



MEMORANDUM

To: Salem Historic Commission

From: Chris Genter, Senior Associate, Oudens Ello Architecture

Re: Response to the Secretary of the Interior's Guidelines on **Flood Adaptation** for Rehabilitating Historic Buildings

Copy: Patti Kelleher, Preservation Planner, City of Salem
Elizabeth Peterson, Director, Witch House, Pioneer Village & Charter Street Welcome Center
Trish O'Brien, Director, Salem Park, Recreation and Community Services
Michael Crouse, Signature Parks Project Manager, Salem Park, Recreation and Community Services
Margaret Wood, Director, Anser Advisory
Virginia Adams, Senior Architectural Historian, The Public Archaeology Laboratory, Inc.
John Wathne, Principal, Structures North
Jillian Borghardt, Structural Engineer Preservation Designer, Structures North
Matthew Oudens, Principal, Oudens Ello Architecture

Attachments: *Pioneer Village Conditions Assessment*, Structures North, November 29, 2022

In 2021, The US Department of the Interior, National Park Service, and Technical Preservation Services published The Secretary of the Interior's Standards for Rehabilitation & Guidelines on Flood Adaptation for Rehabilitating Historic Buildings. The guidelines have evolved from prior iterations in recognizing that many historic properties - particularly those in coastal locations - are subject to an increased flood risk due to changing weather patterns, stronger hurricanes and sea level rise and offers technical guidance and information about how to adapt historic buildings to be more resilient to flooding risk in a manner that will meet The Secretary of the Interior's Standards for Rehabilitation. The guidelines recognize moving historic buildings as an acceptable adaptation approach. The following text describes the flood risk at the current site and how the project will address the guidelines for moving historic buildings to adapt to the flood risk.

The Pioneer Village structures are in FEMA Zone AE: an area of special flood hazard with a base flood elevation (BFE) of 11'-0"; The ground level of the structures is at or below 10'-0"; 1'-0" or more below the BFE. Storm models indicate that the site would be subject to hurricane storm surge from category 1 and higher storms. 3'-0"-4'-0" of sea level rise would make the site inaccessible at high tide and would put the Blacksmith Shop at water level. 6'-0" of sea level rise would put the one-story structures at water level and the two-story Governor's house at the water's edge.

Given the small size of the structures, raising them on elevated foundations or piles above the floodplain is not suitable because it would negatively impact the character of the buildings. A sea wall is already in place but does not offer adequate protection from flooding. Relocation offers the best option for long-term flood resilience and building preservation.

The new site at Camp Naumkeag substantially reduces the flood risk while providing a site by the water that replicates many of the characteristics of the current site. A structural assessment of the buildings by Structures North determined that the buildings are suitable for relocation by barge. Prior to the move, The Public Archaeology Laboratory (PAL) will photograph the buildings from all elevations. In addition, a site survey will be conducted so that the relationship between the structures will be preserved when relocated to the new site. In summary:

- The existing site has an established flood risk
- The buildings are structurally stable to move safely to the new site
- The new site is located outside of the established flood risk area but similar in character to the original setting
- Both sites are near the water and the buildings are suitable for transportation by barge



- The buildings will be fully documented prior to the move

Planning and Preparation

- The Camp Naumkeag site offers a similar setting to the original site while substantially reducing flood risk and sea level rise impacts.
- PAL will document the historic buildings with photographs, and a surveyor will create a site plan with the four directional cardinal points noted, and the relationships to outbuildings and other site and landscape features noted.
- A professional building mover will be contracted to undertake the move. The move will be adequately covered by cargo insurance for all phases of the relocation project.
- The buildings will be moved in one piece to the extent possible. Please refer to *Pioneer Village Conditions Assessment*, November 29, 2022 by Structures North for details on condition and recommended moving procedures.
- Any disassembled sections or units of the building will be clearly marked with each unit's orientation, i.e., front and back, individually numbered, and its location on the building marked on a plan and elevation graphics. A secure location will be provided for the storage of all disassembled components.

Moving Considerations

- Fragile or unstable elements will be protected by bracing or covering.
- All features and additions to the buildings will be maintained in the move to the new site.
- The 4 primary buildings will be moved and placed on the new site in the same relationship to one another. Some later reconstructed buildings and structures - dugouts, wigwams, visitor center, and admissions/gift shop - will not be moved to the new site.
- The location of the new structures will not have a negative effect on adjacent properties or their integrity of setting

Relocation

- Foundations at the new site will be structurally adequate to support the relocated buildings.
- The historic relationship between buildings and the landscape will be maintained with the exception of the orientation; the buildings face south on the current site and will face north on the new site.
- Repairs will be made to the sill plates and floor joists before installation on the new foundations.
- The historic buildings will be allowed to settle on the new foundations before rebuilding the chimneys.
- Buildings will be placed in the proper locational relationship and distance to one another, reflecting as closely as possible the original layout of Pioneer Village.

End of Memorandum
