



ca 1899

Building Condition Report

Norton Wagon Shops

38 NANTICOKE ROAD, MAINE NY

APRIL 24, 2019



ca 2016

Preserve New York is a signature grant program of the New York State Council on the Arts and the Preservation League of New York State. Preserve New York is made possible with the support of Governor Andrew M. Cuomo and the New York State Legislature.

SECTION 1

Evaluation Data	1
Introduction	2
Description and History of Site	3
Description and History of the Wagon Shop	4
Description and History of the Barn	5
Society's Goals for the Buildings and Site	6

SECTION 2 – Existing Conditions Report

Existing Site Conditions	8
Existing Wagon Shop Conditions	9
Existing Barn Conditions	14
Recommendations	17
Opinion of Probable Construction Cost	21

SECTION 3 – Photographic Survey

SECTION 4 – Figures and Appendix

Map Figure A – Site Map	
Map Figure B – Development Map	
Appendix A – Wagon Shop Existing Floor Plans and Elevations	
Appendix B – Barn Existing Floor Plans and Elevations	

1

SECTION 1

Evaluation Data

Resources Collected	Norton Wagon Works, Maine, NY; Historic Structure Report, May 1997, Sandra A. Ham Broome County GIS Mapping System Parcel ID #074.14-1-5 and 074.14-1-6
Date of Site Survey	15 August 2018
Building Address	38 Nanticoke Road, Maine NY 13802
Flooding Impact	
17 Sept 2018	Shop first floor not impacted, side lean-to +-1" of water Barn +-3" of water in first floor
7 Sept 2011	Shop first floor +-6", side lean-to +-13"; Barn +-15" of water in first floor
Possible Hazardous Materials Recommendation	Lead Based Paint, Tar/Creosote Hazardous Material Study

Introduction

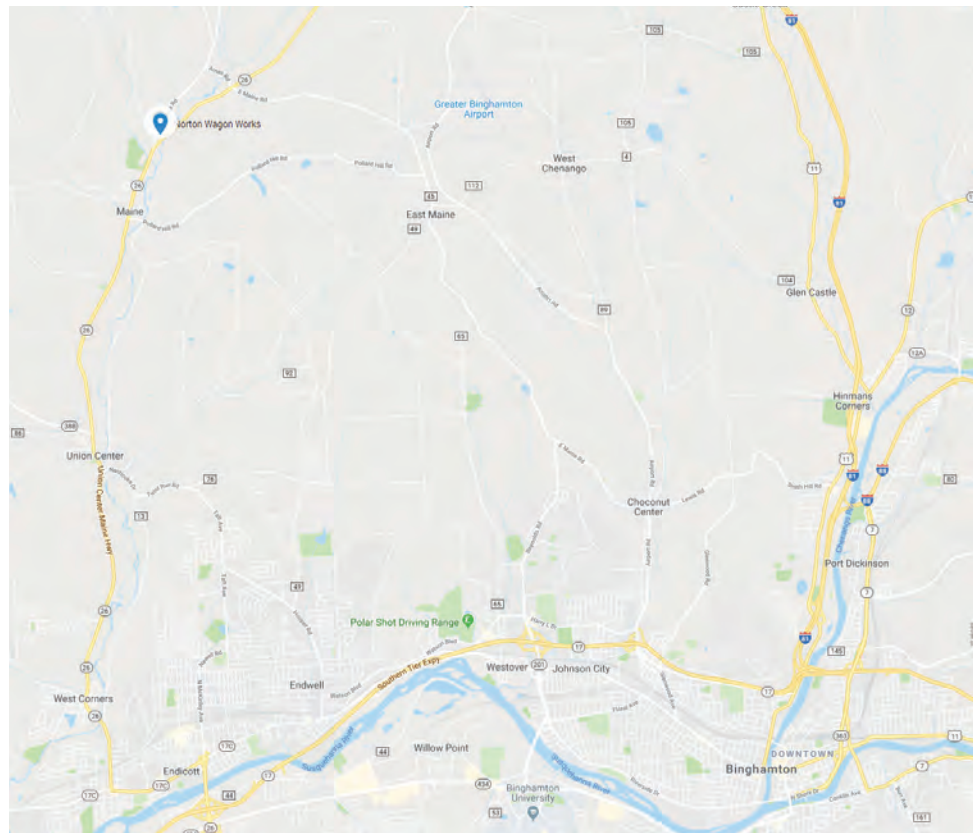
The Architect has been contracted by the Nanticoke Valley Historical Society (NVHS or Society) to provide a Building Condition Report in compliance with a grant awarded by the Preservation League of New York State (PLNYS). The Architect was onsite to survey the structures and collect field data on 15 August 2018. The structures history is well documented. This report is not provided to be an all-inclusive reference collection of the structures. It should be understood as an analysis and documentation of the current conditions of the buildings and recommendations for repair, restoration and treatment. It is suggested to the reader that the 1997 Historic Structure Report (205 page report previously provided electronically to Nanticoke Valley Historical Society, additional copies available upon request) be a companion reference to gain a comprehensive understanding of the site and buildings history. This Building Condition Report is supplemented with current maps, images of the existing conditions as of the time of the report.

This Building Condition Report contains much information that is familiar to those who are acquainted with structures. It should be understood that this report is to be used by the NVHS as an official guide for rehabilitation and reuse. It should also be understood that this report is to be used by those whom are not knowledgeable of the structure, to gain an understanding of the current conditions of the buildings, the Society's goals for the future and evaluate the probability of future support for the Society's endeavors.

The structures are currently in a precarious state of stability. They have sufficiently weather resistant roofing and cladding to limit the rate of decay. The building site is also unkempt. This does have one positive effect in that it camouflages the structures from public view thus limiting vandalism or looting.

Description and History of the Site

The buildings sit on a rural field site of approximately .85 acres. A member of the Norton family obtained the site and adjacent land in 1835. The site does not have access to municipal water or sewer services. A power line system runs on the north side of the site and may be located in a listed Right of Way (refer to Map Fig A). The site does not have active electrical service. The site is bounded on the north by an abandoned (mid-20th century) elevated road bed and R.O.W. This may have been an extension of Tiona Road and bridge over the Nanticoke Creek to NYS Route 26 (refer to Map Fig A and Fig 6). The east side of the site is bounded by an .76-acre parcel also owned by the Society. The east side site contains a flood control embankment that runs along the Nanticoke Creek (refer to Fig 4). The south property line is shared with an adjacent residential structure referred to as the Jefferson Ransom House. To the west, the two-lane Nanticoke Road runs north and south. It is immediately intersected by Tiona Road that runs west, this area is known as Bowers Corners (refer to Map Fig A). The property was obtained by the Bowers family in 1933 and deeded to the Society in 1978. The Bowers House at the Northwest corner of the intersection of Tiona Road and Nanticoke road is also a historic gem with a well-documented history. This building would further contribute to the historical and educational draw of the area (see Fig 1).



Town of Maine, Broome County, New York

Description and History of the Wagon Shop

The wagon Shop is the older of the two remaining structures. Dating from 1843-1848 it was originally constructed as a 1 story 2 bay wooden timber frame structure of approximately 400 square feet. The bays segment the structure from north to south. It is elevated on stone and block piers. A rear (south) two story addition dating from 1850 to 1880 was constructed and the upper level was heightened during the same time period so that the structure was then fully two stories and three bays. Its size is approximately 780 square feet (19' 4" x 40' 7") and remains as such today. An east lean-to that may have covered a forge, was added in the last few decades of the 19th century. The lean-to still remains, it is enclosed, and it is constructed on grade. It is approximately 220 square feet (10' 2" x 20' 4"). The wagon Shop was used to house the Norton wagon manufacturing business until 1929 (see Fig 82).

Description and History of the Barn

The Barn sits to the east of the Shop and is of timber frame construction. It is a 2 bay 2 story structure of approximately 738 square feet (24' 4" x 30' 4"). It dates from the 1870's. The original siting of the building is in question. The Barn may have been built elsewhere and then transported to the current location (refer to image on cover page).

Ideally located along a future travel path between the Society's collection of buildings such as the museum, schoolhouse and the mill building (refer to Map Fig. B) the site can be developed to support the Society's immediate needs, goals and serve the local community. Connecting the building collection will provide a more attractive destination place; a one stop history center. This travel path could partly follow along the creek embankment and connect to the mill building via a footbridge over the creek. The path southward would traverse private property for a short distance and cross a two lane divided county road.

Envisioned as a hub for education, community center, small art and music gatherings and a protective space to permanently display the Society's larger collection pieces, these wagon buildings and their well-documented history of use, reuse and adaptive reuse can be a key component in support of the Society's mission:

“...to conduct, operate and maintain a historical society, exclusively for educational purposes. In keeping with the statement of purpose in the charter of the organization the Society will encourage preservation and knowledge of the past.”

It would be opportune to develop the Wagon Shop site as the central arrival point for visitors and tour groups who could then explore the Society's building collections, attend cultural events and immerse themselves in early Town history. The site has adequate open space to accommodate bus groups, private transport vehicles as well as outdoor learning and activity space.

The Wagon Shop could house small gatherings and events during milder seasons and some permanent displays. The upper level could be displayed as a period in time coordinated with the buildings primary use as a shop for constructing wagons; paint shop and office.

The Barn could display large collection items such as carriages, wagons and sleighs. A open lean-to structure could be constructed to further house larger objects and as protected storage for materials related to the buildings. The building could also be used as additional storage for the Society's other collections and pieces.

Area	Stage 1 2018	Stage 2 2019	Stage 3 2020	Stage 4 2021	Stage 5 2022
West Building Wagon Shops	Funding Preliminary Plan (Preservation Society Grant)	Building Conditions Report Completed Start Writing Full Grants Contact Hoyt, Klee, Kresge Clean Out, Shed Repairs Electricity or Use Generator Windows Remove Board Up	Raise Buildings Add East Shed (Not part of report - noted in Society's Goals)	Develop Displays Outside Walls, Floors (1st and 2nd Floors) Displays. Build Ramp to Second Floor.	Develop Museum and Bowers Corners Unity Open
East Building	Contact Chianis + Anderson Architects, Jeffery Smith Begin draft of Building Conditions Report	Building Conditions Report Completed Clean Out/Inventory Curator Sue Lisk Stabilize (check Tom's work)		Outside Walls, Floors, 2nd Floor Half of Structure. Windows Addition of Attached Shed.	Open
Bridge		Survey Site Acquire Permission Contact Mr. Duzuba	Grants for Bridge Construction	Design and Construction of Bridge.	Open
Grounds		Clean 5' From Buildings Ask Town of Maine to Mow Every Week	Underground electricity for both buidings	Parking Area Outhouses	
Nature Path		Survey Site Acquire Permission Contact Victor Lamoureux (BCC)	Plan and Lay Out Trails for School House to Bridge to Mill	Grants for Nature Trail	Open
Other		Historic Road Marker Sign (Pomeroy Foundation)	Displays in Mill for Agriculture	Open	
NVHS		Start Committees: Funding/Work			

West Building:

Museum First Floor - Displays of Industrial and Agricultural History of 1900 Centure Maine, NY
Second Floor - Wagons and Sleighs

East Building:

Open Hall for use for lectures, concerts, and receptions. Walls will have hanging agricultural displays. Outside shed for large agricultural machines.

2

SECTION 2

Existing Conditions

Existing Site Conditions

The site is maintained by Town of Maine, doing the best they can with limited resources. The property is not routinely mowed. The area immediately adjacent to the buildings is heavily overgrown as of the date of the field survey. This limited the scope of review that was possible around the entire exterior of each building and even beneath the buildings.

The east boundary of the sites is the Nanticoke Creek. It has an earthen berm (refer to Fig 4) probably for flood control (ca 1927), separating it from the buildings. The Nanticoke Creek floods regularly and at levels that reach the buildings wooden components. Most notably, in 2011 Tropical Storm Lee impacted the region and the Barn which is the lower structure had 15" of water in the ground level. Most recently on September 17, 2018, heavy rains impacted the region resulting in flash flooding that pushed 3" of water into the Barn and 1" of water into the Wagon Shop Lean-to.

Site access is via an unimproved field. No signage, fencing or security lighting is present (refer to Fig. 6). Partial macadam paving is visible in the raised area of the abandoned road bed (see Fig 6).

An overhead electric service feed runs from an adjacent pole to the northeast corner of the Wagon Shop (see Fig 7).

The west side of the sites are bounded by Nanticoke Road County Road 306. Nanticoke Road is an undivided two-lane road with a minimal shoulder. There are not any sidewalks in this area.

Wagon Shop

Refer to Wagon Shop - Existing Floor Plans and Elevations (Appendix A).

Exterior

Regular high-water events and past and current maturing trees/bushes closely adjacent to the building may have disrupted the building stone and masonry piers supports. Climbing vines and multi-branch low bushes collect moisture and hold it against the building exterior (refer to Fig 8, 9 and 44). Unable to routinely dry out, this will cause the wood to deteriorate. Any plant growth in contact with the building's surfaces also allow insects and vermin to travel easily into the buildings.

Stockpiled materials susceptible to damage by moisture should be stored under cover. Other stored materials should not be in contact with the building's exterior as they create areas of decay much like that of organic material (refer to Fig 10 and 11).

Foundation piers and footings were not closely reviewed to determine their continued use. As per the 1997 Historic Structure Report, the foundations (piers) consist of concrete block and stone. Based on the limited access to review these components in detail, this report assumes the piers are not adequate to support the rehabilitation project. The rubble stone foundation for the lean-to is understood to be the same.

South

This side of the building is the 'two story' addition that was added as noted above. It is sided with vertical wood boards. The joints between the boards are not covered with battens (refer to Fig 13). The upper boards are continuous and of a long length. Lower portions of the boards are spliced. This may be due to limited length of the boards or portions of the boards may have been replaced due to damage (refer to Fig 13 – Fig 15).

The metal flashing and wood fascia board at the roof are intact and in functional condition.

The Shop building elevation has two upper and one lower window opening. A one-story lean-to is attached to the east side of the Shop. The endwall of the lean-to is set back from the gabled end of the Shop. The lean-to has one window opening. The window sashes are intact. Many panes of glass are missing, and the paint has deteriorated on the upper windows. The window head flashing and sills show signs of severe weathering and are no longer protecting the window openings. This is typical for their age, southern exposure and for wooden elements that project horizontally. The lower windows head flashing is completely missing, and the siding above has rotten away (refer to Fig 14).

There is also a single door at grade level. It consists of solid vertical wood boards. The door opens inwards and is operated with a metal door pull with thumb latch. Its wooden head flashing and adjacent siding are weathered and no longer protecting the door. The wood threshold has deteriorated such that it no longer protects the sill beam below (refer to Fig 15).

East

This side of the building has a 1 story attached lean-to with a shed roof. The Shop and lean-to are sided with vertical wood boards. Some joints between the boards are covered with batten strips. The older portion of the building (northern bays) has siding boards that are pieced/extended at the top. This may have occurred when the original building was lengthened and heightened (refer to Fig 16).

The metal flashing and wood fascia board at the Shop roof are intact and in functional condition. The roofing material is wood shingles. The lean-to has a metal ribbed panel roof with exposed fasteners. It does not have a fascia board or drip flashing.

The Shop building elevation has 5 upper and 3 lower window openings. The lean-to has 3 window openings which consist of unequal sashes and are of a larger opening size than that of the Shop building. The upper window sashes are mostly intact in the Shop. One lower sash on the Shop and one in the lean-to are partly damaged and missing. Many panes of glass are missing throughout, and the paint has deteriorated. Window components including head flashing, sills and trim show signs of severe weathering and are no longer protecting the window openings. A portion of this side of the building is undocumented due a climbing vine impeding photography and closer examination.

Remnants of an overhead electrical service and meter box remain as well as piping that may have served exterior lighting.

North

This side of the building is a two-story gable end that is sided with vertical wood boards. The joints between the boards are mostly covered with battens. At grade level is a single-story bayed entrance center on the building. The bayed entrance does not have vertical battens. Siding boards are pieced/extended at the top. This may have occurred when the original building was lengthened and heightened (refer to Fig 17). There is a step up from the bayed entrance into the Shop

The metal flashing and wood fascia board at the upper gable roof are intact and in functional condition. The bayed entrance has wood shingles without a drip edge or fascia board. It has metal ridge and wall flashing that are all intact and appear to be functioning properly.

The Shop building elevation has 2 upper and 2 lower window openings. The 2 upper windows appear to have been moved vertically as the wood siding below show signs of regular shaped infill consistent with the windows locations (refer to Fig 18). A one-story lean-to is attached to the west side of the Shop. The endwall of the lean-to is set back from the gabled end of the Shop and does not have window openings. The bayed entrance has a single window on each side. The bayed windows are of a shorter height. All window sashes are intact. Many panes of glass are missing, and there is wood and paint deterioration throughout. The window head flashing and sills show signs of severe weathering and are no longer protecting the window openings (refer to Fig 17 and Fig 18).

Existing Wagon Shop Conditions

At grade level the Shop building has a pair of solid doors that swing inward. These doors are immediately inside the bayed entrance and in the same vertical plane as the gable end wall of the building. They have thumb latch and barrel bolt hardware (refer to Fig 19). The upper level of the Shop building also has a center pair of double doors that swing inward. They have windows cut into them that appear to be a retrofit and the windows themselves are single window sashes (refer to Fig 17). The lean-to has a pair of solid wood doors. One leaf has been retrofitted with what may have been a window sash that no longer exists (refer to Fig 20).

An inactive overhead electrical service attaches to the building at the upper portion of the gable. The service entrance cable runs eastward to the side meter box and abandoned electric piping parallels the cable run.

West

This side of the building faces Nanticoke Road and is a single uninterrupted plane. The wall is clad with vertical wood boards. The older portion of the building (northern bays) has siding boards that are pieced/extended at the top. This may have occurred when the original building was lengthened and heightened (refer to Fig 21). The older portion also has batten strips covering the joints in the boards whereas the addition does not.

The metal flashing and wood fascia board at the roof are intact and in functional condition. The roofing material is wood shingles. Some shingles are curling.

This building elevation has 5 upper and 5 lower window openings that align vertically. The upper windows in the addition have a lower head and sill height. The lower windows all along appear to align horizontally. The window sashes are mostly intact. Many panes of glass are missing throughout, and the paint has deteriorated. Window components including head flashing, sills and trim show signs of severe weathering and are no longer protecting the window openings.

Interior

To enter the Shop you do so from the north side through the bayed entrance, which does not appear on the building until the 1930's. The bayed entrance is on a concrete floor pad. There is a step up into the original Shop structure (see Fig 22). Shop doors are located in the north interior wall (see Fig 19).

On the grade level of the Shop, the main structural components of the wooden timber framing are exposed on the interior. Including posts, beams, knee timbers, joists, subfloor. The four primary timber frames consist of approximately 10"x10" posts and the main floor/summer beams are approximately 12"x12". There is a visible sag in summer beam that spans east to west above original Shop building (see Fig 26 and 28). Horizontal wood boards infill the walls (see Fig 23). The interior is cluttered with various artifacts, remnants, materials, and salvaged items (see Fig 25 to Fig 32). The interior details are the same for the addition. You will notice various loose window sashes in many of the interior photos, (see Fig 37) for an acceptable place of storage. There is

Existing Wagon Shop Conditions

evidence of removal of a hive of bees (see Fig 30). At grade level, the partition between the original structure and the addition is finished with vertical boards that do not appear to have similar weathering as other exterior boards and may not be part of the original exterior face of the building before the addition (see Fig 25, 29 and 32). Wire fencing was installed to protect the existing windows and to further secure the building. No window weights or hardware were present and do not appear to have been used on these openings. In most cases, the windows might have never been operable. A few keyed light fixtures hang from framing members above. The electric service panel is intact (see Fig 38).

The Lean-To can be entered with a step down, from the Shop (see Fig 33). The opening is secured by a sliding door located on the Lean-To side. The door has a multi-lit window sash installed, the window is an add on and it is installed with the meeting rail sideways (see Fig 34). One of the double exterior doors has a window cut into it, this also is an add on (see Fig 20). The doors have been repaired and the roof sheathing shows sign of repair also (see Fig 35). Looking south, the roof sheathing and roof framing show signs of repair. On the right, a window opening that aligns with one on the second floor and that may have been in existence before the lean-to was added, is infilled with a wooden storm window, not matching others in the building (see Fig 36).

A steep and narrow set of stairs lead to the upper level of the Shop (see Fig 26 and 27). At the top of the stairs is the second level of the original Shop. The wooden building wall and roof structure is exposed. The wood roof framing components do not have the same patina/oxidation as the wall components. This may be a result of reroofing repairs completed in the late 1970's (see Fig 39). The roof framing has horizontal collar ties, no ceiling joists are present. The interior is sparingly filled with materials and artifacts. The walls are covered with horizontal boards and there is evidence that this was in fact a paint Shop, as the boards are dotted with random paint samples (see Fig 40).

A wall mounted workbench, wall shelving, remnants of a chimney, double doors into the second level of the addition and plaster keys between the lath can be seen along the south wall of the original structure (see Fig 41). The chimney has been removed to below roof line and at grade level, the bricks present on each level may have been salvaged from this work. Further evidence of 'raising the roof' to make the second level usable are splices visible in the posts of the original structure (see Fig 42) with approximately 30" high stub columns mounted atop.

The second level of the addition is finished with plaster on wooden lath. The plaster on the walls is mostly intact. The ceiling was removed as part of the 1970's roofing project (refer to Fig 43 to 46). Evidence of Norton graffiti can be found on the walls and on a glass pane in a door into the addition (see Fig 47).

From the interior, holes through the current wood roof shingles are visible.

Barn

Refer to Barn - Existing Floor Plans and Elevations (Appendix B).

Exterior

Regular high-water events and past and current maturing trees/bushes closely adjacent to the building have disrupted the building stone and masonry piers supports. The Barn floor is lower in elevation than the Shop. It also is closer to the Nanticoke Creek and is subjected to routine high water. Adjacent plants/organic growth collect moisture and hold it against the building exterior (refer to Fig 48 and 49). Roof run off splashes off the leaves and directly onto buildings surfaces that are subject to deterioration. And plant growth in contact with the building's surfaces allows insects to travel easily into the buildings.

Stored and/or loose materials should not be in contact with the building's exterior as they create areas of decay much like that of organic material. Stored materials that are susceptible to damage and rot when exposed to weather should be stored under cover (refer to Fig 48 and 50).

There was very limited access to determine the foundation types beneath the primary frame post members. The northeast corner reveals concrete masonry blocks with what appears to be a poured concrete cap. As per the 1997 Historic Structure Report, the foundations (piers) consist of concrete block and stone. Based on the limited access to review these components in detail, this report assumes the piers are not adequate to support the rehabilitation project.

South

This side of the building is sided with vertical wood boards and battens. Some battens are missing, and some boards are curled (see Fig 51). The boards are regularly spliced at the approximate second floor line (see Fig 52).

The metal flashing and wood fascia board at the roof are intact and in functional condition.

The Barn building elevation has two upper and one lower window opening. One upper and one lower window opening are boarded up. One upper window remains. The window sashes are intact but of a mismatched size for the opening. Many panes of glass are missing, and the wood is severely weathered. The windows are not trimmed out on the exterior; no head flashing and sills exist (see Fig 52).

Existing Barn Conditions

There is also a single door at grade level. It consists of solid vertical wood boards. The door opens inwards and is operated with a metal door pull with thumb latch. Its wooden head flashing and adjacent siding are weathered and no longer protecting the door. The wood threshold has deteriorated such that it no longer protects the sill beam below (refer to Fig 53). The door has a hole in it at lower latch side.

East

This side of the building has evidence of temporary building stabilization measures including wood cribbing, tensile cabling and steel shoring. This building is sided with vertical wood boards with batten strips. Some battens are missing. The boards are mostly of one continuous piece. (see Fig 54). Deterioration of foundation piers, wood sill beams and wood posts are extensive. This side of the building faces Nanticoke Creek. Along this side of the building, some building foundation structure is visible. A more recent cinder block pier is noticeable at the northeast corner of the building (see Fig 55).

The wood fascia board at the roof is intact and in functional condition. The roofing material is metal. There is not a metal drip flashing at the roof overhang.

This elevation has three upper and three lower window openings. They closely align vertically and horizontally on each level. Three of the windows on the lower level are boarded up. The three upper windows are open. No existing windows are visible in any opening. One upper and the three lower windows have window trim, sill and heads with flashing or evidence thereof (see Fig 56). All window opening components are severely deteriorated. Two upper openings are unfinished, similar to those on the south side of the building.

North

This side of the building is a two-story gable end that is sided with vertical wood boards. All the windows and doors are symmetrically oriented (see Fig 57). The joints between the boards are mostly covered with battens. The boards are regularly spliced at the second-floor window sill line (see Fig 58).

The metal flashing and wood fascia board at the upper gable roof are intact and in functional condition.

This Barn building elevation is symmetrical. It has two upper and two lower windows. All sashes are intact except for one lower window opening which is boarded up. At the time of this report, one pane of glass is missing in on upper window sash. Window head flashing and sills on the lower windows show signs of severe weathering and are no longer protecting the window openings (refer to Fig 59).

At grade level the Barn building has a pair of solid doors that swing inward. There is a sloped wooden walk from grade into the Barn (see Fig 60). On the second level there is a similar pair of doors directly in line with those below.

Existing Barn Conditions

West

This side of the building faces the Shop building. The wall is clad with continuous span vertical wood boards covered with batten strips. All the window openings are symmetrically oriented (see Fig 61).

The wood fascia board at the roof is intact and in functional condition. The roofing material is metal. There is not a metal drip flashing at the roof overhang.

This elevation has three upper and three lower window openings. They closely align vertically and horizontally on each level. All the openings on each level are boarded up. No existing windows are visible in any opening. Two lower windows have window trim, sill and heads with flashing or evidence thereof (see Fig 61). All window opening components are severely deteriorated. Four openings are unfinished, similar to those on the east and south side of the building (see Fig 62).

Interior

One enters the Barn at the north side across a wooden walkway and through a pair of doors. On the grade level of the Barn, the main structural components of the wooden timber framing are exposed on the interior. Including posts, beams, knee timbers, joists, subfloor. The interior is cluttered with various artifacts, remnants, materials, and salvaged items. The subfloor is covered with a fine layer of silt and debris, evidence of past flooding (see Fig 63 to Fig 68). There is one intermediate wood post beneath the center of the beam that runs east to west and support the floor of the second level (see Fig 68).

More evidence of temporary building stabilization measures including tensile cabling can be seen along the south wall (see Fig 65 and 66). These stabilization measures appear to have slowed the building collapse but not stopped or reversed it. There is evidence of settling or continued wood beam rot in the building's interior foundation system. The foundation system was not visible during the site survey but there is a noticeable drop in floor level; high point northeast corner low point north wall center (see Fig 69). Deterioration of subfloor and wood posts is extensive along the eastern wall (see Fig 70 to Fig 72). A portion of the subfloor also show signs of sagging which may be further deterioration of floor support/wood beneath (see Fig 73). This area is a low spot in the entire floor and may be subject to ponding when the building is flooded.

It should be understood that these wood structures have been affected by wood damaging insects throughout their lifespan. Evidence of current beetle damage was observed at the grade level (see Fig 74).

A steep and narrow set of stairs lead to the upper level of the Barn at the northwest corner (see Fig 67 and Fig 75). At the top of the stairs is the second level of the Barn (see Fig 76 to Fig 79). The wooden building wall and roof structure is exposed throughout. Most of the wood roof framing components have been reinforced with additional wood members. The newer wood members do not have the darker color of the older wood (see Fig 80).

Existing Barn Conditions

Like the Shop, the interior of the second floor of the Barn is sparingly filled with materials, artifacts and rubble. Unlike the Shop, the Barn does not have visible splices in the structural posts and may have been originally built as a two-story structure. There is one intermediate wood post beneath the center of the roof and it may align with a post in the grade level below. The roof framing does not have a continuous ridge board or beam. The necessity of this post is unknown (see Fig 81).

All the intact windows throughout have wire fencing installed on the interior. No window weights or hardware were visible on the window sashes that remained intact and it does not appear that the windows ever contained these components. The windows may have never been operable.

Recommendations

It is recommended that the preferred treatment for both structures is REHABILITATION in accordance with Secretary of the Interior's Standards for the Treatment of Historic Properties – 2017.

“Rehabilitation is defined as the act or process of making possible a compatible use for a property through repair, alterations, and additions while preserving those portions or features which convey its historical, cultural, or architectural values.”

As discussed in Societies Goals for the Buildings and Site, this treatment will assist the society with achieving their goals with little to no impact on the buildings historical value. Comprehensive planning for the Rehabilitation project and getting approval and support from key stakeholders is imperative. Of course, there is the Society and their network of friends and experts whom have cared for the buildings of the past 40 or so years. These folks should be referenced at key way points in the building's rehabilitation process.

Rehabilitation of rustic agricultural buildings like these have a distinct advantage over many other historic building types. The building components are readily visible and accessible; exterior and interior. These structures utilized local materials and craftsmanship that was readily available at the time of their construction. The lumber materials are still obtainable at local mills in dimensions and types to match existing. The labor and skill to implement the rehabilitation may be sourced locally as well. The buildings timber framing construction is repairable and in certain cases, replaceable. No unique talent, sourcing of exotic materials or specialized experience is necessary to rehabilitate these structures and keep them in service for many decades more. Timber framing expertise can still be found whether through recommendations from local mills and building manufacturers or accessing the local Amish community.

RETAIN REPAIR REPLACE DO NO HARM

Major condition issues with the buildings exist. Past stabilization measures have become permanent means of maintaining the buildings in a precarious state of slow decay. For example, temporary shoring placed on the east side of the Barn to stabilize its vertical decline has remained relatively stable as the rest of the Barn continues to sag and settle. Ongoing areas of repeated exposure to moisture exposure and flood waters continue to contribute to the structure's further deterioration.

Recommendations

CURRENTLY

The following recommendations are organized in a hierarchical manner. The listing is organized from items deemed most critical to least critical. Survival and longevity of the structures is the main intent of the listing.

- I. Inventory stored equipment, materials and artifacts
 - a. Items which may have been a physical part of the buildings in the past should be noted and labeled as such and set aside separately for use in the building's rehabilitation.
 - b. The Society should reach out to their key members and friends whom have intimate knowledge of the building's treasures to assist.
 - c. Debris, salvaged brick and excess materials should be removed from each building. Provide a clear temporary protected space for salvaged and excess materials to be stored (brick, lumber etc) covered and protected as necessary (refer to item IV-b below).
- II. Housekeeping
 - a. Remove rubble and debris completely from the interiors of both structures.
 - b. Move salvaged bricks outside.
 - c. Move miscellaneous lumber elsewhere.
 - d. Limit storage and access on the second floors.
 - e. Post "No Smoking" and "No Trespassing" signage.
 - f. Assess security of structures from non-authorized access
- III. Clear the immediate site area (recommend 5 feet out minimum) around each building of brush and debris, extra materials and salvaged pieces. Consolidate storage with item I. above.
- IV. Stabilization in advance of intrusive rehabilitation efforts
 - a. Historic plaster in the upper floor Shop 'office' shall be stabilized. It is a unique surviving feature and should be protected as such. Applied coatings on the exposed side and from the backside (wall cavity) should be considered. Plaster buttons may be installed. The goal shall be to maintain as much original plaster, lath and the important keys. Vibrations, racking and even changes in temperature and humidity will affect the material.
 - b. Window components should be removed from their openings and catalogued. Board up all window openings from the interior.
 - c. Brick chimney shall be shored and braced.

END OF 2019

2020

- V. Address resilience to natural hazards
- a. Elevate the buildings – process involves lifting the buildings and setting them higher above grade so as not be impacted by future flooding. Exact new elevation height to be determined via professional surveyor elevation certificate and review of Town code. Preliminary estimate of 30". There is a selection of regional companies that lift buildings for repair and elevation.
 - b. Adjoining grade to be filled and graded to limit the visual impact on the historic character and setting of the site and to maintain the current relationship of the building to the surrounding grade so as not to appear that they have been raised. Preliminary regrade slope of 1" rise to 12" run approximately 30' out from the buildings in all directions.
 - c. Minimal leveling and straightening is involved; so as not to disturb building components that have sagged/settled over long period of time. Cannot level and straighten a building in the few months the elevation process takes. Character sags, out of square and plumb conditions shall be accepted. Goals need to be reviewed by project team prior to lift.
 - d. Provide clear space beneath the buildings between grade for future inspection and to limit moisture damage. A graded area for exterior access beneath shall be provided.
 - e. Bury the overhead electrical service to be less obtrusive to the historic nature of the site. By burying the wiring below ground, the electric service is also less prone to damage by high wind events. Consider relocating interior equipment to be less visible/obtrusive.
- VI. Structural
- a. As part of the elevation process, rotten wooden components beneath the first floor ie: floor boards, floor joists, posts and beams should be replaced in kind or repaired as necessary.
 - b. The first-floor systems shall be evaluated, and additional code required structure added to accommodate future use of the building for public gathering space, exhibitions (Shop) and/or storage (Barn).
 - c. New masonry piers should be installed and extend below frost line and sit on adequate concrete footings beneath the Shop and Barn. The perimeter piers will be clad with a material (field stone perhaps) to appear as being sympathetic to the original.
 - d. A chimney foundation (Shop) should be installed at this time.
 - e. The lean-to will receive a new foundation system as well and its appearance can be treated like that of the Shop and Barn.

END OF 2020

SAFELY MOTHBALLED

VII. Insect treatment

- a. Implement a program for routine monitoring and treatment. Regular inspection is the first line of defense for prevention or early infestation of insects.
- b. Judicious use of a liquid applied borate-based insecticide, fungicide, miticide, moldicide should be considered. Utilize a product that does not change the appearance of the wood and does not interfere with future treatment (restoration, repair, replacement) of the material.

VIII. Roofs

- a. Patch, repair and maintain metal and wood shingle roofs
- b. Gently remove/clean organic growth from bayed entrance roof and replace damaged wood shingles
- c. Install half-round gutters and downspouts all around.

IX. Exterior repairs

- a. Remove and replace damaged beyond repair and missing siding, window and door head flashing, sills and trim. Salvage all removed components. New wood materials will not have the same aged look/patina as the removed siding. Source materials from other 'board and batten' structures. Reuse removed materials. Match replaced or missing components with similar building details that exist.
- b. Install battens to cover all joints between boards throughout. This is considered part of making the buildings weather, vermin, insect and vandal resistant.

X. Windows

- a. The loose stockpiled sashes should be surveyed to see which ones match the removed sashes and which openings they are from.
- b. All sashes that are to be reinstalled shall undergo repair/restoration work. Remove damaged wooden material and replace with like in-kind for material and profile. An epoxy repair system may be acceptable in some cases. Replace missing panes of glass. Coordinate with local glass company for availability and use of older wavy glass. Reglaze, prime and paint.

XI. Master Planning

Plan future development of structures and site in accordance with Society's goals.

- a. Vehicle access
- b. Connection to other Society properties
- c. Evaluate structures for use of upper floors
- d. Evaluate Building Code required items for public assembly/historic house museum
- e. Evaluate accessibility into buildings
- f. Public access/events/exhibits

Opinion of Probable Construction Costs

Recommendation	Estimated Cost
I. Inventory stored equipment, materials and artifacts	\$2,000
II. Housekeeping	\$4,000
III. Site Clearing	\$4,000
IV. Stabilization	\$13,500
V. Resilience	
Elevate Buildings	\$70,000
Grading	\$20,000
Electric Service	\$12,000
VI. Structural	
Wood Floor Repair – approx. 780sf Shop, 220sf Lean-to, 738sf Barn	\$34,000
Wood Floor Supplemental Structure	\$17,000
New Masonry Piers – approx. 12 for Shop and 9 for Barn	\$42,000
Chimney Foundation	\$3,000
Lean-to Foundation – 41lf	\$20,000
VII. Insect Treatment and Monitoring	\$5,000 / \$1,000 per year
VIII. Roofs	\$15,000
IX. Exterior Repairs	\$45,000
X. Windows – approx. 54 openings	\$11,000
XI. Master Planning	\$7,000 - 50,000

Note: Cost ranges are shown to address different methods and materials to achieve the same outcome, to account for unknown conditions behind concealed construction and to capture a wide-ranging scope of work, design and construction services. It is recommended that cost escalation in the amount of 5% be added to each cost item for each additional year that the recommendations are not implemented.

3

SECTION 3

Photographic Survey

Figure Key



Figure 1 - Bowers House



Figure 2 - Power Lines

Figure Key



Figure 3 - View East From Tiona Rd, Bowers House on Left



Figure 4 - East Side Flood Control Embankment

Figure Key



Figure 5 - View West Towards Tiona Rd, Bowers House Beyond



Figure 6 - Abandoned Road Bed With Partial Macadam Paving Visible

Figure Key



Figure 7 - Overhead Electric Service



Figure 8

Figure Key



Figure 9 - description



Figure 10 - description

Figure Key



Figure 11 - description



Figure 12 - description

Figure Key



Figure 13 - South Elevation



Figure 14 - South Windows

Figure Key



Figure 15 - South Door



Figure 16 - East Elevation

Figure Key



Figure 17 - North Elevation



Figure 18 - North Elevation Details

Figure Key



Figure 19 - Grade Level Shop Doors - Interior



Figure 20 - North Elevation Lean-To

Figure Key



Figure 21 - West Building Elevation



Figure 22 - Bayed doors entrance with step up

Figure Key



Figure 23 - Typical Shop Interior Framing Components



Figure 24 - Interior Grade Level View North West Corner - Original Structure

Figure Key



Figure 25 - Interior Grade Level View South West Corner – Original Structure – Entrance to Lean-To on left, Dividing Wall Between Addition on Right



Figure 26 - Interior Grade Level View South – Original Structure- Opening to Addition in Center, Stairs to Second Level on Right

Figure Key



Figure 27 - Interior Grade Level View South –Stairs to Second Level



Figure 28 - Interior Grade Level View West – Original Structure

Figure Key



Figure 29 - Interior Grade Level View North West – Addition



Figure 30 - Interior Grade Level View Towards South Wall - Addition

Figure Key



Figure 31 - Interior Grade Level View Towards West Wall - Addition



Figure 32 - Interior Grade Level View Towards North West Corner - Addition

Figure Key



Figure 33 - Interior Grade Level – Entrance to Lean-To From Original Structure



Figure 34 - description

Figure Key



Figure 35 - Interior Grade Level View North – Lean-To



Figure 36 - Interior Grade Level View South – Lean-To

Figure Key



Figure 37 - Interior Grade Level View Towards South East Shop Corner – Salvaged Windows



Figure 38 - Electrical Service Panel

Figure Key



Figure 39 - Interior Second Level View North From Top of Stairs – Original Structure



Figure 40 - Interior Second Level View East – Original Structure

Figure Key



Figure 41 - Interior Second Level View South Towards Addition – Original Structure



Figure 42 - Second Level Post With Visible Splice – Original Structure

Figure Key



Figure 43 - Interior Second Level View North Towards Original Structure – Addition



Figure 44 - Interior Second Level View East – Addition

Figure Key



Figure 45 - Interior Second Level View South – Addition



Figure 46 - Interior Second Level View West – Addition

Figure Key



Figure 47 - Norton Graffiti Interior Second Level Door



Figure 48 - description

Figure Key

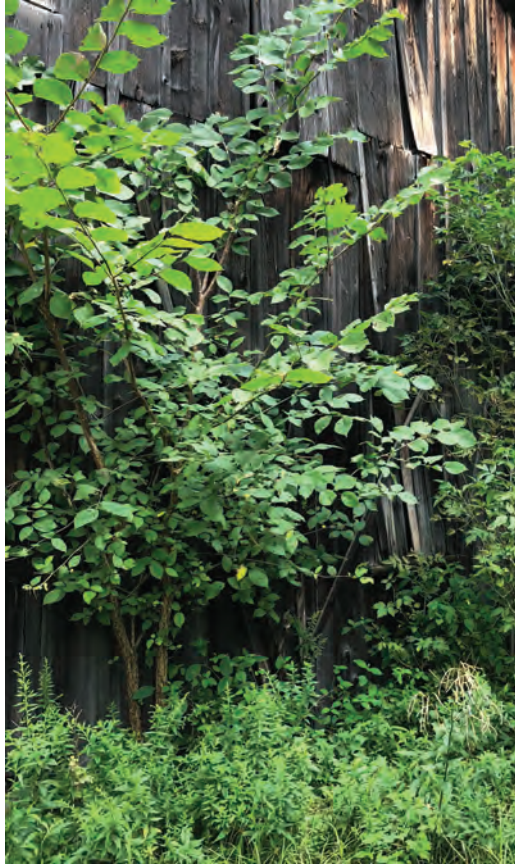


Figure 49 - description



Figure 50 - description

Figure Key



Figure 51 - South Building Elevation



Figure 52 - description

Figure Key



Figure 53 - description



Figure 54 - East Elevation

Figure Key



Figure 55 - description



Figure 56 - Typical Boarded Finished Window

Figure Key



Figure 57 - description



Figure 58 - description

Figure Key



Figure 59 - description



Figure 60 - Wooden Walk to Entrance

Figure Key



Figure 61 - West Elevation



Figure 62 - Typical Boarded Unfinished Window Opening

Figure Key



Figure 63 - Interior Grade Level View – Northeast Corner



Figure 64 - Interior Grade Level View – East Wall

Figure Key



Figure 65 - Interior Grade Level View – Southeast Corner



Figure 66 - Interior Grade Level View – Southwest Corner

Figure Key



Figure 67 - Interior Grade Level View – North Entrance Doors and Stair to Second Level



Figure 68 - description

Figure Key



Figure 69 - Floor Level Drop – View From North Center Towards Northeast Corner



Figure 70 - Stabilization Measure at Missing Floor and Sill Beam Building Perimeter

Figure Key



Figure 71 - Stabilization Measure at Missing Floor and Sill Beam Building Perimeter



Figure 72 - Stabilization Measure at Missing Floor and Sill Beam Building Perimeter

Figure Key



Figure 73 - Sagging Subfloor at Interior Floor Span



Figure 74 - Evidence of Powder Post Beetle Activity

Figure Key



Figure 75 - Interior View – Second Level Looking Down Stairs



Figure 76 - Interior View Second Level – North Wall

Figure Key



Figure 77 - Interior View Second Level – East Wall



Figure 78 - Interior View Second Level – South Wall

Figure Key



Figure 79 - Interior View Second Level – West Wall



Figure 80 - Reinforcing at Wood Roof Framing

Figure Key



Figure 81 - Roof Framing and Intermediate Post

GEO. E. NORTON,
Manufacturer of the Celebrated
**DAVIS BROS. PATENT
COMBINATION SPRING PLATFORM,**



THE BEST CARRYING, EASIEST RIDING AND MOST DURABLE WAGON IN USE.

The best carrying because of perfect Springs, and bearings at proper points to give the greatest strength.

Easiest riding. A Wagon carrying 1500 lbs. rides as easy for one man as the best Phaeton.

Most durable, because the combination of the Springs is such as to give perfect elasticity to the gear, thereby entirely obviating the sharp side motion and consequent strain on the Wheels and other parts of the Wagon, allowing the Wagon to pass over all irregularities of road without winding or cracking the box, or jerking, or inconvenience to those riding. The binding of the circle, a necessity with all other Platform Wagons, is entirely obviated, allowing the Wagon to follow the road without crowding the team from side to side.

Our Wagons are manufactured from choice material, by the best mechanics, thoroughly painted, with fine finish and trim, and warranted.

If you want the best Wagon for the money ever made, write or call on us. If you want a Family Wagon, an Express Wagon, a Peddler's Wagon, Market Wagon, or a Wagon for any of the purposes for which the Platform or Democrat Wagon is generally used, see and try these Wagons and you will use no other.

We have arrangements whereby we can ship to any part of the United States at the lowest rates.

All communications will be cheerfully answered.

Special terms given to those wishing to deal in these Wagons.

L. A. DAVIS & BRO., Patentees, Binghamton, N. Y.

GEO. E. NORTON,
Manufacturer of
**Heavy and Light Lumber Wagons, Platforms, Carriages,
Buggies, Cutters, &c.**

Repairing done on short notice. Painting a Specialty.

MAINE, Broome County, N. Y.

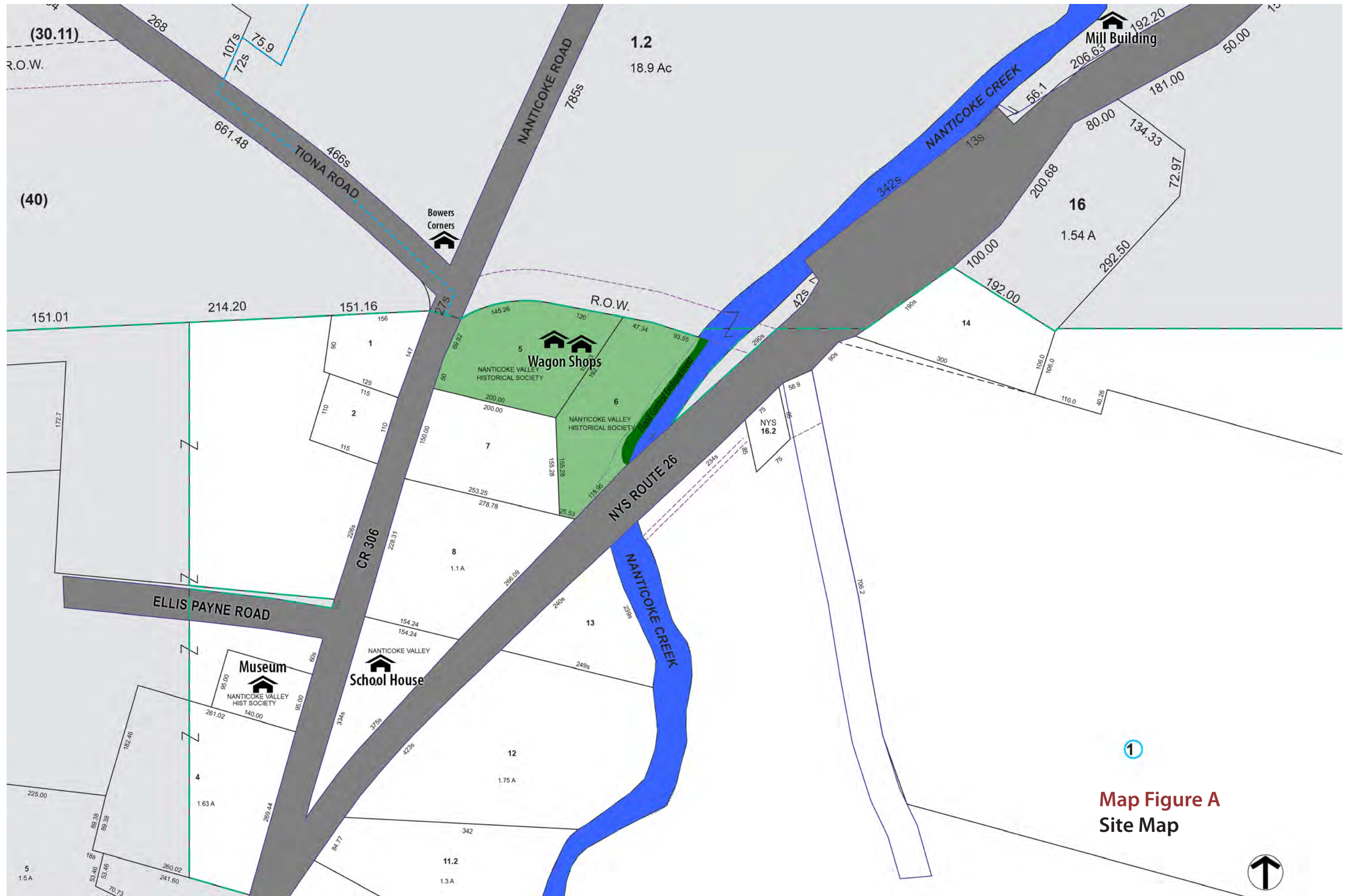
Republican Print, Binghamton, N. Y.

Figure 82 - Norton Wagon Manufacturing advertisement

4

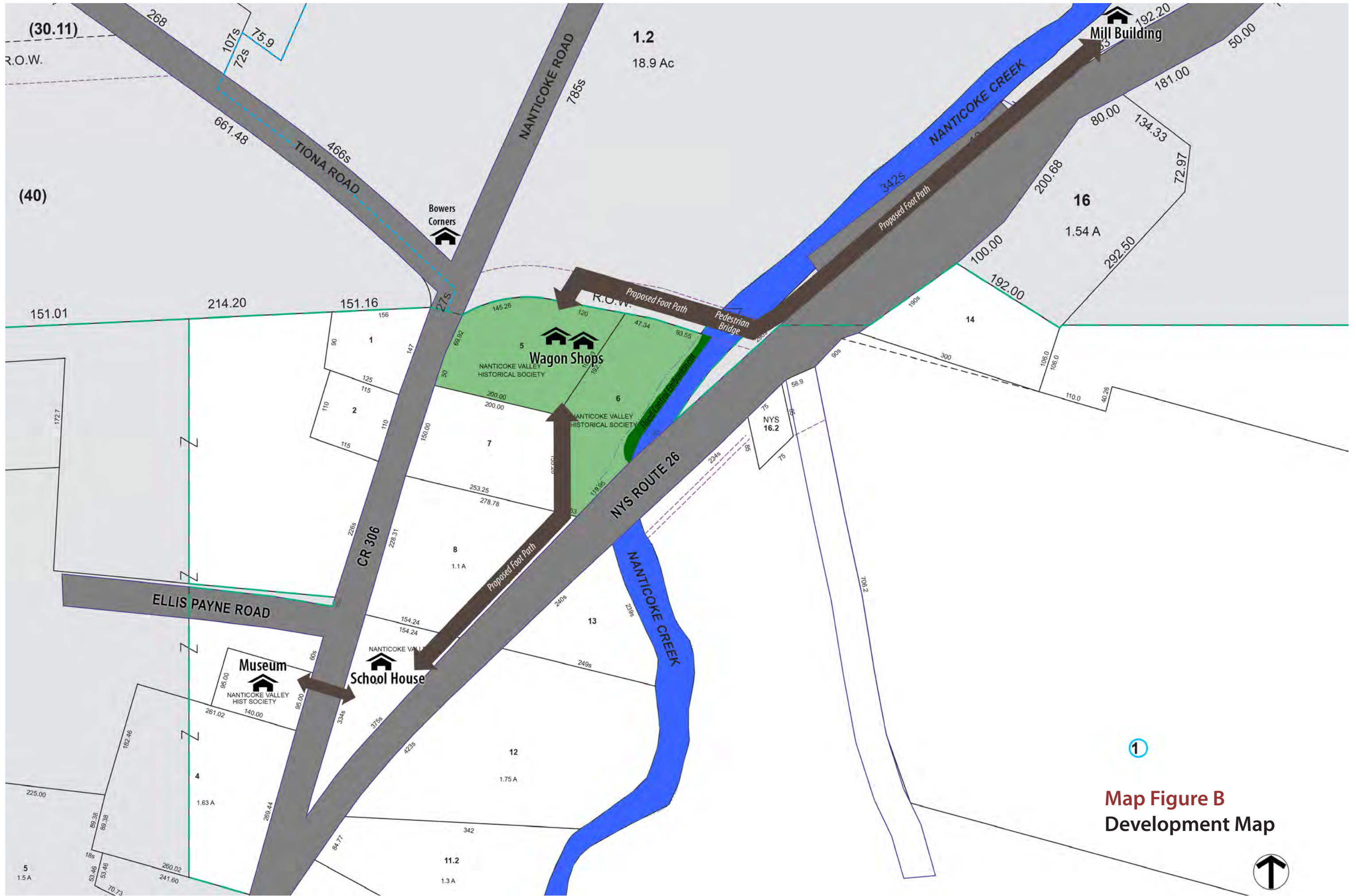
SECTION 4

Figures and Appendix



Map Figure A
Site Map

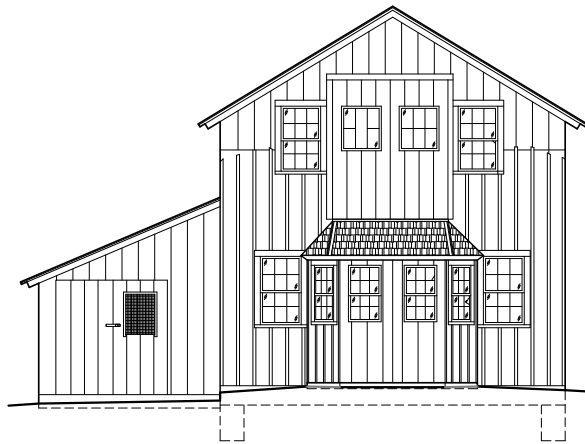




1
Map Figure B
Development Map



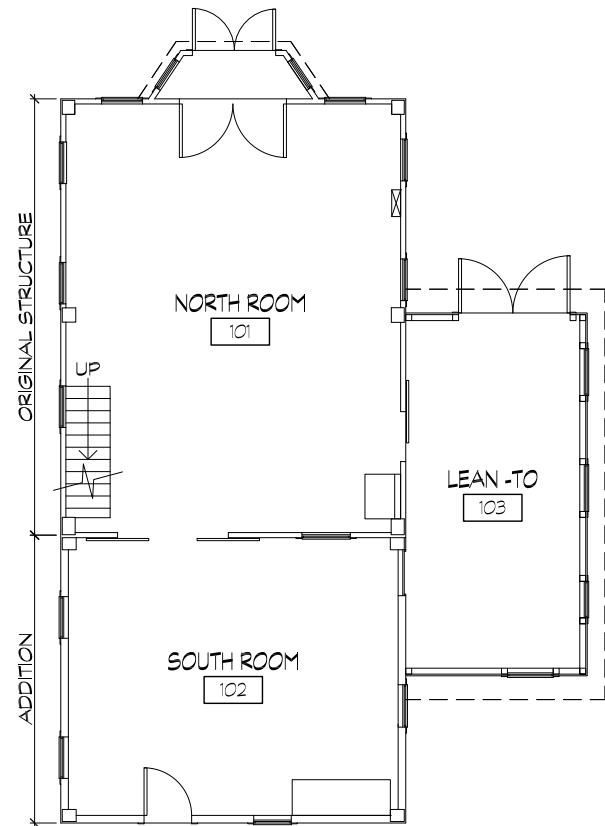
Appendix A



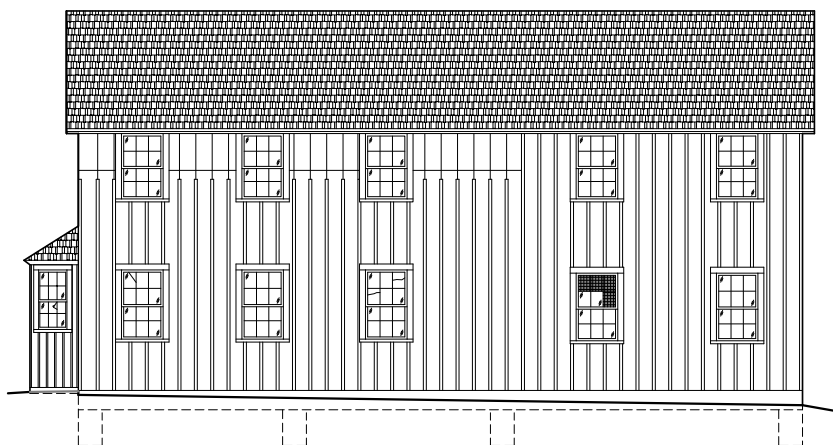
5 WAGON SHOP - NORTH ELEVATION
A1.01



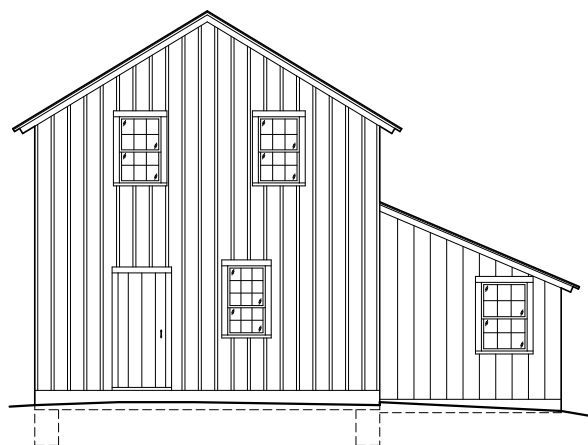
3 WAGON SHOP - EAST ELEVATION
A1.01



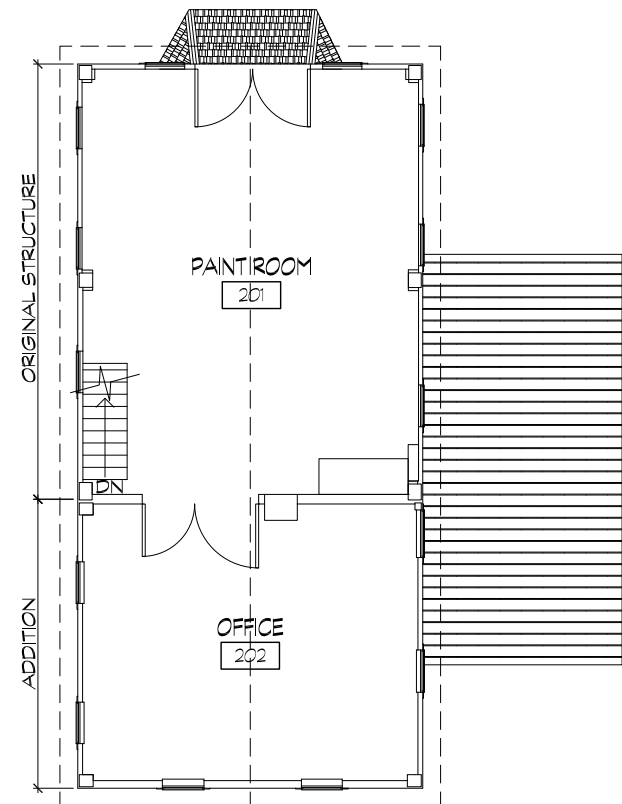
1 WAGON SHOP - FIRST FLOOR PLAN
A1.01



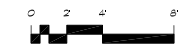
6 WAGON SHOP - WEST ELEVATION
A1.01



4 WAGON SHOP - SOUTH ELEVATION
A1.01



2 WAGON SHOP - SECOND FLOOR PLAN
A1.01



chianis anderson
architects

84 Court Street
7th Floor
Binghamton, New York 13901
607.772.1701 voice
607.772.1129 fax
www.chianisanderson.com

Professional Seal: _____
Professional Seal: _____

Consultant: _____

Project Key: _____

Preliminary Design

Revisions

Number	Description	Date

Project Title

Nanticoke Valley Historical Society - Norton Wagon Works Site
38 Nanticoke Rd
Maine, New York

Drawn By: JBS Reviewed By: JTS Date: 11.23.2018 Project No: 17.055

Sheet Title

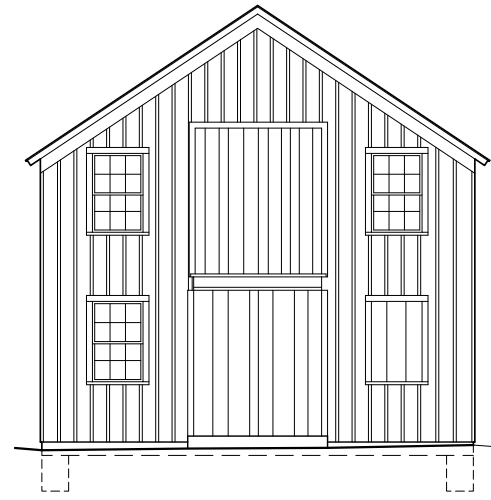
Wagon Shop - Existing Floor Plans and Elevations

Sheet Number

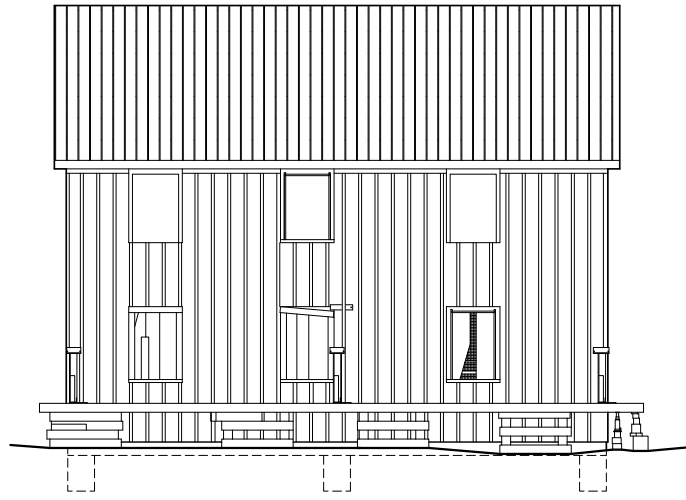
A1.01

WARNING: IT IS A VIOLATION OF THE PROFESSIONAL ENGINEERING LAW FOR ANY PERSON TO ALTER THIS DRAWING UNLESS HE/SHE IS ACTING UNDER THE DIRECT SUPERVISION OF A LICENSED ARCHITECT OR ENGINEER. ANY ALTERATIONS MUST BE IDENTIFIED WITH A DESCRIPTION, DATE, SIGN, AND SIGNATURE.

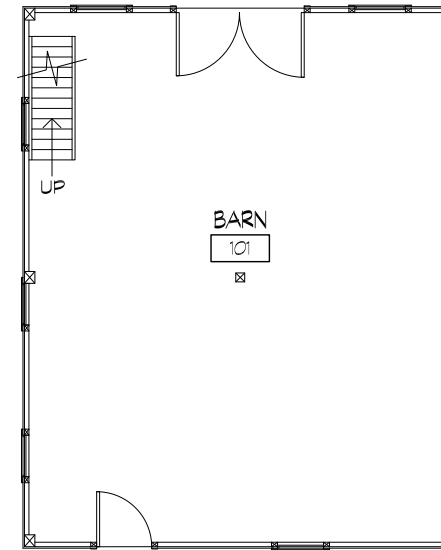
Appendix B



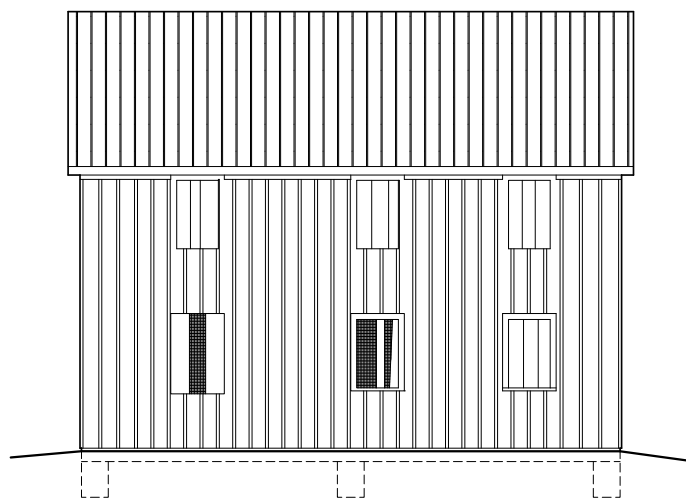
5 BARN - NORTH ELEVATION



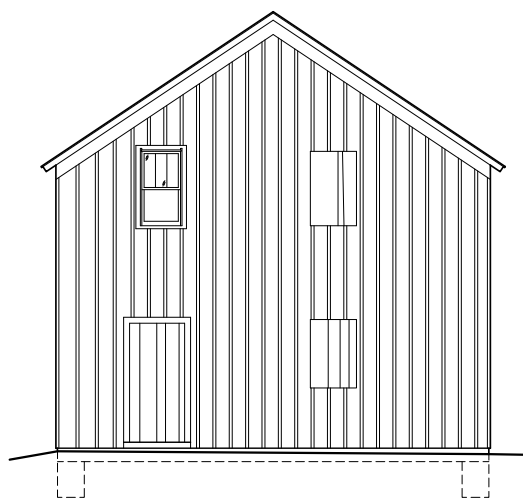
3 BARN - EAST ELEVATION



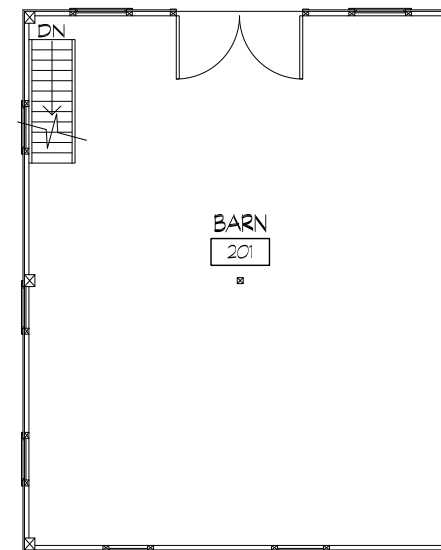
1 BARN - FIRST FLOOR PLAN



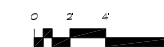
6 BARN - WEST ELEVATION



4 BARN - SOUTH ELEVATION



2 BARN - SECOND FLOOR PLAN



Professional Seal: _____
 Professional Seal: _____

Consultant: _____

Project Key: _____

Preliminary Design

Revisions		
Number	Description	Date

Project Title
 Nanticoke Valley Historical Society - Norton Wagon Works Site
 38 Nanticoke Rd
 Maine, New York

Drawn By: JBS Reviewed By: JTS Date: 11.23.2018 Project No.: 17.055

Sheet Title
 Barn -Existing Floor Plans and Elevations

Sheet Number

A1.02

17/NOV/2018 11:51 AM
 ALL THE DRAWINGS HEREIN ARE THE PROPERTY OF CHIANIS ANDERSON ARCHITECTS, PLLC. NO PART OF THESE DRAWINGS MAY BE REPRODUCED OR TRANSMITTED IN ANY FORM OR BY ANY MEANS, ELECTRONIC OR MECHANICAL, WITHOUT THE WRITTEN PERMISSION OF CHIANIS ANDERSON ARCHITECTS, PLLC.



... your solution to the built environment