show through.

Stone Building Envelope:

- The East elevation below the eave has a few areas of mortar loss and cracked joints, the largest of which measures 60" wide x 60" high.
- The Domed oven has appeared to settle away from the building as there is a 3/4" gap that allows smoke to exit.
- The perimeter has many areas of mortar loss from capillary rise.
- The West elevation has mortar loss and spalled stone near chimney #6.

Plaster / parge coat in Commandant's Council Chamber:

- Peeling / non-permeable coating failure
- Failed / deteriorated plaster

IV Photo Documentation /noting structural concerns and aesthetic deficiencies:





Chimney #8 -Typical Mortar loss and inconsistent composition West Side



Chimney # 8 Close up of mortar loss South side



Chimney #7 East side, organic growth, mortar loss, iron embedment



Chimney #7 - Open flues



Chimney #7 adjacent to Modern EPDM roof



Chimney #6 Closed Flue



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Chimney #6 Mortar Loss – West Side



Chimney #5 - Portland Mortar



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Missing shingles on dormers



Typical condition of roof shingles



Chimney #4 cracked parging / open joints at cap



Figure Chimney #4 South side



Chimney #3 Mortar Loss, Portland Cement



Chimney #2 - Open Clay tile flues



Chimney #2 North Side -Loss of flashing



Chimney #1- Southwest sides



Deteriorated parging and mortar joints -East Elevation



Voids between Chimneys 1&2



Typical staining from previous leaks - Typical



Rusts jacking of pot holder anchor - Typical



Mortar loss at firebox



Failed Plaster and coatings- Commandant's Council Chamber



Peeling coatings – Commandant’s Council Chamber



Chimney 2 base south elevation



Chimney #2 Close up of Cold joint / separation from building



Boulangerie East Wall - wood decay



Scupper at third floor level



Close up of scupper



South Redout -Cracked modern chimney head



South Redout Rebuild Chimney head



South Redout Finial

- End of Section -

V Specific Observations and Recommendations for Repairs:

Below are the priorities for performing repairs:

1. Make the Roof weather tight.
2. Restore structural integrity.
3. Protect against the future loss of irreplaceable historic fabric.
4. Deal with safety issues.
5. Provide for ventilation.
6. Restore the historic fabric including repair and/or replacement.

Many projects are done in phases as funding becomes available, however follow the same priorities. International Chimney sees our role in this as your partner in whatever capacities you need us, to accomplish your goals. We understand that your goal is to repair the chimneys and roof in order to make the building weathertight while not altering historic fabric.



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Roof:

We recommend that the roof is replaced entirely. Cedar roofs are typically a 40 to 50-year roof and it is not known to ICC the current age of these singles. More research is needed to determine what was the original roof material used in 1726 or the period that the NY SHPO determines to restore it to. Regardless this current roof is beyond its useful life and any cost of repairs would be better spent on a replacement as there are too many deficiencies to target. For the purposes of this report and budget we assume an in-kind replacement of 5/8" Western Red or Eastern White cedar taper sawn shingles.

Chimneys (above roofline exterior & flues where open):

The chimney heads need to be repointed and various stones re-laid. The chimneys have been pointed with inappropriate mortar various times. When modern cements are utilized for repairs of historic masonry, particularly Portland cement, the mortar fails or cracks the surrounding stones. Prior to the 1930s in North America, Portland cement was not readily available, therefore natural hydraulic lime or pure lime mortars were used which have a greater modulus of elasticity and allow for moisture passage and movement through the stonework. When these chimneys swell from taking on moisture or move from high winds the newly added Portland cement does not move or flex and therefore you see hairline cracks along the stone faces and losses where it falls out. We recommend removing all unsound inappropriate mortars and pointing with a Natural Hydraulic Lime mortar (NHL 5). It would be ideal to remove all Portland cement from the structure, however that is not practical and could cause more harm initially than necessary.

Chimney #1

Closed flue. Parge coat cap is in decent shape. Inappropriate Portland cement mortar and some minor loss of mortar evident. Stonework is in decent shape. However, adjacent stonework is deteriorated and open flashing at eaves allow for moisture infiltration. – Recommend reflashing and repointing as necessary.

Chimney #2

This chimney is open and currently the only chimney utilized. (Bakery or Boulangerie). Two clay tile flues rise above the stone chimney cap. ¼ opening chicken wire is installed over the flues to keep wildlife out. The parge coat is cracked slightly and mortar shrinkage is noted on top. To the south of the flue is a 1.5" iron pipe exiting the top of unknown purpose. This chimney is in decent condition however the stonework to the N/E between #1 and #2 is open to the weather. There is much use of Portland cement mortar in pointing. The flashing is aging and has open joints, the sealant appears to be drying out showing loss of adhesion to stonework. Some biological growth is evident on north side which is expected. From a camera inserted into the clay tile flues we see note a buildup of creosote, loss of mortar between tiles and some piled detritus in the base. The Northern most flue is in slightly worse condition than the South clay flue. There is significant sidewall buildup near the base– Recommend an initial cleaning of flues, repointing, reflashing and annual chimney sweep if continued use is desired.



Chimney #3

Closed flue. Flashing loss at northside, open to elements. West and north sides of the chimney show significant mortar loss. – Recommend reflashing and repointing as necessary.

Chimney #4

Closed flue. Northwest side of cap stone is cracked. Portland cement mortar used throughout. Parge coat cap is cracked and open to the elements. –Recommend repointing and new parge on the top.

Chimney #5

Closed flue. Crack at horizontal seam. Urethane caulk/sealant is dried out. Can see daylight from interior in stairwell. – Recommend reflashing.

Chimney #6

Closed flue. Northside flashing is open, can see daylight from 3rd floor interior. Mortar appears to be in good condition overall. However, the stonework beneath on the west elevation has much mortar loss. – Recommend reflashing and repointing as necessary.

Chimney #7

Open flues (2). Iron pin embedded/projecting from the south side of the chimney. The parge coating on top has graffiti and/or peoples initials and names carved into it. Appears to be lime based, no cracks. Some organic growth and mortar loss is noted. The flashing is caulked to stones, not cut into the mortar. From a camera inserted down the flue we note spalling stones and advanced mortar loss throughout. We also note soot, creosote, organic growth and bird droppings, skeletons, feathers and nesting debris, detritus on top of fire box / damper shelf. – Recommend closing the flues to weather, discontinue use and repointing and reflashing the exterior of chimney head.

Chimney #8

Open flues (2). East flue has chicken wire friction fit closing it off. There are many cracked and spalled stones, open joints/mortar loss throughout. Parge coating on top shows shrinkage cracks. Caulk at flashing is dried out. Can see daylight from interior. From the camera inserted down the flues we note the same general condition as Chimney #7.– Recommend closing the flues to weather, discontinue use, repointing and reflashing.

Chimneys (interior fire boxes):

First Floor:

Barracks /Bunk Room west wall chimney (#6)

Flue is closed off, has some mortar spalling and fire box lintel is delaminating / rust jacking – Recommend repointing as necessary.



Commandants' Council Chamber chimney (#7)

East side flue, damper works, some cracking evident, rust jacking @ pot holder anchors. West side flue of (#8), cracked stone at anchor for pot filler, firebox shows heavy creosote on stone, mortar condition is decent, beams above show dry rot. -No work recommended at this time.

Boulangerie chimney (#2)

North and East wall was wet, heavy build up of creosote in firebox, northside of chimney is wet, wood is decaying due to excessive moisture. The exterior stonework / beehive done is separated from building allowing moisture to enter. – Recommend pointing cold joint with NHL 3.5 mortar to seal the crack. Recommend chimney sweep clean of the clay tile flues.

Second Floor:

Upper Guard Room chimney (#3)

South east corner of building closed flue no evident damage. – No work recommended at this time.

Work shop Chimney (#1)

Flue is closed off with stone at the firebox, northeast corner is wet, south of hearth has step cracks, recent repair appears to have utilized a modern mortar of Portland cement mix. – Recommend removal all of the Portland cement as delicately as possible as this wall sees significant moisture and will suffer damage if left in place. The moisture must be able to pass through the joints.

East Room chimney (#8) North wall

Open flue, cracked hearth stone, looks good otherwise. – No work recommended at this time.

West Officer's Room at chimney (#8)

Open flue, Damper in working condition, iron pot holder anchor is rust jacking, resultant cracked stone to the left of anchor.- No work recommended at this time.

Officer's Chamber North chimney (#7)

No visual defects noted – No work recommended at this time.

Commandants' Room North Chimney (#7)

Loss of mortar in fire box- Recommend repointing as necessary.

Chapel Southwest Chimney (#6)

Blocked in, no visual defects noted – No work recommended at this time.



In summary, only three (3) of the chimneys have open flues. Each are in typical condition as can be expected for their age. Any embedded iron (pot holder anchors or dampers) will continue to expand due to oxidation and will crack surrounding masonry unless it is removed. To slow this process moisture should be reduced from entering the stonework. To remove the iron would damage the historic fabric therefore no treatment is recommended at this time. The repairs on the building envelope and the roof will slow the migration of moisture through the stonework. Capping the remaining chimneys and reflashing and repointing will slow the moisture which will in turn reduce the rust jacking of the iron. When the iron eventually cracks and spalls the stone, repairs can be made at that time.

Plaster work:

The Commandant's Council Chamber north/west wall is holding moisture and the paint is peeling. The mortar and parge coat plaster is the path in which moisture exits the wall. Whether the water is soaked in from the exterior via rain or entering from the eaves and leaks in the roof from above, or wicking up from capillary rise, mortar and plaster must allow for passage of moisture vapor in order to adequately dry out. It is evident that the plaster and/or the paint used for this wall is restricting passage of moisture vapor and therefore it is peeling and failing. A coating of greater perm rating is necessary. We recommend that the coatings and parge coat are removed from the stone wall and replaced with a natural hydraulic lime plaster (NHL 2 or 3.5 depending on more testing) and a potassium silicate mineral coating to achieve the white look if so desired.

Readout north of drawbridge / gate building:

We note a 17-course modern brick / rebuilt chimney head. At the transition there is an iron band support tied back to the cedar roof. There are 2 copper lightning points installed to a downlead. The corbelled head is cracked through 11 courses of brick. Some brick are completely loose and will fall to grade eventually. The wood finial is decayed and is in need of replacement or restoration and coatings.

VI Cost impact:

For providing the repairs as demonstrated in this report we quote the budget of:

Roof:

Removal and replacement in kind of existing cedar roof system, replacement of the EPDM, all flashing to be copper, residing dormers, re-sheathing roof decking as needed, replace/repair fascia trim as necessary:

\$500,000.00 to \$550,000.00

Chimney Heads (above roofline):

Repointing and repairing existing stone work as necessary utilizing Natural Hydraulic Lime Mortar and closing 4 chimney flues (#7):

\$115,000.00 to \$135,000.00

Stone Building envelope:

Repointing as necessary with Natural Hydraulic Lime Mortar (only filling of voids) Not removal of Portland cement mortar as sound:

\$55,000 to \$75,000

Plaster Repairs:

Removal and replacement of plaster and coatings on the north wall in the Commandant's Council Chamber:

\$13,000.00 to \$15,000.00

Rebuild of the South Redout Chimney head:

To rebuild the top 17 courses of the chimney, repairing reinforcement steel:

\$18,000.00 to \$23,000.00

It has been our endeavor to provide for a comprehensive plan for repairing and maintaining the French Castle building envelope to historic preservation standards. Please feel free to contact the writer a 716-650-3450 office or 716-525-6429 cell with any questions or comments.

Sincerely: International Chimney corporation

By: Tyler J. Finkle,
Preservation Division Manager



**INTERNATIONAL CHIMNEY
CORPORATION**
Historic Preservation

Appendix G - Repointing quote from Morris Masonry Restoration, LLC.



441 Bailey Ave, Buffalo NY 14210 P: 716-894-0102 F: 716-894-8194 E: mmr@morrisrestoration.com

March 18, 2021

Old Ft Niagara
Resource Development
PO Box 169
Youngstown NY 14174

Re: Budgetary Quotation

Attn: Erika Schrader

We reviewed the conditions assessment report performed in May 2019. We also visited the site in November 2019 to review existing conditions and make our own assessments of the north & south redoubts.

Our assessment of the south redoubt and the May report are in line with each other as far as quantity of work required for immediate repair.

The north redoubt we believe needs similar amount of work which is not completely in line with the May report.

The budget quotation for immediate work needed is as follows:

** Following the 2021 inspection:

The exterior of the building has not changed enough to affect the scope of work. Add 10 sf of repointing interior on the 3rd fl. Add 5% per year to cover rise in cost

South Redoubt.....\$74,000.00

Southwest face add repointing right side of entry 5lf, left side of entry 5lf, near top right side 7lf and 20lf across the top.

Northwest face add repointing detail A 10lf, detail C 13.5lf and 15lf across the top.

Northeast face add reinstall 8 stones at detail G. Add repointing detail G 8lf, upper center window 5lf, upper right side 5lf and 10lf across the top.

Southeast face add repointing detail A 24lf and detail B 23lf. Interior 3rd floor reset 2 loose stones and replace 1 missing stone.

North Redoubt.....\$73,500.00

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Note: All repointing & restoration work will be performed staying within the guidelines set down by the Department of Interior's "Historic Briefs #2".

- Excludes: Sales tax
- Permits
- Removal, handling and/or disposal of hazardous materials
- Winter heat & protection

Cordially,

Jeffrey Morris
Jeffrey Morris
President

JM/njm

Pg. 2 of 2

Appendix H: Certificate of Incorporation

Internal Revenue Service
District Director

Department of the Treasury

Date: January 3, 1980

Person to Contact
E. Cohen
Contact Telephone Number
Tel. (212)-530-7337

> OLD FORT NIAGARA ASSOCIATION, INC.
P.O. 169
Youngstown, NY 14174

Gentlemen:

Reference is made to your request for verification of the tax exempt status of your organization.

We are unable to furnish you with a copy of the original determination or ruling letter that was issued to your organization. However, our records indicate that exemption was granted as shown below.

A determination or ruling letter issued to an organization granting exemption under the Internal Revenue Code of 1954 or under a prior or subsequent Revenue Act remains in effect until exempt status has been terminated, revoked or modified.

Our records indicate that there has been no change in your organization's exempt status.

Sincerely yours,

Fred J. Kessler

Group Manager, Exempt Organizations

Name of Organization:
OLD FORT NIAGARA ASSOCIATION, INC.

Date of Exemption Letter:
May, 41

Exemption granted pursuant to 1954 Code section 501(c) (3) or its predecessor Code section.

Foundation Classification (If Applicable):