

COUNTY OF YORK

MEMORANDUM

DATE: January 13, 2009 (HYDC Mtg. 1/26/09)
TO: Historic Yorktown Design Committee
FROM: J. Mark Carter, Assistant County Administrator
SUBJECT: Application No. HYDC-39-09, Watermen's Museum, 301 Water Street

Issue

This application, submitted by the Watermen's Museum and represented by Mr. Walt Akers, requests approval of the design and architectural features of an 18th-century windmill reproduction proposed to be constructed on the west side of the Museum property. The subject property is approximately ½-acre in size and is undeveloped. A very thorough description of the proposal, including renderings, has been provided by the applicant and is attached.

This application is for the architectural compliance aspect of the approval process. In addition to the review by the HYDC, the applicant must apply for land use approval under the terms of the YVA-Yorktown Village Activity District. That application will be reviewed by the Planning Commission and ultimately acted on by the Board of Supervisors.

Pertinent Design Guidelines

The subject property is located in the *Waterfront* sub-district, as defined by the Yorktown Historic District and Design Guidelines. The Yorktown Historic District requires that any new structure must be reviewed and approved from an architectural design standpoint by the HYDC.

This proposal should be evaluated for conformance with the *Waterfront* standards (see standards beginning on page 55 of the Design Guidelines). A listing of those standards, along with staff comments regarding compliance of the proposal, follows:

Standard	Comments
<p data-bbox="237 1518 375 1545"><u>A. Purpose</u></p> <p data-bbox="285 1572 894 1600">The design guidelines for the Waterfront are intended to:</p> <ol data-bbox="285 1627 943 1686" style="list-style-type: none"><li data-bbox="285 1627 943 1686">1. preserve the character of <i>contributing</i> buildings, landscapes, and the Waterfront as a whole;	<p data-bbox="967 1627 1430 1850">The original date of construction of the Museum buildings is unknown. Nevertheless, they are clearly contributing in the context of the Waterfront, even if not technically meeting the definition. In staff's opinion, the proposed windmill will not detract from or damage the character of the existing museum buildings.</p>

<p>2. encourage an appropriate site design response to the area's waterfront location that ensures protection and enhancement of water views and public access to the shoreline;</p> <p>3. promote and guide new construction that contributes to an architecturally unified Waterfront appropriate to Yorktown's character.</p> <p>Like many town centers, the Yorktown Waterfront is not the product of any one historical era, but rather reflects the changes in use and architecture that accompanied the growth of Yorktown over the years. The challenge for the Waterfront will be to recreate and revitalize its function as a focal point for Village activity while permitting it to continue to grow and change in the future. For this reason, sensitivity to the following design principles is essential:</p> <ol style="list-style-type: none">1. Buildings and façades should be compatible with the size and character of the area's buildings, and should encourage active pedestrian activity and interaction.2. The pedestrian scale should always be considered, with details and amenities scaled and provided for pedestrian activity wherever possible.3. New buildings should respect and be compatible with existing design, height, and siting patterns with frontage directly on the sidewalk. Materials that are compatible with the character of the area, particularly brick and wood, should be used.4. Scenic and pleasant views to and from the York River and vantage points such as the Coleman Bridge, the bluffs, and other significant sites should be protected and maintained.	<p>The proposed design will add another structure along the waterfront but will not significantly alter water views.</p> <p>The proposed construction appears complementary to the existing Museum buildings as well as the Riverwalk Landing architecture.</p> <p>It appears to staff that all of these design objectives have been observed.</p>
<p>B. Site Planning and Landscape Alterations</p> <p>1. Views</p> <p>Scenic and pleasant views to and from the York River and vantage points such as the Coleman Bridge, the bluffs, and other significant sites should be protected and maintained. The effect of new construction on such views, and on views from surrounding properties, will be considered on a case-by-case basis. Views objectionable in the Historic District from such vantage points should be screened whenever possible. Preservation of historic, scenic views should take precedence over any special allowances concerning size, scale, form, and massing. When developing or redeveloping parcels located between Water Street and the river, one or more view corridors to the York River should be provided in the site design and layout. Such view corridors should have a minimum width of fifteen (15) feet and together comprise not less than 25% of the</p>	<p>The proposed windmill would have an octagonal base 22.5 feet wide. At less than 20% of the total width of the subject lot, staff does not believe the proposed structure would adversely affect views of the river. The "view corridors" on either side would easily exceed the minimum 15-foot/25% standard.</p>

<p>street frontage of the lot. Such view corridors may be provided through the use of side yard setbacks, open areas within the interior of the lot, transparent lines of sight through buildings, or any combination. In any case, the river should remain visible to pedestrians from Water Street at normal eye level.</p> <p>Views from public rights-of-way and adjacent properties to ground-level utilities such as air conditioning units, trash and recycling containers, and satellite dishes must be screened. Such mechanical equipment should be located unobtrusively on the site in side or rear yards. Use appropriate evergreen plant materials or compatible, solid fencing as the preferred screening approaches. Other acceptable alternatives—either on their own or in combination with plant materials or fences—include the construction of compatible outbuildings to house such utilities, or the use of walls, provided they are in character with the primary building or outbuildings on the site.</p> <p>2. Walks, Paths and Paved Pedestrian Areas</p> <p>Use appropriate materials for walks, paths and paved pedestrian areas, such as brick, bluestone or other monolithic stone, or exposed aggregate (brown or gray pea gravel) concrete. Asphalt and plain concrete are not appropriate materials for pedestrian circulation on the Waterfront.</p> <p>3. Parking Areas</p> <p>Locate parking areas, where feasible, at the side or rear of buildings located on the south side (land side) of Water Street. Parking adjacent to buildings on the north side (river side) of Water Street is discouraged, but if it is provided, it should be located to the side of buildings and not adjacent to the street or the river. Any parking areas adjacent to Water Street, whether located at the front or side of the building, should be defined with plantings or other features that provide a streetscape edge.</p> <p>Appropriate species of trees and other plant materials should be included in the landscape design for parking lots. Particular attention must be given to the height of such trees at maturity when evaluating whether views from the bluffs or other critical vantage points will be impacted.</p> <p>In all cases, opportunities to provide vehicular connections between parking areas associated with adjacent properties, and to consolidate or reduce in number the entrances/exits to such parking areas from Water Street, should be explored and pursued.</p> <p>All new parking areas must be paved with a permanent, dustless, hard surface. Preferred surfacing materials include brown pea-stone set in an asphalt base or a brownstone asphalt mixture. Standard black asphalt is appropriate only as a base for stones. Also to be</p>	<p>n.a.</p> <p>A brown pea gravel walkway is proposed to extend between the structure and the adjacent Watermen’s Museum parking lot.</p> <p>No additional parking is proposed.</p> <p>n.a.</p> <p>n.a.</p> <p>n.a.</p>
---	---

<p>avoided: standard smooth or broom-finish concrete.</p>	
<p>4. Vegetation</p> <p>Naturally-occurring vegetation, particularly that associated with the bluffs, should be retained and incorporated into the overall site and landscape design when it is healthy and contributes positively to the character of the Waterfront. Noxious plant materials, such as kudzu, should be removed from the landscape and replaced with appropriate vegetation. Landscaping to be preserved or planted must be carefully selected to ensure its sustainability in a waterfront environment and a commercial/public use setting and to ensure that it contributes positively to the site character. Selected trees and shrubs should be evaluated with respect to growth habits and to avoid the necessity of severe future pruning and ultimate deformation due to planting in an inappropriate location.</p>	<p>n.a.</p>
<p>5. Walls and Fences</p> <p>Fences and walls should contribute to the site's character and not detract from principal architectural features on the site or adjacent to the site. Appropriate exposed finish materials for walls include wood, brick, stone, or stamped concrete. Unfaced concrete or concrete block walls are not appropriate.</p> <p>Fences may be wood, brick or wrought iron. Salt-treated wooden fences must be painted or stained. Composite wood or wood-substitute products or synthetic fence materials may be considered on a case-by-case basis. Chain-link and wire fences are not appropriate.</p>	<p>n.a.</p> <p>n.a.</p>
<p>6. Site Furnishings</p> <p>Site furnishings, such as benches, trash receptacles, and bicycle racks, should be selected to be compatible with the setting in which they will be located and the overall streetscape character of the Waterfront. Such furnishings should be constructed of durable, yet appropriate, materials and will be reviewed on a case-by-case basis to assure consistency with the character of the particular setting and the historic area as a whole. Vending machines, if located outside buildings, shall be screened from view from rights-of-way, public walkways, and the river by architectural features, landscaping, fencing or combinations thereof.</p>	<p>n.a.</p>
<p>7. Lighting</p> <p>a. Landscape Lighting</p> <p>Landscape lighting should be visually unobtrusive during both the day and night. It should complement the architecture and outdoor spaces rather than spotlighting them. Lighting wattage should be understated and compatible with the setting and surroundings and must not create inappropriate light</p>	<p>n.a.</p>

<p>trespass onto adjacent properties or glare on adjacent properties, public streets or public areas.</p> <p>b. Building Lighting</p> <p>Building lighting should be provided only when it will enhance and complement the architectural features of a structure at night as opposed to spotlighting them for attention-getting purposes. Lighting wattage should be understated and compatible with the setting and surroundings and must not create inappropriate light trespass onto adjacent properties or glare onto adjacent properties, public streets or public areas.</p> <p>c. Street, Walkway and Parking Lot Lighting</p> <p>Poles, posts and fixtures should be designed and sized as an integral part of the site architecture and, generally, should not exceed the height of the eaves of nearby structures. Galvanized metal, bright colors, and other visually inappropriate materials should not be used for poles, posts or fixtures. Lighting wattage should be selected and limited to achieve appropriate illumination levels for safety and security while avoiding light glare and trespass onto adjacent properties, public streets or public areas.</p> <p>C. Architectural Additions, Alterations and New Construction</p> <p>1. Planning for Alterations, Additions and New Construction</p> <p>In general, alterations, additions and new construction on the Waterfront should be designed to harmonize with the surroundings and maintain compatibility in terms of style and materials. Materials need not duplicate those of nearby buildings, but similarity is often desirable. Design should be compatible with and contribute to the character of an architecturally unified Waterfront. The following principles should be observed:</p> <p>a. Scale</p> <p>The size and proportion of new structures should be related to and compatible with the scale of adjacent buildings. Roof lines, building façade widths and rhythm of other features should be consistent with the scale of adjacent buildings, a pedestrian orientation, and the general character of the Waterfront.</p> <p>b. Massing</p> <p>(1) In general, a simple, rectangular building form should be used. Appropriate design variations could include a single, rectangular, box-like building, a single building with more complex massing of several rectangular forms, or a primary building with one or more accessory buildings or</p>	<p>No exterior building lighting is proposed.</p> <p>No additional site lighting is proposed.</p> <p>Staff is of the opinion that windmill will make a positive contribution to the waterfront. The Hardiplank horizontal siding will be compatible in appearance to the existing buildings and very durable in the waterfront environment.</p> <p>Excluding the wind vanes, the structure will be 20 feet in height, keeping it generally in scale with other structures on the waterfront.</p> <p>The rectangular building form guideline is not practical for a structure such as this.</p>
---	--

<p>dependencies. Large box-like forms should be broken into smaller, varied masses that are more characteristic of Yorktown.</p> <p>(2) Primary emphasis should be given to one building when using multiple buildings on a single lot. Such emphasis should be expressed through the building's larger size and higher level of detailing. Other buildings on the lot should be limited in size to no more than 60% of the footprint of the primary building, and should be constructed of compatible materials and use similar architectural features and details.</p> <p>(3) Accessory buildings and dependencies should be located either to the side or rear of the primary building, except on waterfront lots, where the location should be evaluated on a case-by-case basis to ensure that their size and location does not significantly obstruct views to the river.</p> <p>c. Height</p> <p>The overall height of new construction should relate to that of adjacent structures and to the objective of maintaining desirable views to and from the Waterfront and the adjacent bluffs and other significant vantage points.</p> <p>d. Roof Shapes</p> <p>(1) Roof shapes should be a traditional gabled style with a slope consistent with those found on <i>pivotal</i> and <i>contributing</i> buildings throughout the village. Roof shapes and orientation should be designed with consideration given to maintaining views and visibility from the bluffs and other significant vantage points.</p> <p>(2) Flat roofs, although they may optimize views from the bluffs and other significant vantage points, should be avoided since they will not produce the quality and character appropriate for the Waterfront.</p> <p>e. Design</p> <p>(1) Overall building design should be consistent with the character of Yorktown and particularly the style, shape and massing of the buildings on Main Street.</p> <p>(2) Standard, corporate designs for national franchise businesses should be avoided unless these designs are compatible with the character of the Yorktown Waterfront.</p>	<p>n.a.</p> <p>n.a.</p> <p>Excluding the wind vanes, the building complies with the 25-foot height guideline established by the YVA District. However, even if the height of the vanes is considered, the structure will not, in staff's opinion, block or disrupt views of the river from the nearest existing residences – the Windmill Point townhouses</p> <p>The roof shape is a conical form with two small dormers and will not impact visibility from the bluffs.</p> <p>n.a.</p> <p>Staff believes the proposed structure is consistent with the character of Yorktown.</p> <p>n.a.</p>
--	--

<p>f. Sense of Entry/Orientation</p> <p>All primary buildings should have an orientation and entrance to Water Street. Buildings on parcels located between Water Street and the York River should also have a façade developed to orient to the river. Entries should be articulated with covered porches, porticos or other pronounced architectural forms.</p> <p>2. Architectural Elements</p> <p>a. Walls</p> <p>(1) Wall materials should be compatible with those of existing construction in type, color, texture, size, spacing, and general appearance. Weathered, stained or painted wood, and brick are the preferred materials in the Waterfront area. Composite or synthetic wood or wood substitutes may be approved by the HYDC on a case-by case basis.</p> <p>(2) Wood siding should be horizontal clapboard (beaded edge or beveled) with approximately 6 inches exposure. Trim should be made of trim-grade lumber, not to exceed 2 inches in actual thickness, 6 inches in width at corners and 4 inches around openings- except for trim around the main entrance(s) which can be of different sizes and configurations compatible with the building style and features.</p> <p>(3) Brick walls should be made out of Virginia red brick. Wire cut brick should only be used for painted surfaces. Brick that is bright red, orangish-red, pink, light red, tan or similar colors inconsistent with the types common in Yorktown should not be used. Mortar should be in a beige-to-tan color range. White mortar is not appropriate.</p> <p>(4) Exposed exterior wall surfaces should not consist of more than two materials, and those materials should change along a horizontal line such as a floor line or gable end – with the heavier material always being below the lighter material.</p> <p>(5) Buildings with siding must have foundation walls faced with brick.</p> <p>(6) Retaining walls should be finished in brick or granite.</p> <p>(7) Metal siding is not appropriate.</p>	<p>As explained in the applicant’s submission, the orientation of the structure is based on wind direction, not street frontage. In any event, the structure will present interesting and attractive views from both Water Street and the Yorktown Riverwalk.</p> <p>Clapboard (Hardiplank) beaded siding is proposed to be used as wall materials. Staff believes that Hardiplank, or its equivalent, should be approved since it will be more durable in the waterfront environment and will be indistinguishable from the wood siding used on the adjacent Museum buildings.</p> <p>Drawings indicate compliance with the clapboard guidelines. Composite trim (cellular PVC) is proposed to be used, all of which would be indistinguishable from wood, but much more durable in the waterfront environment</p> <p><i>n.a.</i></p> <p><i>n.a.</i></p> <p>The structure will be placed on a concrete slab foundation faced with brick (Virginia red brick with tan mortar).</p> <p><i>n.a.</i></p> <p>None proposed.</p>
---	---

<p>(8) Tile-faced or ceramic-faced masonry units are not appropriate.</p>	<p>None proposed.</p>
<p>(9) Varnished, epoxy-finished or otherwise shiny materials are not appropriate.</p>	<p>None proposed.</p>
<p>b. Building Color</p>	
<p>(1) Paint colors for all exterior surfaces (excluding fences) should be selected comprised of a color or colors from the Yorktown Color Palette, as defined in Appendix 3, Glossary. Other colors may be proposed and will be considered on a case-by case basis.</p>	<p>Walls: white Trim: white Doors: Palace Arms Red (MS –W1083)</p>
<p>(2) All wooden fences should be painted white or, if to be left natural, properly treated or sealed to preserve and maintain their appearance.</p>	<p>n.a.</p>
<p>c. Doors</p>	
<p>(1) Windows in entrance doors are permitted and should be vertically proportioned. Exterior doors should be of painted wood, enameled metal, or glass. Sliding glass doors should not be used.</p>	<p>The plans propose custom-made wood doors with wrought-iron hinges/hardware. Both are proposed to be painted Palace Arms Red, which is a conforming color.</p>
<p>(2) Utility doors and service doors shall not face the street.</p>	<p>n.a.</p>
<p>d. Windows and Shutters</p>	
<p>(1) Window openings should be designed to respect the width to height ratio of the bays in the building façade. Attention should be given to the façade’s overall composition, symmetry, or balanced asymmetry. Windows should be square or vertical in proportion. Casement windows should be avoided.</p>	<p>n.a.</p>
<p>(2) Windowless elevations visible from Water Street, the river, or public spaces should be avoided.</p>	<p>n.a.</p>
<p>e. Roofs</p>	
<p>(1) In general, roofs should be of a symmetrical gable style. Primary roofs should have slopes no less than 9:12. Secondary roofs may have slopes less than 9:12 depending on the material used (e.g. – a standing seam roof over a porch might have a lesser slope).</p>	<p>The primary roof is proposed to have a pitch slightly greater than 12:12, which is of necessity to accommodate the brake wheel and windshaft.</p>
<p>(2) Steep gable roofs (e.g., greater than 12:12 pitch) are not appropriate.</p>	<p>n.a.</p>
<p>(3) Dormers are appropriate if they encompass only the width of the window and have roofs</p>	<p>The small dormers will function as portals for the windshaft (and possibly a future tailpole).</p>

<p>that match the form and pitch of the main roof.</p>	
<p>(4) Roof materials should be wood or asphalt/fiberglass composition shingles, or cement shingles. Shingle colors should be compatible in color with the exterior color of the building, either existing or as selected from the Yorktown Color Palette, as defined in Appendix 3, Glossary. Also appropriate are metal standing-seam roofs with factory-applied finishes in a traditional, compatible color, or copper standing-seam.</p>	<p>Taper-sawn cedar shingles are proposed.</p>
<p>(5) Roof vents, chimney caps and plumbing vents shall match the color of the roof or shall be black, dark gray, or copper/bronze.</p>	<p>n.a.</p>
<p>(6) Flashing may be copper or anodized aluminum or painted to match or complement the color of the building or roof.</p>	<p>no visible flashing.</p>
<p>f. Chimneys/Vents</p>	
<p>(1) Chimneys that would become a dominant feature of the waterfront skyline should be avoided. Chimneys and flue enclosures should be made of brick, painted or left natural depending on the type of siding/color of the building. Chimneys may be either external or internal.</p>	<p>n.a.</p>
<p>(2) Commercial kitchen exhaust vents shall be concealed from view from public streets, walkways and the river.</p>	<p>n.a.</p>
<p>g. Porches and Balconies</p>	
<p>(1) Use porches, arcades and other similar covered areas as protective and transitional spaces between commercial uses and public rights-of-way.</p>	<p>n.a.</p>
<p>(2) All posts or columns for porches should be consistent and compatible with the scale and character of the building. Columns and posts should be painted to match the trim color of the building.</p>	<p>n.a.</p>
<p>(3) Stoops at secondary entrances should be made of brick, or brick-faced concrete.</p>	<p>n.a.</p>
<p>(4) Railings should have top and bottom rails and balusters should have a vertical orientation. Wood or wrought iron is an appropriate material for railings.</p>	<p>n.a.</p>
<p>h. Gutters and Downspouts</p>	<p>None proposed</p>
<p>(1) The use of ground gutters is encouraged.</p>	<p>n.a.</p>
	<p>n.a.</p>

<p>(2) If fascia-mounted guttering is used, it should be metal with a half-round configuration. Copper is the preferred material; however, metal with a factory-applied finish color that matches or complements the roof or building color may also be considered. Downspouts should be of round cross-section or other shape appropriate to the style of the building, and made either of copper or metal with a factory-applied finish color that matches or complements the color of the wall surface to which they are attached.</p>	
<p>i. Awnings</p> <p>Canvas awnings are appropriate for commercial uses provided they are positioned so as not to disrupt the symmetry or rhythm of the building façade. Awnings should be of a single color, but in no case more than two colors, selected to complement the exterior color scheme of the building and in consistency with the Yorktown Color Palette, as defined in Appendix 3, Glossary.</p>	<p>n.a.</p>
<p>j. Utilities</p> <p>(1) Window-type air conditioning units, either in windows or inserted in special openings in the building wall, are not acceptable.</p> <p>(2) The use or placement of television antennas or building-mounted satellite dishes visible from public rights-of-way or the river is not acceptable. Such equipment should be located in attic spaces or inconspicuous exterior locations.</p> <p>(3) Typical rooftop mechanical equipment should be screened completely from view from both the village and the river by locating such equipment in attics, dormers, cupolas or by concealing them behind/within a gabled roof form or other appropriate architectural feature. Buildings should accommodate such equipment in such a way that no portion thereof is visible from adjacent residential areas or key vantage points.</p>	<p>n.a.</p> <p>n.a.</p> <p>n.a.</p>

Recommendation

In staff’s opinion, the proposed construction is consistent with the Design Guidelines and with the character of existing Museum structures and the surrounding portions of the Waterfront subdistrict. From an architectural design standpoint, staff believes that the proposal is well conceived and appropriate to its function. The concept of an 18th-century windmill reproduction dates back to the 1989 Focus on Yorktown workshop. Although that discussion and the Yorktown Master Plan suggested a location on the NPS-owned Windmill Point property on the bluffs above this site, staff believes this to be

Historic Yorktown Design Committee

January 13, 2009

Page 11

an appropriate alternate location and one that would be a positive addition to visitation opportunities on the waterfront and the visual interest of this approach into Yorktown. Accordingly, staff recommends that the Committee find the proposed architecture consistent with the Yorktown Design Guidelines.

jmc

Copy to (w/o attachments): Walt Akers
 Watermen's Museum

Attachments

- Applicant's narrative, including renderings
- Vicinity map

THE YORKTOWN WINDMILL PROJECT

<http://www.yorktown-windmill.org>



PLANNING CONSIDERATIONS FOR THE YORKTOWN WINDMILL

A. Overview

The Watermen's Museum, in cooperation with the Yorktown Foundation and other groups, is developing a plan to construct a reproduction 18th century windmill on an undeveloped property adjacent to the Watermen's Museum (identified as 301 Water Street / P12C-1839-1866).

This document addresses concerns regarding placement of the structure, architectural features and facilities for visitors and their compliance with the requirements of the Yorktown Historic District and Design Guidelines.

B. Type, Placement and Scale of Structure

B.1. Type and Placement of Windmill

Because of the nature of this structure, it is more precisely described as a machine than a building. Consequently it should be considered within the category of 'scholarly reconstructions intended for interpretive use', as described within the Yorktown Historic District and Design Guidelines.

The windmill will be constructed on an undeveloped lot owned by the Watermen's Museum at 301 Water Street in Yorktown (Figure 1). The structure will be generally centered on the lot to provide interpretive activities to be conducted around the exterior.

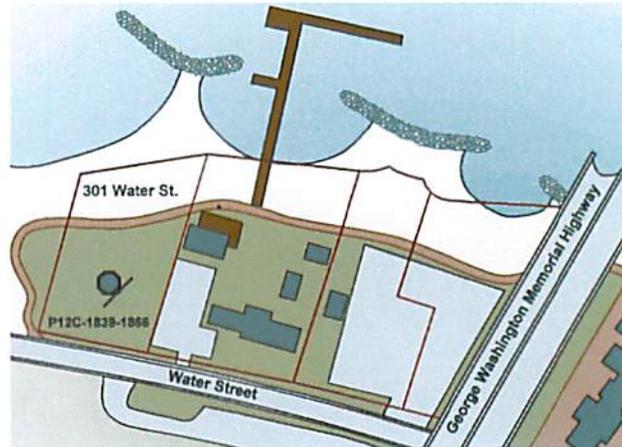


Figure 1: Location of Proposed Structure

B.2. Orientation of the Structure

Because the structure has an octagonal base, it does not have a principal façade, as such. The dominant feature of this structure will be the wind vanes and the front of the windmill is generally considered to be the direction in which the vanes are facing. Because the cap of the mill rotates on a vertical axis to face the vanes into the wind, the 'front' of the mill may be changed dynamically. During the installation of the structure it is recommended that we determine the desired facing of the vanes and position the cap in that direction permanently.

For the sake of maintenance and storm protection, it is recommended that the vanes be positioned at 'cross-winds' with the prevailing air current to minimize stress on the exterior wooden components during hurricane season.

B.3. Size and Scale

- a. **Base:** The windmill sits on an octagonal base with sides of 8' 7 1/2" and a diameter of 22' 6 1/2" at its widest point.
- b. **Height:** The windmill is an independent, free standing two story structure with a height of 19' 11 1/2" from the finished first floor to the eaves. The cap height is an additional 9' 1 1/2" and the vanes at their highest extent during rotation reach to 44' 6 1/2".

- c. **Footprint:** The windmill will be the primary structure on the lot and its footprint will consume less than 10% of the total lot space.

B.4. Form and Massing

The windmill will be a singular, octagonal form with walls that taper inward at 11 degrees as they rise vertically. This design element is required in order for the vanes to rotate vertically as the cap is rotated horizontally and is found in all surviving 18th century windmills. The tapered frame allows the mill to operate using wind from any direction.

There are no attached wings, detached outbuildings or subordinate structures associated with this proposal.

B.5. Roof Form:

- a. **Form:** The roof of this structure is a smooth, conical form with two dormers: anterior and posterior.
- b. **Pitch:** The roof's pitch will be slightly greater than 12:12 in order to accommodate the 8' brake wheel and the windshaft.
- c. **Dormers:**
 - i. **Anterior Dormer:** The anterior dormer is the larger of the two dormers and is the portal through which the wind shaft extends. The vanes are affixed to the windshaft immediately outside of this dormer. This dormer will have a gabled roof that will use the same roofing material as the primary roof.
 - ii. **Posterior Dormer:** The posterior dormer is the smaller of the two dormers and is the portal through which the tail pole would extend if it were installed. The tail pole is a 60 foot shaft that extends to the ground and is used to rotate the cap into the wind.

The initial design of this structure does not include the installation of the tail pole, however the dormer will be installed for interpretive purposes and to allow the feature to be added at a later date if desired.

C. Architectural Elements

C.1. Foundation Material:

The structure will sit on a low-rise, monolithic slab with brick facings. The slab will be specified to meet the requirements for flood and wave action that are identified for this site.

C.2. Wall Materials:

- a. **Structural Elements:** All structural lumber will be pressure treated, southern yellow pine.
- b. **Siding:** The exterior siding will be Hardiplank clapboard siding or an equivalent concrete siding that is visually indistinguishable from wood. The siding will be installed in a horizontal orientation.
- c. **Foundation Brick:** Bricks used around the foundation will be Virginia red brick with tan mortar and will be installed in a running bond.

C.3. Roof Material:

Roofing shingles will be 5X, taper sawn cedar shingles with a 5" reveal.

Note: Taper sawn shingles are used rather than shakes because their smooth, regular surface makes them more conducive to the bending that is required to accommodate the conical roof. 5X or XXXXX is used to describe all shingles and shakes that are 16" in length.

C.4. Doors:

The structure will have two doors on opposite sides of the building. The primary door will be the one that faces toward Water Street and the secondary door will be the one facing the York River. The doors will be hand made from wood and will be characteristic of the doors used on other outbuildings in Yorktown. The hinges will be of wrought iron and will be consistent with the fence gate hardware used at the Dudley Diggs House.

Note: While this type of hardware is atypical of residential doors, it is highly consistent with this type of structure because of the requirement for a rugged, utility hinge that can be exposed to harsh weather.

C.5. Windows:

The structure will have four identical windows. Each window will be in a 'two over two', separated light configuration. The windows will be handmade for this project and will be constructed from cellular PVC and painted to be indistinguishable from wood.

C.6. Shutters:

No shutters are currently planned for this structure.

C.7. Porches, Stoops and Railings

The path leading to this structure will be of low angle and will allow handicap accessibility to the windmill. In conjunction with the low height of the foundation, the ground around the walk will be built up to eliminate the requirement for railings on the entry ramp.

C.8. Chimneys:

This structure will have no chimneys.

C.9. Gutters and Downspouts:

This structure will have no gutters or downspouts.

C.10. Color:

- a. **Exterior Walls:** White
- b. **Exterior Trim:** White
- c. **Exterior Doors:** Palace Arms Red

C.11. Mechanical and Communications Equipment

There will be no mechanical, HVAC or plumbing installed in the building. Electrical service will enter the building through a conduit installed in the concrete slab and will not be visible from outside.

C.12. Walls and Fences

The installation of walls or fences is not included as part of this proposal.

C.13. Walks, Paths and Paved Pedestrian Areas

There will be a path leading from the Watermen's Museum parking lot to the Water Street entrance of the structure. To maintain the character of the site, the path will consist of brown pea gravel on grade. A handicap ramp will be installed at the entry of the building and will consist of brown pea gravel over concrete.

C.14. Vehicular Circulation and Parking Areas

Parking for the site will be provided by the same facilities as the Watermen's Museum. There are four parking lots within walking distance of the windmill site. They are designated as follows in *Figure 2*.

- a. Lot A: Immediately adjacent to the site, Lot A provides 8 parking spaces including 2 handicap designated spaces. These spaces are restricted to use by the museum.
- b. Lot B: Located adjacent to the Watermen's Museum, Lot B provides 60 parking spaces that are restricted to use by the museum.
- c. Lot C: Located across the street from the Watermen's Museum, Lot C provides 20 marked, public

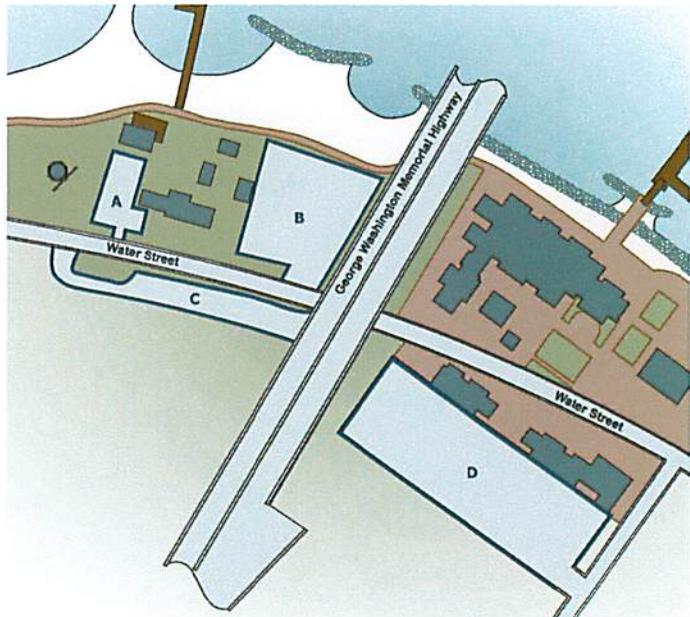


Figure 2: Parking Facilities

parking spaces.

- d. Lot D: Within walking distance of the site, the parking terrace at Riverwalk Landing provides 270 marked, public parking spaces.

C.15. Lighting

No exterior lighting or illumination is planned for this project. However, a complementary exterior lighting plan may be proposed as a separate project at a later date.

C.16. Restrooms

In addition to the restroom located within the Watermen’s Museum, there are three public restrooms within walking distance of the site. These are shown in *Figure 3*.

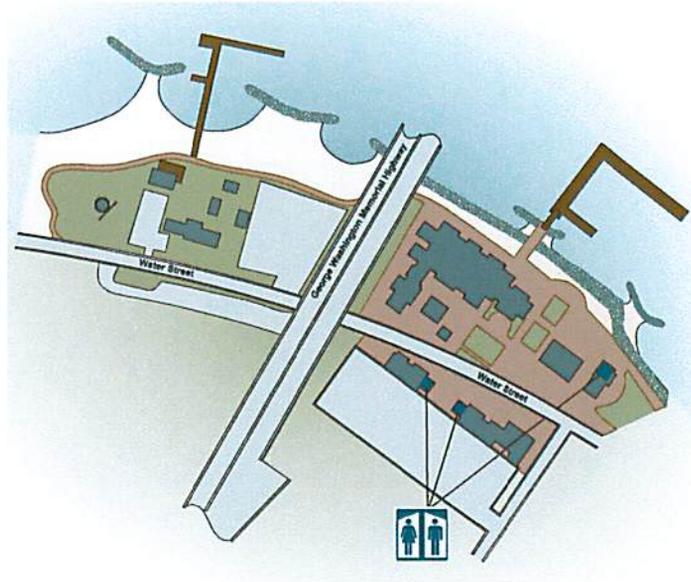


Figure 3: Restroom Facilities

D. Contact Information

For additional information about the Windmill Project, please contact:

Walt Akers
110 Kenneth Drive, Seaford Virginia 23696
757/846-4810
akers@jlab.org



Front View of Yorktown Windmill



Rear View of Yorktown Windmill

Proposed
Windmill Site



Proposed Boat-Building
Shop (previously approved
by HYDC)

