



1200 Architectural Engineers PLLC



EHT Traceries Historic Preservation



**THE WASHINGTON CANOE CLUB**  
**Interior and Exterior Modifications and Repairs**  
Old Georgetown Board Commission of Fine Arts • Concept Design Submission Volume 2

October 17, 2024

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## **STRUCTURAL FIELD ASSESSMENT OF WEST BAY**

### **Washington Canoe Club – Boathouse Rehabilitation 3700 Water Street, NW Washington, DC 20007**

September 12, 2023




#### **BACKGROUND AND GENERAL SUMMARY**

The Washington Canoe Club, constructed circa 1904, is located at 3700 Water Street, N.W., in Washington, DC. Two significant additions were made to the structure in 1910 and 1922. The building sits along the north shoreline of the Potomac River west of the Key Bridge. The building is listed on the National Register of Historic Places. The wood-framed structure is two stories and is reported to originally bear on a combination of stone backfill and wood piles. Currently, the structure is set within the flood zone of the Potomac River, with historic floods evidenced through the boathouse by way of silt deposits and historic markers just above the existing second floor level. The building has suffered both from moisture and insect damage as well as from significant localized settlements. An effort was made in 2011 and 2012 to stabilize areas of the ground and upper floors. Shoring to support gravity loads from the upper floor was provided in the form of steel screwjack posts. X-bracing was added to resist lateral wind loads at both the upper and ground floors.

1200 Architectural Engineers, PLLC (1200AE) was asked by the Washington Canoe Club (WCC) to visit the site to observe the structural conditions of the West Bay and make a field assessment of the structure with focus on what will be required to allow occupancy of the ground level of the Boathouse. These observations were recorded over two days and are described below.

As a general observation, the original wooden columns that support the upper floor framing are in poor condition. Severe decay is prevalent at the column bases due to years of moisture collection and sometimes flooded conditions. At some columns, the decayed base has been cut and replaced by a new wooden block that sits on the concrete slab. At other columns, steel screwjack posts placed in the 2011 shoring effort have been located adjacent to the original columns as a means of by-passing the failing columns altogether and re-supporting the framing above. The bases of these steel posts have themselves deteriorated in the years since installation due to moisture exposure. A diagram of the observed conditions at each post has been provided for the West Bay on sheet S100.

1200AE has analyzed the wind loads acting laterally on the West Bay. The base shear at the west wall line due to wind is approximately 6.6 kips (ASD). The original bearing wall acted as a shearwall to resist this lateral wind load. In its current state, the wall is unable to provide adequate resistance and the load instead is carried by x-bracing installed between shoring posts. This x-bracing was installed in 2012 in tandem with the installation of shoring screwjack posts. The bracing and shoring are present at both levels, with the shoring posts providing a line of support for the undersized roof rafters.

| OBSERVATIONS  | IMAGES  |
|---|---|
| <p><u>Photo #1</u><br/>This image shows the deterioration of existing wood columns that bear at slab on grade. The screwdriver is embedded at the base of the column in material weakened by moisture exposure.</p> <p><i>Recommendation:</i><br/><i>Repairs include replacing the column and installing a new pre-cast or cast-in-place concrete plinth at its base. Alternatively, the post can be retained by removing the damaged base and replacing with a new concrete plinth. Include connection between wood and new base and anchorage between new base and existing slab on grade. Temporary shoring will be required during repair work.</i></p> |  <p>Photo #1:</p>   |
| <p><u>Photo #2:</u><br/>Severe moisture and termite damage at wood columns bearing at slab on grade.</p> <p><i>Recommendation:</i><br/><i>See Photo #1</i></p>  |  <p>Photo #2:</p>  |
| <p><u>Photo #3:</u><br/>Severe moisture and termite damage at wood columns bearing at slab on grade. Significant section loss at the base of the column is apparent.</p> <p><i>Recommendation:</i><br/><i>Full replacement is recommended where damage extends more than 8 inches above the floor level. Final determination of repair versus replacement may be decided based upon architectural and construction cost parameters.</i></p>   |  <p>Photo #3:</p> |

**Photo #4:**

This image shows a wood column base that has been cut and replaced with a bearing block. A diagonal 2x6 brace is connected at the base as well.

**Recommendations:**

*Option 1 – dowel anchor bolts into the existing slab each side of the column through the bearing block. Additional fasteners would be required from column to block. Leaving wood at the slab surface leaves the base susceptible to deterioration from periodic wetting over time.*

*Option 2 – replace base and anchor as described in Photo 1*

**Photo #5:**

This wood column bears overtop a concrete pedestal and displays severe moisture and termite damage. An existing screwjack post was previously installed to resupport the framing above the wood column. This steel post is itself showing signs of corrosion due to moisture exposure.

**Recommendation:**

*Replace or repair the wood column per recommendations for Photo 1, thereby removing need for steel post, or repair base of wood column in order for it to continue functioning as a canoe support and replace or reinforce the base of the steel post.*

**Photo #6:**

Several existing screwjack post bases are structurally compromised at their bases due to moisture exposure. This column is suffering from rust and de-lamination.

**Recommendation:**

*Replacement or repair by encasement of the post base in a new cast-in-place concrete plinth is recommended. New reinforcement in the plinth should engage the existing post base and the plinth should be anchored into the slab on grade.*



Photo #4:

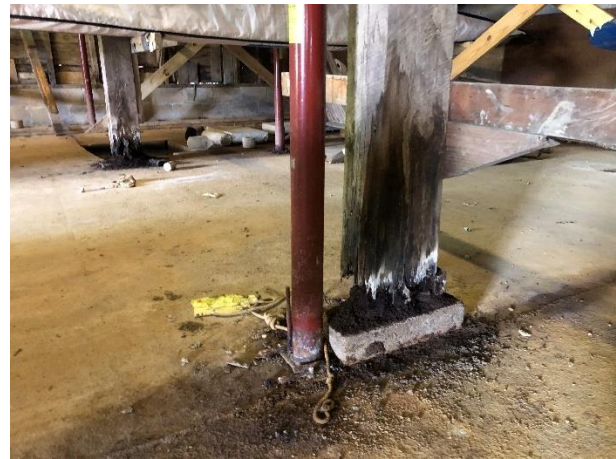


Photo #5



Photo #6

**Photo #7:**

This image shows x-bracing at two (2) locations along the west wall. The bracing is straddled by screwjack posts either end and they connect to blocking above the posts within a single bay only. This x-bracing provides stability for the screwjack posts and additional resistance to lateral wind forces that act on north and south facades.

**Recommendation:**

*Provide solid blocking between posts within the joists bays and reinforce connections to that blocking and at the base of the braces.*

**Photo #8:**

The existing exterior wall at the west side is in poor condition. The sill shows signs of moisture and termite damage, which can also be observed at the base of the wall studs. The poor condition of this wall likely prompted the addition of the shoring installation in 2011 and 2012 along this wall line.

**Recommendation:**

*Provide localized repairs to achieve solid bearing on the foundation. Repairs would include:*

- *Temporary shoring of wall with nailed wood nailer on inside face of wall.*
- *Replacement of damaged wood sill with new pressure treated wood to match existing geometry. Lap replacement sill with existing.*
- *Replace rotted stud bearings and lap with some length of new wood stud sister.*

**Photo #9:**

Existing blocking installed at the top of screwjack posts and between joists. An x-brace member fastens to this blocking.

**Recommendation:**

*Continue solid wood blocking between tops of braces in the joist bays to provide a better transfer of load from the floor system.*



Photo #7



Photo #8



Photo #9

**Second Floor - Photo #10:**

This image is taken from the catwalk above the second floor lockers, looking towards the west exterior wall. Existing wood shoring posts with x-bracing are shown in the foreground. An additional line of shoring posts & beams are visible in the background to limit amount of roof load on the west wall.

*Recommendation:  
See below*



Photo #10

**Photo #11:**

The light shines on the existing x-brace fastened to a shoring beam at the west wall. This beam supports roof rafters and itself spans over screwjack posts. This line of shoring was likely installed to take roof load off of the failing west wall.

*Recommendation:  
See below*

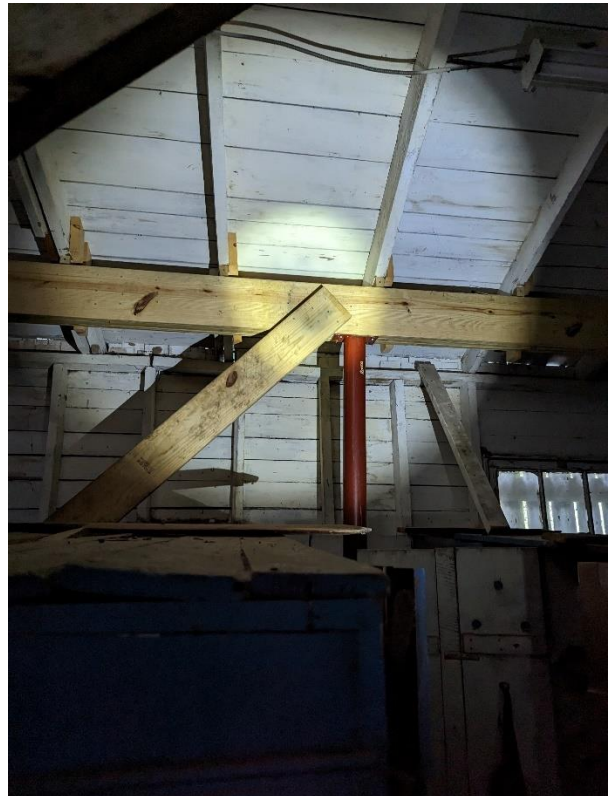


Photo #11

**Photo #12:**

This image is shot from below the shoring beam along the west wall, looking up. The previous installation of vertical blocks to the rafter is pulling away from the rafters in some cases, either due to settlement or poor fastening by the installer.

**Recommendation:**

*Add additional blocking and fasteners to reinforce these connections.*



Photo #12

**Photo #13:**

Cross-bracing at the second floor shoring line that runs adjacent to the existing catwalk (see photo #10). This x-bracing likely acts as a stabilizer for the tall and slender shoring posts.

**Recommendation:**

*Augment connections with light gage metal strapping fastened to the wood braces.*



Photo #13



**Photo #14:**

This photo of ceiling and floor framing is taken from the main level kitchen. The framing shows damage from moisture and termites.

**Recommendation:**

- *Sister new framing to the existing joists wherever the existing members show sectional loss.*
- *Assume some additional floor board replacement with new plywood.*



Photo #14

**Photo #15:**

This photo of ceiling and floor framing is taken from the storage room adjacent to the west boat storage area. The double trimmer in particular displays advanced moisture and termite damage.

**Recommendation:**

- *Sister new framing to the existing joists wherever the existing members show sectional loss.*
- *Assume some additional floor board replacement with new plywood.*



Photo #15

**Photo #16:**

The closet framing at the storage area adjacent to the kitchen shows signs of termite damage at the sill plates.

**Recommendation:**

- *Replace the sill plate and sister new studs to the existing studs.*
- *Replacement sill material should be pressure treated wood or of a naturally rot resistant wood species. Anchors into the floor slab should be stainless steel.*
- *Sill replacement will require temporary shoring of floors or wall above area of repair.*



Photo #16

**Photo #17:**

Wall framing adjacent to and below the central stair shows signs of water and termite damage at the base of the wall.

**Recommendation:**

- *Replace the sill plate and sister new studs to the existing studs*
- *Replacement sill material should be pressure treated wood or of a naturally rot resistant wood species. Anchors into the floor slab should be stainless steel.*
- *Sill replacement will require temporary shoring of floors or wall above area of repair.*

**Photo #18 and #19:**

At the second floor level within the main assembly room, temporary shoring for the roof is in place within the central area. This portion in turn is supported down to the ground level with a series of beams, posts and walls below. Drawing S101 shows the floor framing with the general layout of partitions on the 2<sup>nd</sup> floor level. As depicted in Photos #18 and #19, and represented in plan on S101, the perimeter of this main room has substantial floor deflections, relating to historic settlement or deterioration of the perimeter bearing walls below. The center area where the shoring is in place is largely on the high end of the relative floor elevation.

**Recommendation:**

*As part of the repairs to columns some walls below, there is a potential opportunity to correct some of the observed displacements. Three approaches to floor leveling are initially considered:*

- *Lifting bearing walls. Because the highest settlements tend to be around the perimeter walls, which in turn tend to correspond to bearing walls below, lifting the floor supports in these areas would be similar to lifting the weight of structure from ground level up through the roof level, as we would be lifting a line of bearing wall. This is possible but more along the lines of larger scale lifting of portions of the building, with similar cost implications.*
- *Leveling of the floors at the finish level is*



Photo #17



Photo #18



Photo #19

another possibility. This would likely require removal of the floor boards, installing sisters or nailers on the floor joists, and reapplying the floor finish at corrected elevations. In this scenario, the bearing walls and framing would remain near the current elevation but the finish would be raised in deflected areas to make the floor more level.

- A third option might be to cut the framing free of the perimeter bearing walls and resupport the floors on new ledgers at a higher elevation. This approach would require temporary shoring and then new wood ledgers with new framing connectors. The floor finish could potentially remain as the floor framing is lifted into place.



Photo #20

**Photo #20:**

Some of the posts and walls at the 2<sup>nd</sup> floor level were observed to be out of plumb. Future repairs that might involve resupporting portions of the structure can consider straightening some of these components, similar to the leveling of floors.

## CONCLUSIONS & RECOMMENDATIONS

The existing conditions observed and recommended extent of improvements can be seen on the drawings provided with a general summary of the recommendations provided below:

1. Reinstall/repair posts that have lost structural integrity (see Figures below)
  - a. Cut and replace w/ new concrete plinth
  - b. Replace member altogether with plinth below
  - c. Shore existing column and cast plinth below column (long-term solution)
  - d. Scrape and paint steel posts, dowel into slab and encase in concrete

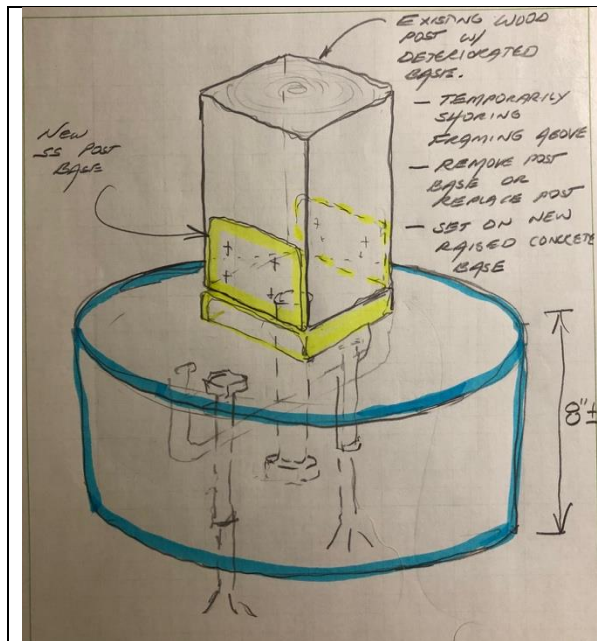


Figure 1: Wood post base repair concept

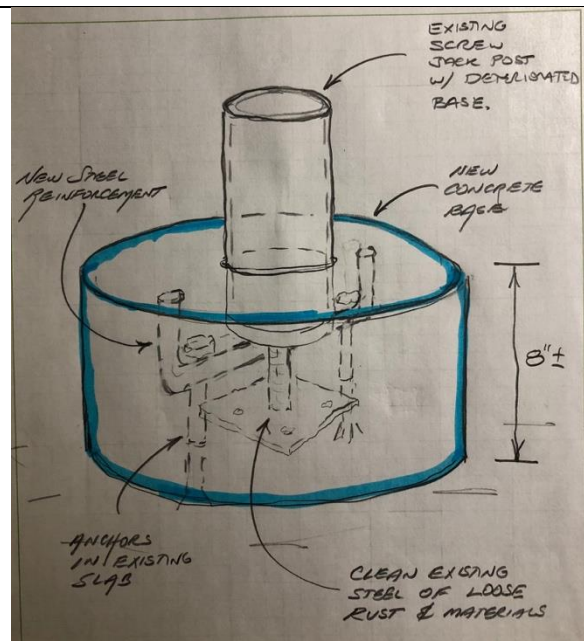


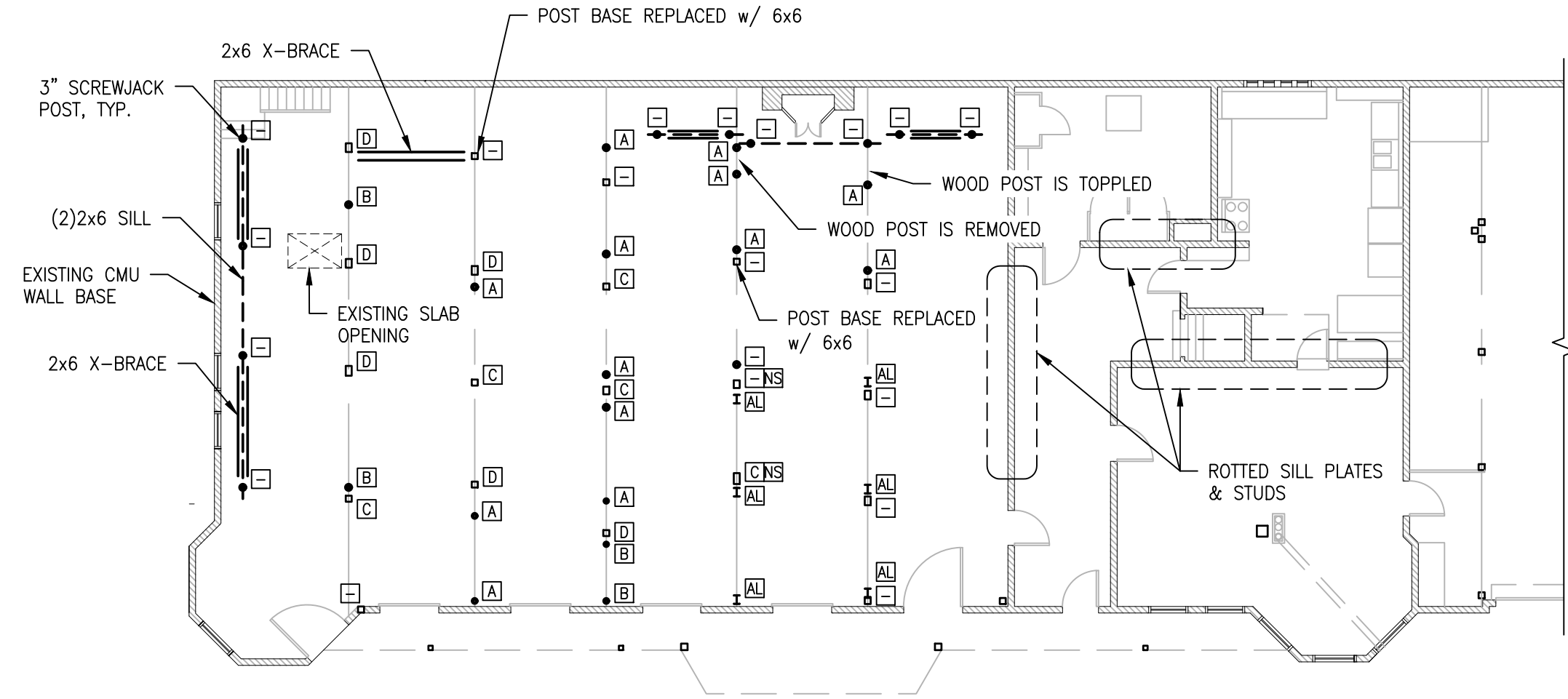
Figure 2: Steel post base repair concept

2. Provide solid blocking between top of x-bracing within joist bays
3. Add squash blocks between posts above and existing girders below floor joists.
4. Provide solid connections at the top of shoring supporting the rafters.
5. Provide two (2) additional bays of x-bracing at the lower level door openings.
6. Reinforce connections at braces to floor sill and top blocking.
7. Sister existing joists where damaged by moisture and termites (see plans and notes above)
8. Replace sill plates and sister new studs to existing where damaged by moisture and termites (see plans and notes above).

If you should have any questions or concerns related to the content of this report, please feel free to contact us at (703) 350-4151.

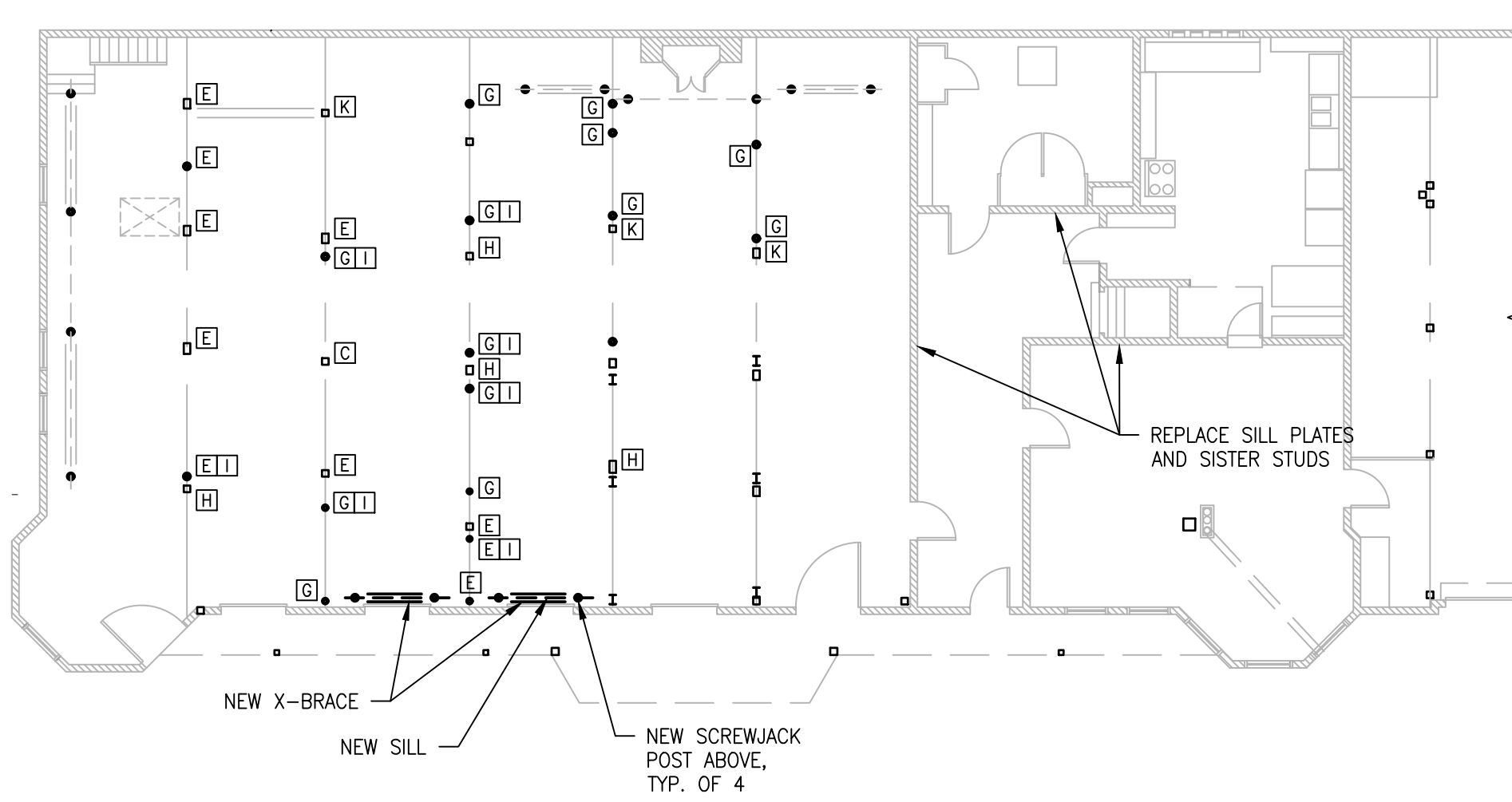
Site observation visits are conducted for the purpose of observing the general nature of and the technical progress of the work and do not replace regular quality control inspections.

- [A] RUST AT SCREWJACK BASE
- [B] RUST & DELAMINATION AT SCREWJACK BASE
- [C] ROT AT WOOD BASE OR 6x6 CRUSHING
- [D] SEVERE ROT AT WOOD BASE OR 6x6 CRUSHING
- [ ] NO CRITICAL DEFICIENCIES OBSERVED
- [AL] EXISTING ALUMINUM COLUMN
- [NS] NON-STRUCTURAL POSTS FOR CANOE SUPPORT



1 EXISTING LOWER LEVEL FOUNDATION PLAN  
 S100 SCALE: 3/32"=1'

- [E] REPLACE MEMBER COMPLETELY WITH NEW RAISED BASE.
- [G] SCRAPE, PAINT, & ENCASE POST BASE IN CONCRETE, OR REPLACE.
- [H] CUT COLUMN BASE AND REPLACE WITH BEARING BLOCK OR CONCRETE PLINTH.
- [I] STEEL POST IMMEDIATELY ADJACENT TO FAILING WOOD COLUMN MAY BE REMOVED IF COLUMN IS REPLACED.
- [K] ADD ANCHORS TO EXISTING BEARING BLOCK INTO SLAB.



MODERATE SETTLEMENT

LARGE SETTLEMENT

LARGE SETTLEMENT

LOCALIZED TERMITE DAMAGE AT JOISTS & FLR BOARDS

MODERATE SETTLEMENT

4" SCREWJACK POST ABOVE, TYP.

X-BRACING ABOVE

SCREWJACK POST BELOW, TYP.

X-BRACING BELOW

(E) DROPPED GIRDER, TYP.

(E) 2x10 @ 16" TYP.

(E) W8

(E) W8

(E) W8

LARGE SETTLEMENT

MODERATE SETTLEMENT

LARGE SETTLEMENT



1 EXISTING SECOND FLOOR FRAMING PLAN  
S101 SCALE: 3/32"=1'

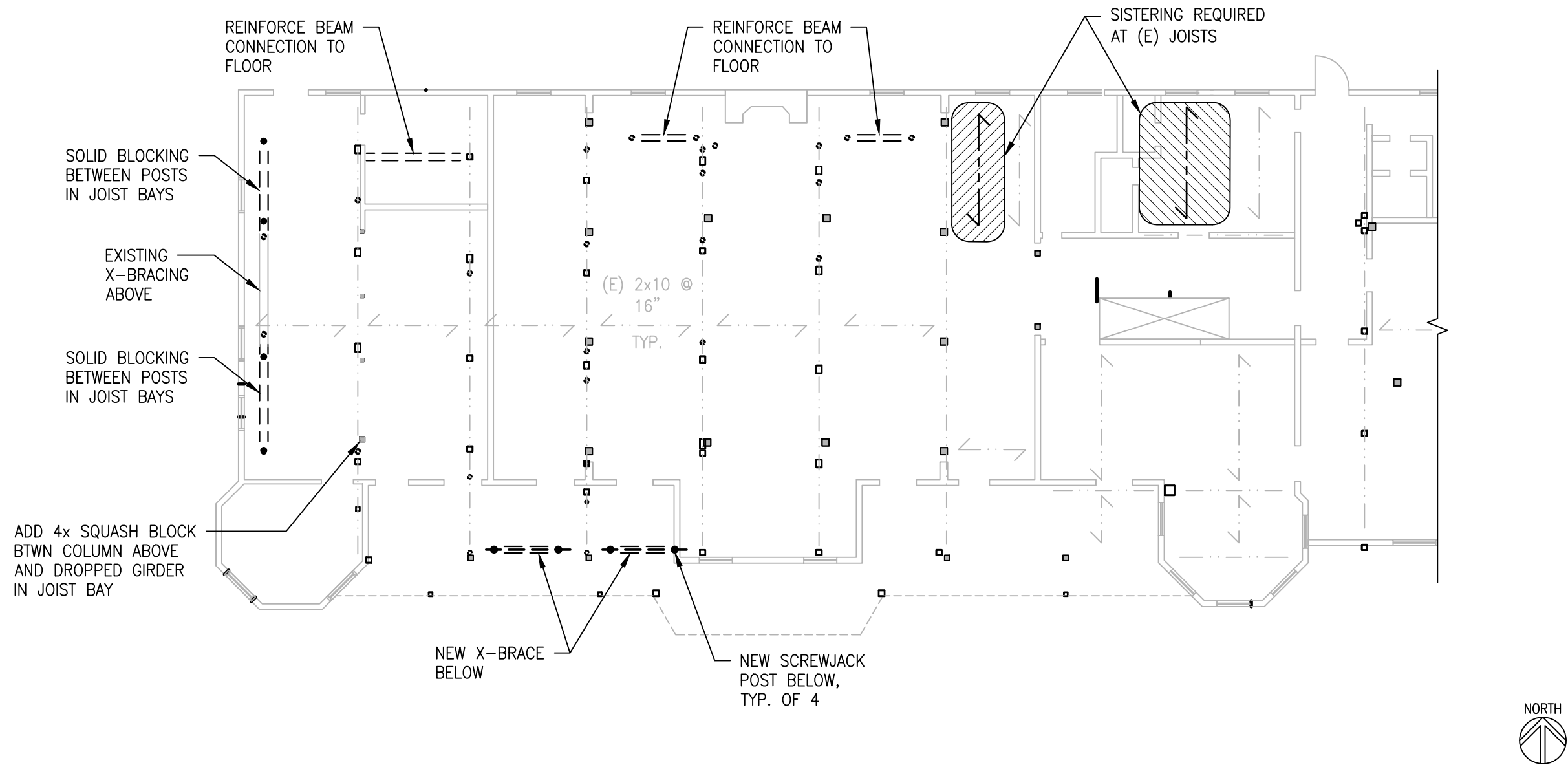
210 N. Lee St., Suite 210  
Alexandria, VA 22314  
T: 703.350.4151  
1200ae.com

MCC1200  
ARCHITECTURAL ENGINEERS PLLC

Date: 7/03/2023 Submission: REPORT  
Project Title: WASHINGTON CANOE CLUB  
3700 WATER STREET, NW  
WASHINGTON D.C. 20007

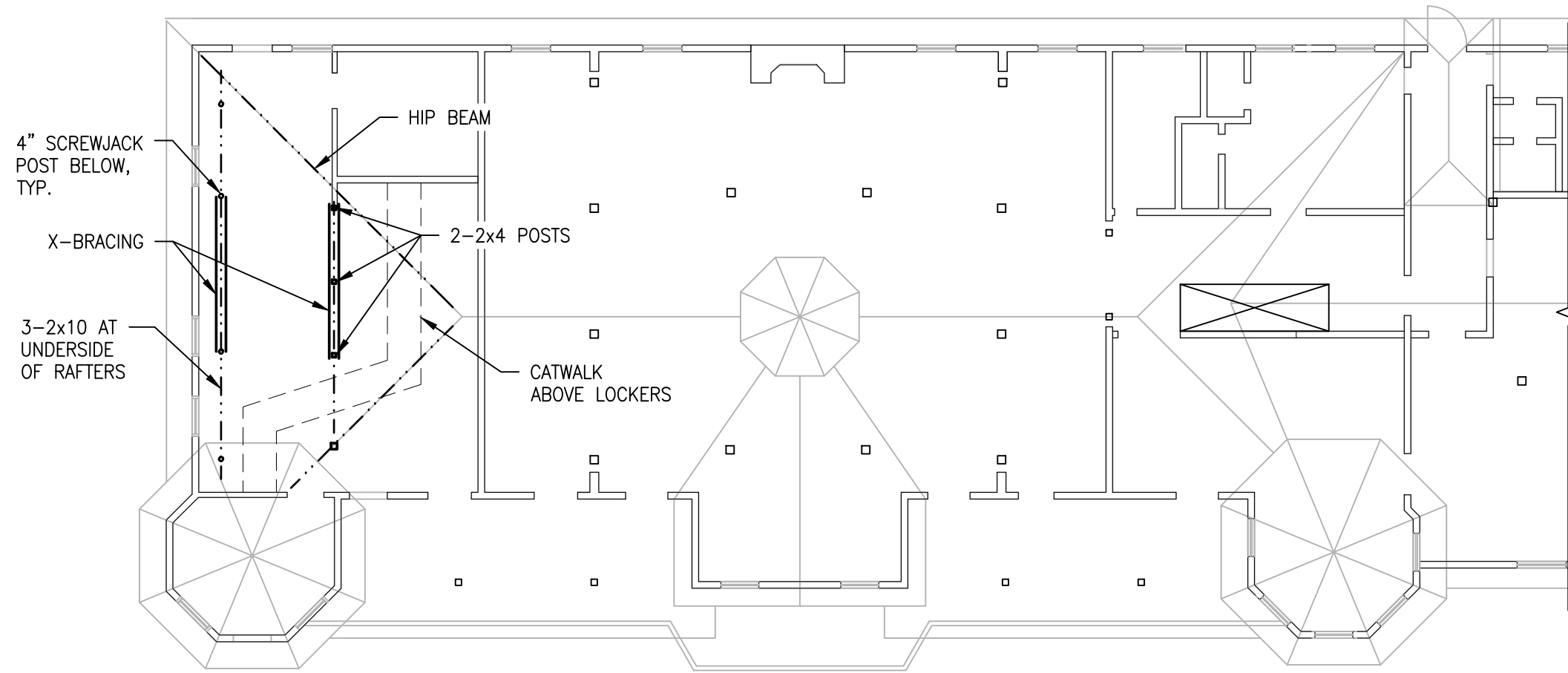
Project Number: 17-040.3

S101



1 SECOND FLOOR FRAMING PLAN - PROPOSED WORK  
S101A SCALE: 3/32"=1'





1  
S102

**EXISTING ROOF FRAMING PLAN**  
SCALE: 3/32"=1'

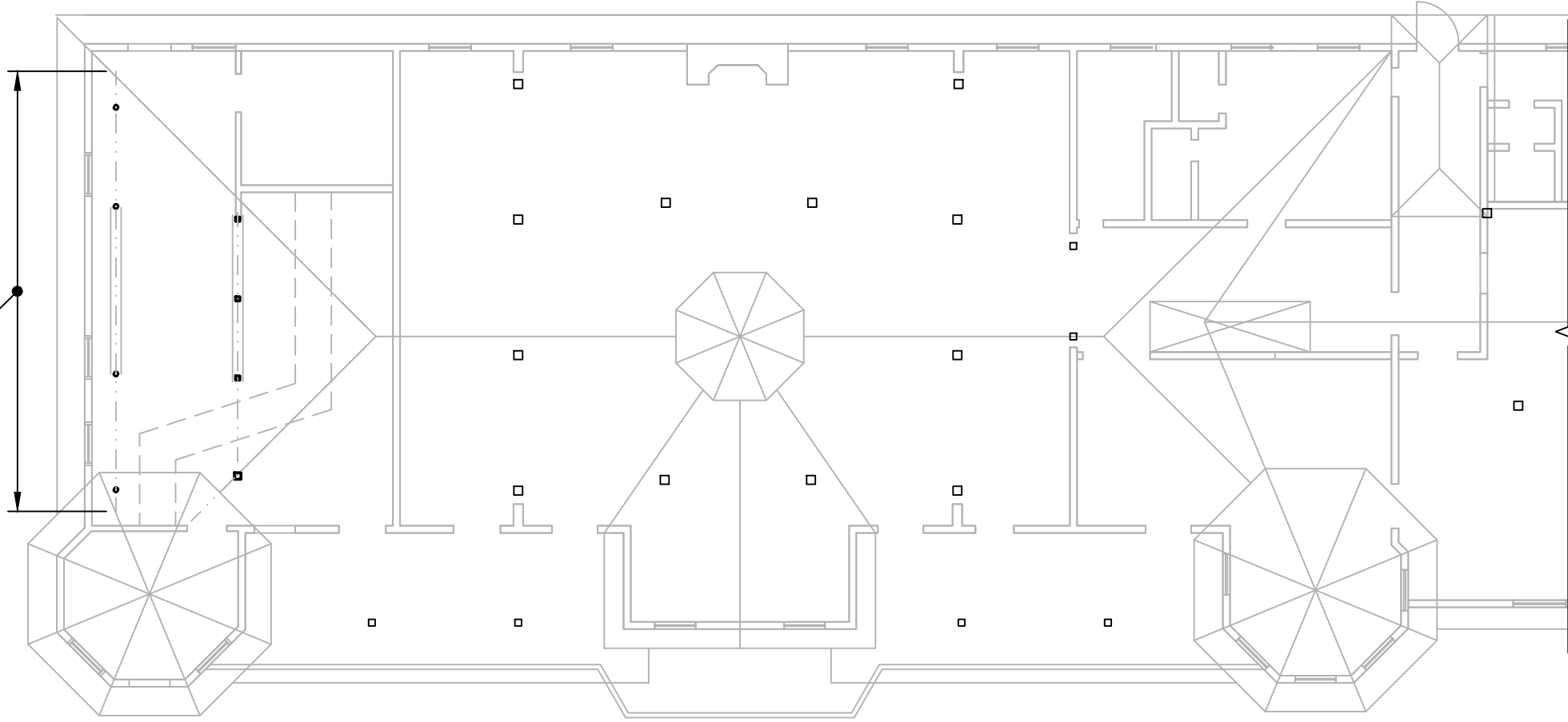
210 N. Lee St., Suite 210  
Alexandria, VA 22314  
T: 703.350.4151  
1200ae.com

**MCC1200**  
ARCHITECTURAL ENGINEERS PLLC

Date: 7/03/2023 Submission: REPORT  
Project Title: WASHINGTON CANOE CLUB  
3700 WATER STREET, NW  
WASHINGTON D.C. 20007

Project Number: 17-040.3  
**S102**

REINFORCE EXISTING  
CONNECTIONS FROM  
BEAM TO RAFTER



1  
S102A

# ROOF FRAMING PLAN – PROPOSED WORK

SCALE: 3/32"=1'

Project Number: 17-040.3

# S102A

Date: 7/03/2023 Submission: REPORT

Project Title:  
WASHINGTON CANOE CLUB  
3700 WATER STREET, NW  
WASHINGTON D.C. 20007

# MCC1200

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210 N. Lee St., Suite 210  
Alexandria, VA 22314  
T: 703.350.4151  
1200ae.com

## FIELD REPORT

|                      |   |                         |   |
|----------------------|---|-------------------------|---|
| <b>Date:</b>         | 9/13/2021   | <b>Date(s) on site:</b> | 8/20/2021 and 9/3/2021  |
| <b>Attention:</b>    | Donald H. Gregory AIA   | <b>Project name:</b>    | Washington Canoe Club<br>East Bay Structural Assessment                               |
| <b>Company:</b>      | Cox Graae + Spack<br>Architects                                   | <b>1200AE Proj. #:</b>  | 17-040.2  |
| <b>Weather:</b>      | Rain  | <b>Location:</b>        | Washington, DC  |
| <b>Submitted by:</b> | John Matteo   | <b>Present on site:</b> | J. Matteo (1200AE); D.<br>Cottingham (WCC) first visit;<br>J. Ross (WCC) second visit |
| <b>Cc:</b>           | Bill Spack – CGS<br>Alyssa Stein, Laura Hughes<br>– EHT Tracerics |                         |   |

### BACKGROUND AND GENERAL SUMMARY

1200 Architectural Engineers, PLLC (1200AE) was asked by the Washington Canoe Club (WCC) to visit the site to observe the structural conditions of the East Bay. These observations were made following upon the more comprehensive conditions assessment performed by EHT Tracerics, which provides a detailed account of the history of the East Bay and the amount of historic fabric that remains after decades of modifications, deterioration and repairs. Prior to the current assessments, significant structural investigations were performed in the previous decade that resulted in the design and construction of temporary shoring and lateral bracing throughout the East Bay. A brief listing of these structural assessments and interventions is as follows:




- 2010 Condition assessment report by McMullan & Associates
- 2011 design and construction of temporary shoring for gravity loads
- 2012 design and construction of temporary bracing for lateral loads

The addition of the 2012 temporary lateral wind bracing was implemented for the purpose of allowing limited occupancy of the lower level of the East Bay which remains the status today.

The findings of 1200AE's visual assessment of the East Bay are summarized as follows:

- Overall, 14% of the total East Bay structure was found to be both historic and retaining structural integrity.
- The East Bay structure is very much reliant on the extant temporary shoring and bracing for both vertical support and lateral stability
- The limited amount of remaining historic material does not support the extent of repairs and intervention that would be required to rehabilitate the East Bay
- Rehabilitating the existing structure would require significant structural intervention with limited potential of retaining historic fabric, and would likely require further loss of historic fabric due to the amount of structural intervention required to meet code requirements
- The remaining historic fabric does not retain structural integrity without significant reinforcement

- The structural integrity of the East Bay has been severely compromised due to the past modifications and stabilizing interventions

| OBSERVATIONS   | IMAGES   |
|--|--|
| <p><u>South Wall – Photos #1 and #2</u></p> <p>The south wall of the East Bay presents a mix of materials primarily dating from after 1970 (refer to the EHT Tracerics East Bay Assessment for a more detailed chronology and cataloguing of materials). The upper portion of the 2<sup>nd</sup> floor wall was built directly on top of a historic parapet associated with the original roof terrace. This creates a natural discontinuity, or hinge, in the 2<sup>nd</sup> floor wall structure. The hinged condition of the wall was later braced laterally with the observed diagonal struts at most of the wall studs.</p> <p><u>Photo #3:</u></p> <p>The mix of historic and new material is clear in this image, with the majority of material falling later than the period of significance. Some remnants of historic siding and isolated studs were also observed.</p> |  <p>Photo #1: View of East Wing from SE Corner</p>  <p>Photo #2: 2<sup>nd</sup> Floor south wall Interior</p>  <p>Photo #3: Bracing of wall hinge at 2<sup>nd</sup> floor level</p> |

**Photo #4:**

This image shows the continuation of studs from above down to the 1<sup>st</sup> floor level. The majority of the historic studs have suffered significant damage over time, most particularly at the base, but in many cases higher up. The image shown is an example of a historic stud being cut high up in the wall height, and then supported vertically and lapped with new material. In this particular case, the condition of the historic wood remains compromised structurally within the zone of the lap, amounting to a condition that is likely weaker than the original construction. The overall approach at the south wall amounts to a more recent structure that is supporting some historic remnants that play a highly diminished role in the current stability of the construction.



Photo #4: Replacement of historic wall studs of the south wall at 1<sup>st</sup> floor level

**Intermediate Wall – Photo #5:**

The roof framing is currently shored and lateral X-bracing is in place to resist lateral wind loads. The wall was once an exterior wall to the raised structure to the north which housed the Women's Locker Room.



Photo #5

**Photo #6:**

The shoring and bracing added in 2011 and 2012 extends down to the ground floor slab on grade, as depicted in the image. This level has been subjected to repeated moisture collection and the shoring and bracing is suffering from active deterioration at the connections. In general, water on the site migrates from the higher elevations to the north toward the river to the south, and has established pathways for penetration through the north foundation wall over time.



Photo #6

**Photo #7:**

The photo depicts the north side of the 2<sup>nd</sup> floor intermediate wall along its top plate. A history of termite damage is apparent in lengths of the top plate and some studs. Newer hurricane ties have been added at the bearings of the small gabled roof over the Women's Locker Room, however some of these ties undoubtedly have reduced capacity where attached to deteriorated wood.



Photo #7

**Photo #8:**

The photo depicts the north side of the 2<sup>nd</sup> floor intermediate wall along its bottom plate. A history of sustained water penetration is apparent in the plate and lower boards that were once exterior siding. Localized termite damage and selective reinforcement was also observed.



Photo #8

**Photo #9:**

The tie connecting the bearings of the gabled roof rafters has suffered some water damage and material degradation. The roof structure above the Women's Locker Room appeared relatively intact for some portions, however the support conditions were typically heavily compromised structurally.



Photo #9

**North Wall – Photo #10:**

Areas of failed roof boards were noted, as well as some prior repairs of structural members. The modern hurricane tie observed here is fastened into a wood top plate that is now suffering material damage, apparently associated with the sustained water penetration from above.



Photo #10

**Photo #11:**

The 2<sup>nd</sup> floor north wall was observed to be severely deteriorated. This image is an example of a historic stud that was left in place that is now almost fully deteriorated from a combination of water penetration and termite damage.



Photo #11

**Photo #12:**

The north wall also has a line of temporary shoring and lateral wind bracing which extends up to the roof level.



Photo #12

Photo #13:

The line of shoring and bracing is offset to the south of the inside face of the north wall by approximately 2 to 3 feet. Similar to that observed at the south wall, diagonal wood kickers extend up the wall and tie into the floor level at the base of the shoring and bracing.



Photo #13

Photo #14:

Also similar to the south wall, the extension of the 2<sup>nd</sup> floor wall at the north side was achieved by an additive construction that was inherently susceptible to lateral displacement and even failure because of the discontinuities in the framing. The discontinuity just above the 2<sup>nd</sup> floor level has formed a hinge and has displaced outward to the north. The 2011-2012 shoring and bracing have temporarily addressed this discontinuity and outward buckling with the addition of light-gage metal connection and regularly spaced diagonal bracing struts. In general the framing toward the west end of the Women's Locker Room was observed to be in better condition than that observed to the east, however some water and insect damage was clearly present.



Photo #14



**Photo #15:**

Following this relatively intact wall framing down to the 1<sup>st</sup> floor level, defining the north wall of what now functions as a Weight Room, the historic framing was observed to be relatively intact. However, the framing was typically constructed with a physical discontinuity, or structural hinge, between the top of masonry foundation and the 2<sup>nd</sup> floor framing. The historic studs bear on a modern sill plate and the foundation itself was comprised of modern concrete block for the upper portions, both of which are consistent with the likelihood that the bottom portion of the historic framing had been previously deteriorated and essentially replaced by extending the foundation upward with new cmu.



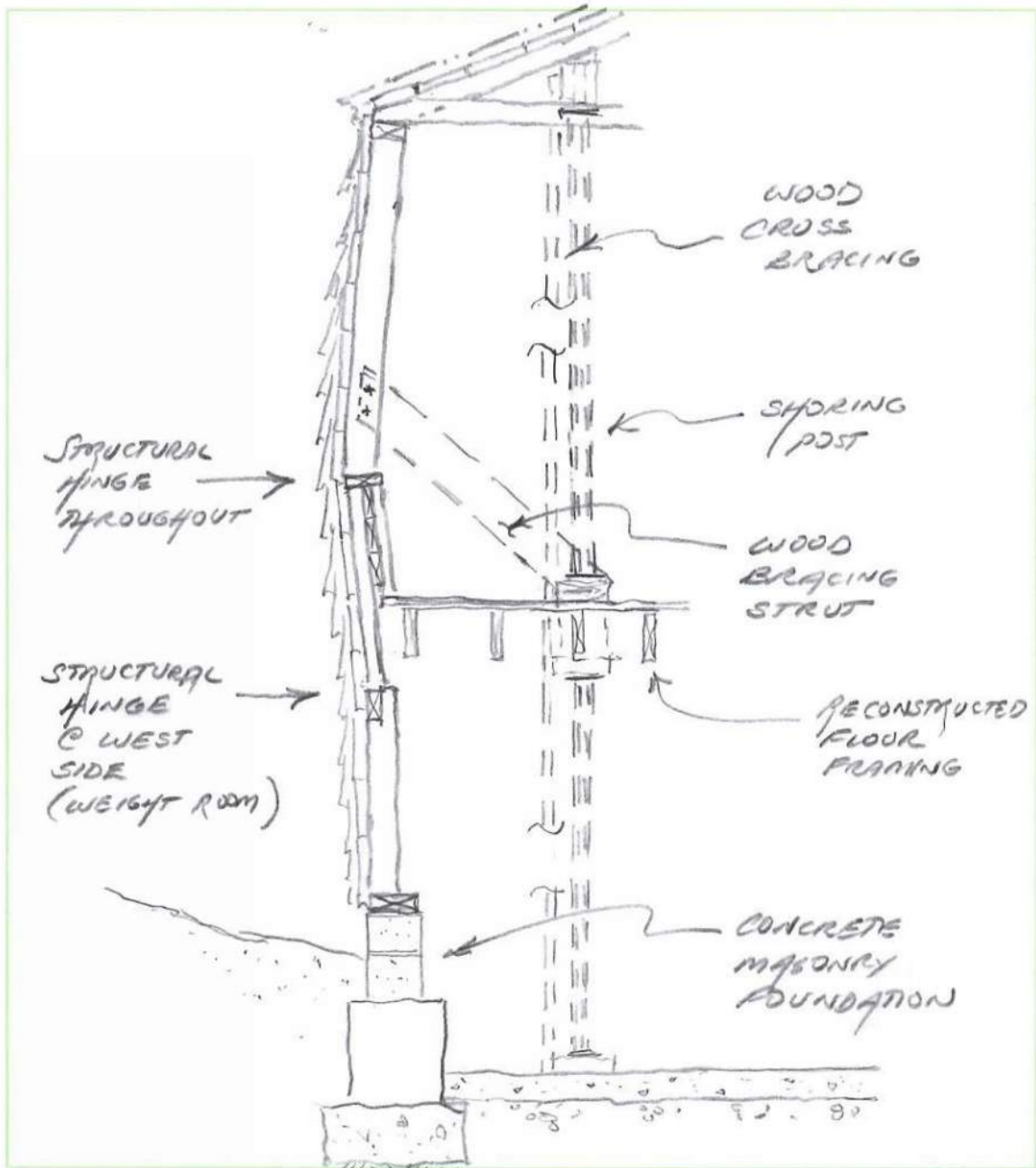
Photo #15

**Photo #16:**

Image shows a discontinuity of the stud framing relative to the 2<sup>nd</sup> floor level, potentially created when the 2<sup>nd</sup> floor framing was fully replaced (note the modern wood framing running parallel to the north wall). A wall section depicting this portion of the north wall is represented in Figure #1 below. The presence of multiple structural hinges within the spanning portions of the walls between the diaphragms present at the roof, 2<sup>nd</sup> and ground levels creates a fundamentally weakened structural system. The wall structure is now comprised of a mix of historic and new material, all of which is very much reliant on the temporary shoring and bracing for support and stability.



Photo #16



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Figure #1: East Bay north wall section

**Photo #17:**

The image shows the hinged wall framing above the 2<sup>nd</sup> floor, near the transition between the c. 1920 and late 1930's construction. Some of the historic framing material appears intact, however, as depicted in Figure #1 and described above, the general construction is fundamentally weakened at its discontinuities and has consistently suffered deterioration at its base. This leaves a condition not unlike the south wall where some historic remnants are being supported above the ground by modern interventions, while these remnants are providing a substantially compromised structural role in the current configuration.

**Photos #18 and #19:**

Further east along the north wall at the 2<sup>nd</sup> floor level, wood deterioration and outward buckling of the wall becomes more severe. Added metal fasteners now provide little benefit where connected into heavily deteriorated wood.



Photo #17



Photo #18



Photo #19

Photos #20 and #21:

Areas of historic wood wall framing in the eastern portion of the north wall, at the 1<sup>st</sup> floor level, were observed to be significantly deteriorated. Typically, as noted for the western portion of this wall, the lowest level of the studs has been previously replaced with a new wood sill plate and cmu foundation wall set at a higher level. That history of wood deterioration has continued since that time, as both images show severe wood deterioration now extending up into what must have been more intact historic structural fabric when the earlier repairs were implemented.



Photo #20



Photo #21

## SUMMARY OF HISTORIC STRUCTURAL MATERIAL

1200AE performed an additional site visit to provide an estimate of (1) the amount of historic framing that is present in the East Wing, and (2) of that present historic framing, how much of it retains structural integrity. The percentages represented in Table 1 are estimates of historic material, however, as noted below, these values and an assessment of structural integrity should also be considered more broadly at the structural system level. For example, most if not all, of the historic framing is ultimately supported by new framing. In addition, as described previously and represented in Figure #1, the detailing within areas of historic wall construction often render this framing unstable without significant bracing and support. The following paragraphs describe the findings from this effort, organized by framing areas, with a comprehensive summary provided in Table 1 below. **Overall, 14% of the total structure was found to be both historic and retaining structural integrity.**

### South Wall:

**15% of the wall framing is estimated to be historic and retaining structural integrity.** The south wall framing has largely been replaced with newer wood construction, particularly at the lower portions of the wall. Some isolated posts from the original construction remain at the jambs of the large openings, however their bases are typically rotted and lacking structural integrity. As depicted above in Photo #4, the limited amount of framing extending from above is typically spliced and now supported by newer wood framing. The primary remnant of historic framing material is evident at the 2<sup>nd</sup> floor original parapet, which is now shored and braced back to the non-original 2<sup>nd</sup> floor framing. This historic material is fully supported by new framing below and is built over top with new wall extension that dates to the 1970's.

### East Wall:

**16% of the wall framing is estimated to be historic and retaining structural integrity.** Based upon all visually accessible areas and consistent with the WCC reported flood damage and subsequent reconstruction, the first floor level is 100% replacement. 1200AE directly observed the first floor wall framing on both the north and south ends of the wall, extending visually inward approximately 8 feet on each end, and found all framing and sill plates to be replacement framing. Note that 100% visual access was not possible because of the addition of a retrofit plywood shear wall inboard of the wall construction, which is now likely essential for the structure's stability. At the second story, the southern two-thirds of the east wall dates to the 1970's and therefore is not considered historic fabric. The only portion of historic framing at the second story is at the northern end of the east wall and corresponds with the east wall of the women's locker room. This framing is relatively intact, although it too is completely supported by new framing below.

### North Wall:

**36% of the wall framing is estimated to be historic and retaining structural integrity.** As noted above, the north wall is in poor structural condition and is entirely reliant on the support of the temporary shoring in place, particularly at the second story. The tabulated values represent intact historic material observed, however none of this material represents an intact structural system that can remain in place without substantial further removals and support by future new structure. This is either because of the original detailing with wall hinge points as noted above, or because the historic remnants are being supported now by replacement material or the temporary shoring. For example, only a small area of wall is observed to be historic and intact at the first floor level (approximately 23 SF depicted in Photos #15 and #16) and this material is both supported on replacement concrete block and more modern wood sill plates, as well as having a hinge detail that misaligns with floor levels and creates a structural instability.

Intermediate 2<sup>nd</sup> Floor Wall:

**60% of the wall framing is estimated to be historic and retaining structural integrity.** On a relative scale this wall retains a larger amount of historic framing that appears mostly intact. Photos #7 and #8 depict the nature of visual deterioration, which appears to be from past water and insect damage. This wall functioned as an exterior second story wall until it was enclosed by the addition of a roof in the 1970's and is now also entirely supported on new floor framing and first floor posts.

Roof Framing:

**21% of the roof framing is estimated to be historic and retaining structural integrity.** The current framing is largely newer construction from the 1970's, however the concentration of historic framing is over the Women's Locker Room. This framing was found to be relatively intact, although suffering from localized deterioration from water penetration and insect damage. The western portion of the roof framing (original 1920's portion) has suffered damage from fire at some point in its history. The fire damage appears to amount to a loss of capacity at the edges of roof boards (assumed approximately 10% to 20% loss of capacity) and only minor damage to framing members. Although the roof board damage is not compromising the support of gravity loads substantially at this time, it does compromise perhaps more significantly the diaphragm resistance of the roof framing in this area (see Photo #22).



Photo #22

2<sup>nd</sup> Floor Framing:

**7% of the floor framing is estimated to be historic and retaining structural integrity.** The framing is almost entirely replacement from the 1970's. A small area toward the northeast corner appears to be original.

1<sup>st</sup> Floor Slab:

Cores taken previously show this be a replacement slab, or slab poured overtop earlier finish floor levels.

| Component                             | Total Area (SF)                                   | Historic Framing Present                      |       | Historic Framing Retaining Structural Integrity |       |  |
|---------------------------------------|---|---|-------|---|-------|--|
|                                       |   | %   | Area  | % of Historic Framing Present                   | Area  | % of Total Area                              |
| South Wall                            | 622   | 18%   | 115   | 82%   | 94    | 15%  |
| East Wall                             | 641   | 16%   | 102   | 100%  | 102   | 16%  |
| North Wall                            | 462   | 88%   | 406   | 41%   | 166   | 36%  |
| Total for Exterior Walls              | 1,725   | 36%   | 623   | 58%   | 362   | 21%  |
| Intermediate 2 <sup>nd</sup> Flr Wall | 300   | 75%   | 225   | 80%   | 180   | 60%  |
| Roof Framing                          | 1,755   | 26%   | 462   | 80%   | 370   | 21%  |
| 2 <sup>nd</sup> Flr Framing           | 1,755   | 7%  | 128   | 90%   | 115   | 7%   |
| 1 <sup>st</sup> Flr Slab              | 1,755   | 0%  | 0     | na  | na    | na   |
| Total Floor & Roof Framing            | 5,265<br>(3,510 for 2 <sup>nd</sup> floor & Roof) | 11%<br>(17% for 2 <sup>nd</sup> floor & Roof) | 590   | 82%   | 485   | 9%<br>(14% for 2 <sup>nd</sup> floor & Roof) |
| Total for All Components              | 7,290   | 20%   | 1,438 | 71%   | 1,027 | <b>14%</b>                                   |

Table 1: Summary of Historic Framing

## CONCLUSIONS & RECOMMENDATIONS

It is clear that the amount of historic structural fabric that retains structural integrity is relatively small within the East Bay at this time, calculated as being only approximately 14% of the total area of structural components. Where observed, the historic structural material was typically supported by modern material and often suffering from active deterioration from moisture and/or insects. In addition, as described above, the modification of walls over time leaves a structure that is fundamentally weakened by the presence of member discontinuities. As such, the structure is very much reliant on the temporary shoring and bracing for both vertical support and lateral stability at this time. A rehabilitation would very likely require significant disassembly or temporary shoring, ultimately with new continuous structural members by-passing the historic and holding them in place. The addition of continuous structure through the built wall discontinuities of intermediate sill and top plates would require cutting through historic members and represent an additional loss of historic structural fabric. Meeting structural code requirements, particularly for lateral loadings, would also likely require significant interventions, such as the introduction of shear panels on the interior face of walls that would

both damage any remnants of historic finishes and potentially impact the interior space use.

With these severe structural conditions we find the recommendation to reconstruct the East Bay to be reasonable from a preservation perspective, and prudent from the perspective of assuring structural safety in the future.

In summary:

- Overall, 14% of the total East Bay structure was found to be both historic and retaining structural integrity.
- The East Bay structure is very much reliant on the extant temporary shoring and bracing for both vertical support and lateral stability
- The limited amount of remaining historic material does not support the extent of repairs and intervention that would be required to rehabilitate the East Bay
- Rehabilitating the existing structure would require significant structural intervention with limited potential of retaining historic fabric, and would likely require further loss of historic fabric due to the amount of structural intervention required to meet code requirements
- The remaining historic fabric does not retain structural integrity without significant reinforcement
- The structural integrity of the East Bay has been severely compromised due to the past modifications and stabilizing interventions

If you should have any questions or concerns related to the content of this report, please feel free to contact us at (703) 350-4151.

Site observation visits are conducted for the purpose of observing the general nature of and the technical progress of the work and do not replace regular quality control inspections.





# WASHINGTON CANOE CLUB

3700 WATER STREET, NW WASHINGTON, DC 20007

## HISTORIC STRUCTURE REPORT

SITE HISTORY, EXISTING CONDITIONS, AND  
RECOMMENDATIONS FOR TREATMENT



EHT TRACERIES, INC.  
PREPARED FOR WASHINGTON CANOE CLUB

Final Submission | July 2021

**WASHINGTON CANOE CLUB**  
3700 WATER STREET, NW WASHINGTON, DC 20007

**HISTORIC STRUCTURE REPORT**  
VOLUME I: SITE HISTORY, EXISTING CONDITIONS, AND  
RECOMMENDATIONS FOR TREATMENT

FINAL SUBMISSION, JUNE 2021

*Prepared by:*

**EHT Traceries, Inc.**

Laura Harris Hughes, Principal  
Alyssa Stein, Project Manager  
Ben Walker, Architectural Historian  
Mia Maloney, Historic Preservation Specialist

*Incorporating Findings from Reports and Assessments by the Following:*

**AECOM**

1155 21st Street, NW  
Washington, DC 200367

**Baird Smith, FAIA**

**Enviro Assessment, PC**

PO Box 1154  
Bonners Ferry, ID 83805

**EverGreene Architectural Arts**

3009 Kaverton Road  
District Heights, MD 20747

**MCC 1200 Architectural Engineers PLLC**

210 N Lee Street  
Alexandria, VA 22314

**NPS Historic Preservation Training Center**

106 Commerce Street  
Frederick, MD 21701

*Prepared for:*

**Washington Canoe Club**

*Unless otherwise noted, all images were taken in November 2020 by EHT Traceries.*

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*Chapter 1*

**INTRODUCTION**



# INTRODUCTION



FIGURE 01 Washington Canoe Club, south elevation, looking north from dock.

The Historic Structure Report (HSR) for the Washington Canoe Club was prepared by EHT Tracerics to inform and guide future rehabilitation and flood mitigation efforts. This HSR has been developed in accordance with the *Secretary of Interior’s Standards for the Treatment of Historic Properties* and *Preservation Brief 43: The Preparation and Use of Historic Structure Reports*. Historic Structure Reports were first developed by the National Park Service (NPS) in the 1930s, and since then have become a nationally recognized tool for the documentation and preservation of historically significant buildings and structures. Historic Structure Reports document the history and physical appearance of a building as well as providing guidance to property owners, architects, architectural historians, contractors, and regulatory review bodies prior to treatment. This HSR will be the guiding document to ensure responsible and appropriate preservation treatments for the rehabilitation and future maintenance of the Washington Canoe Club.

Building upon information developed in previous reports that were prepared to address the structural and preservation related deficiencies of the building, this HSR includes the following:

*Volume I*

1. Introduction and background information regarding the genesis and purpose of this report, as well as a summary of major findings presented in each of the following sections;



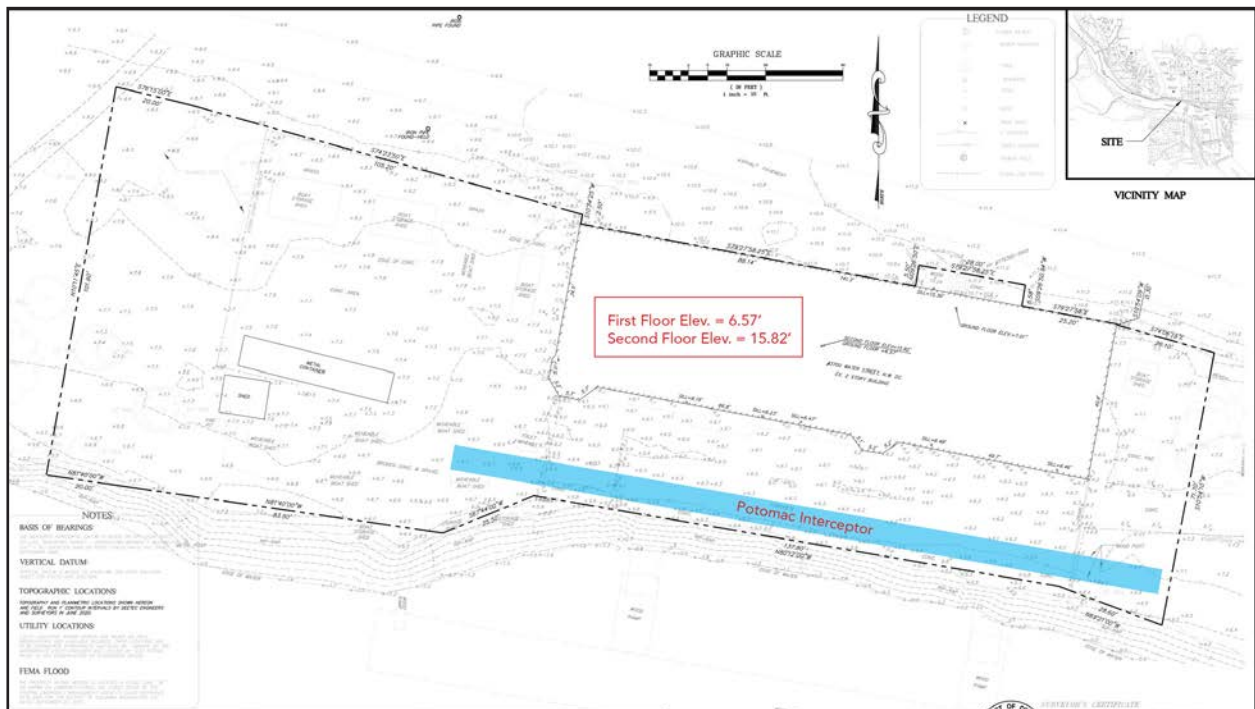


FIGURE 02 Topographic Survey of the Washington Canoe Club. Deetec Engineers and Surveyors, June 2020.

2. Detailed narrative of the building and site history, including development and construction history, evolution over time, and historical context;
3. Evaluation and identification of character-defining features;
4. Assessment of existing conditions;
5. Recommendations for treatment; and
6. Bibliography.

## ADMINISTRATIVE DATA

### SITE OVERVIEW

The Washington Canoe Club is located at 3700 Water Street, NW, at the western edge of the Georgetown neighborhood in Washington, District of Columbia as part of what was colloquially referred to as Boathouse Row. Prominently viewed from Key Bridge, it is located about 100 yards upstream (west) from the stone remnants of the Aqueduct Bridge. The building was constructed in three phases between 1905 and 1922 to accommodate the Washington Canoe Club. The building is located on Federal land within the boundaries of the Chesapeake and Ohio Canal National Historical Park. In 2019, a long-term lease agreement was signed between the National Park Service (NPS) and the Washington Canoe Club for the Club's continued use of the building.

## PROJECT BACKGROUND

In 2017, the Washington Canoe Club retained Cox Graae + Spack Architects (CGS), a Washington, DC-based architectural firm, to develop plans for the full rehabilitation of the severely deteriorating building. Importantly, their plans incorporate flood mitigation to elevate the building above the floodplain to prevent future water damage. The scope of the rehabilitation project includes both exterior and interior renovations to support the Washington Canoe Club's continued use of the building. The HSR, requested by NPS, along with a future Cultural Landscape Inventory, will provide the information necessary to inform decision making about the significance, integrity, and treatment of the Washington Canoe Club.

## PROJECT SCOPE AND METHODOLOGY

The purpose of a Historic Structure Report is to provide a compilation of the findings of research, investigation, analysis, and evaluation of a historic building. In addition to an existing conditions survey and documentation, this report will synthesize and update the work completed by the National Park Service and various consultants over the past decade. This HSR will serve both as a record document of existing conditions as well as a guide for decision-making in the future, both for major projects and for routine building maintenance. The HSR effort began in the fall of 2020 and the report was completed and presented to the Washington Canoe Club in the winter of 2021. The evaluation and analysis in this report focuses primarily on the building and its immediate surroundings.

The project methodology included the following:

**Document Review and Additional Research:** EHT Tracerics reviewed all relevant research and planning documents created to date, including but not limited to all previous studies, assessments, and historic documentation. These documents serve as the basis for this report. Tracerics worked with the Washington Canoe Club and Cox Graae + Spack to identify any document deficiencies during the review of previously gathered documents. Limited research was conducted to fill in the gaps and gather additional photographic documentation. Additional research was conducted as necessary.

**Condition and Integrity Assessment:** EHT Tracerics conducted a survey of the building exterior and interior in the fall of 2020 to identify and photograph existing conditions. By comparing the findings of this survey against previous surveys, EHT Tracerics confirmed and updated the condition and integrity assessments of previously identified historic features.

**Significance, Evaluation, and Preservation Zoning:** This section utilizes the information presented in existing National Register documentation. Preservation zone diagrams were developed to reflect the varying levels of architectural significance and integrity throughout the building.

**Treatment Recommendations.** Based on the evaluation of historical and architectural significance, condition, and integrity, treatment recommendations were developed for the property. Within the framework of an overall *Rehabilitation* treatment, both a general

preservation philosophy and specific feature-based treatment recommendations were developed. The recommendations addressed physical deterioration throughout the building, preservation best practices, and priorities for the preservation of the building.

**Document Production.** This report was drafted and reviewed internally by EHT Tracerics and reviewed by the Washington Canoe Club, CGS, NPS, and the DC Historic Preservation Office. The final document will be made available in both printed and digital formats for ease of reference.

## SUMMARY OF FINDINGS

### *Overview of Site and Building History<sup>1</sup>*

The Washington Canoe Club, completed in 1905-1906 in the Shingle style for use by the newly chartered Washington Canoe Club, sits along the Potomac River and south of the Chesapeake and Ohio Canal. Original building permits identified George P. Hales as the architect and R. Z. Hazell & Bro. as the builder of record. When constructed, it stood on pilings to accommodate water access for the paddlers from the clubhouse. The original section of the building was two stories in height with a 40' by 60' footprint. From the time of its completion, the building served as a social center for clubhouse members as well as a storage space for equipment and canoes.

In 1909, Hales designed an addition to the boathouse. The builders contracted for this work were Howison & Skinker. The two-story addition, which expanded the boathouse to the east, included additional space for social functions, as well as a dressing room and bathroom for ladies use on the second floor. On the first floor, the expansion allowed for a grill room and a work room for canoe repair. Descriptions of the building also hailed the verandas and the corner towers and called attention to the shingled exterior that characterized its appearance and distinguished it architecturally.

A second addition to the boathouse -- a three-bay extension to the east -- was constructed between 1918 and 1922 to provide additional canoe storage on the first floor and a women's locker room on the second floor along the northern edge of the building. The women's locker room was expanded at some point between 1936 and 1939. The southern two-thirds of the addition was used as a roof deck, though this was covered in the mid-1970s and made into a workroom. In 1992, as changing canoe standards necessitated the need to update the storage, two club members removed the entire structural support system in the East Boat Storage Area, including the interior boat storage racks and the floor of the second floor workroom.

Throughout its existence, the boathouse has required several repairs to respond to damages incurred during flooding events and in response to civic improvements, such as the Potomac Interceptor Sewer System installation. Most significantly, the original proportions of the building's first story has been compromised.

In 2010, the National Park Service, owner of the land on which the Washington Canoe Club is located

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<sup>1</sup> This section utilizes and builds upon the historic context included in the Historic American Buildings Survey (HABS) report (No. DC-876) written by Virginia B. Price in 2013.

as well as the building itself, determined that the building was no longer structurally sound. While temporary stabilization measures were taken, the building, with the exception of the first floor East Boat Storage Area, has remained unoccupied since that time.

### **Overview of Significance**

The Washington Canoe Club was designated as an individual landmark within the DC Inventory of Historic Sites in 1973 and was listed in the National Register of Historic Places (NRHP) in 1990. It is also considered a contributing resource to the Georgetown Historic District and Potomac Gorge.

The NRHP documentation identifies the period of significance as extending from 1904 through 1939. The NRHP identifies 1904 as a significant date as it corresponds to the year that the Washington Canoe Club was established. The NRHP further identifies 1924 as a significant date because it was the year that the Washington Canoe Club members prevailed in national competition to represent the United States at the Olympics.

This chapter also presents preservation zone diagrams to document the significance and integrity of spaces throughout the building.

### **Overview of Existing Conditions**

The Washington Canoe Club is generally in poor condition, with some components being beyond repair. The only exception to this is the East Boat Storage Area.

In 1992, club members replaced a majority of the structural support system in the East Boat Storage Area. In 2010, the building was deemed structurally unstable. Between this time and 2013, NPS installed temporary structural stabilization measures to strengthen the damaged framing and to secure the structure. These measures enabled the partial re-opening of the boathouse to club members; presently only the East Boat Storage Area is accessible. Further stabilization is required.

Beyond the building's structural deficiencies, the building does not meet current code requirements for egress, accessibility, and life and safety. Further, the existing structure is located in the flood zone of the Potomac River. The building has experienced impacts from several severe floods throughout its history, with the worst taking place in 1936 when water levels reached the height of about fifteen inches above the second floor level of the boathouse.<sup>2</sup> The Federal Emergency Management Agency (FEMA) has established flood zones for the Potomac River and this property is delineated in the most severe of these areas.<sup>3</sup>

### **Overview of Treatment Recommendations**

This section defines the preservation philosophy for the Washington Canoe Club and outlines specific treatment recommendations for all building features. The recommendations within this chapter follow the *Secretary of the Interior's Standards and Guidelines for the Treatment of Historic Properties*. Because

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2 Historical data indicates a maximum flood water height at the Little Falls measuring station of 28.1 ft. on 3/19/1936.

3 Extracted from Baird Smith, FAIA, *Washington Canoe Club Boathouse Rehabilitation 2015 : Part I - Design Parameters*, March 15, 2016. .

this HSR is being prepared concurrently with the rehabilitation design process for the Washington Canoe Club, these recommendations will integrate the treatments and alternatives currently being proposed for the building with preservation best practices. Doing so will document the decision-making process for major and minor interventions for the Washington Canoe Club rehabilitation.

This report recommends an overall Rehabilitation treatment approach, reflecting the identified use of the building and its varying degrees of historic integrity, significance, and condition. Rehabilitation allows for the preservation of significant historic features while also allowing other planning and programmatic shortcomings to be addressed.

***List of Common Abbreviations***

|         |  |
|---------|--|
| B&O     | Baltimore & Ohio                       |
| C&O     | Chesapeake and Ohio                    |
| CGS     | Cox Graae + Spack                      |
| DC SHPO | DC State Historic Preservation Officer |
| FEMA    | Federal Emergency Management Agency    |
| HPO     | DC Historic Preservation Office        |
| HPRB    | DC Historic Preservation Review Board  |
| HSR     | Historic Structure Report              |
| NPS     | National Park Service                  |
| NRHP    | National Register of Historic Places   |
| WCC     | Washington Canoe Club                  |

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An aerial photograph of a large, multi-story building complex situated on a hillside overlooking a river. The building has a prominent central tower and a large, flat roof. A boat is visible on the river in the foreground. The background shows more buildings and trees on the hillside.

*Chapter 2*

**SITE AND BUILDING HISTORY**

## HISTORIC CONTEXT

### EARLY RIVER RECREATION AND THE RISE OF BOAT CLUBS IN WASHINGTON, DC

Following the Civil War, as the American economy shifted from agrarian to manufacturing pursuits, Americans began to rethink their attitudes toward lifestyle, specifically with regard to leisure and the outdoors.<sup>1</sup> A more concentrated population and increased leisure time for many set the stage for the development of sports and recreation that are now considered integral to American life.<sup>2</sup> Organized sports, including football; baseball; rowing; and cycling, became nation pastimes. A growing awareness of the costs associated with a more sedentary city life also helped created enthusiasm for exercise in the outdoors, and numerous fraternal organizations formed around the country. The introduction of streetcars and commuter rails made the country -- the outdoors -- accessible to city dwellers who took to mountain-climbing, fishing, hunting, and camping.<sup>3</sup>

Canoeing was very much a part of this national movement. While boats similar to canoes and kayaks had been used for millennia, their recreational use in both Europe and America boomed in the late nineteenth century. Canoeing was popularized by John MacGregor, a Scottish lawyer who toured Europe in the “Rob Roy,” a 4.57 meter “canoe” (technically a kayak) of his own manufacture. During the 1860s and 1870s, MacGregor toured Europe in the “Rob Roy” and described his travels in a series of widely read books. In 1867 the Royal Canoe Club, founded in England in 1866, held its first flatwater race and began annual competitions in 1874.<sup>4</sup> In the United States, the New York Canoe Club was founded in 1871, followed by the American Canoe Association, the first national canoe association in the country formed in an effort to foster communication amongst the growing number of local clubs, in 1880.<sup>5</sup>

Washington’s sultry summers and its location along the Potomac and Anacostia Rivers made canoeing a particularly appealing activity. The earliest known boat club in the region was the Falcon Club, formed in 1844. During the second half of the nineteenth century, many more clubs formed, including: the Gazelle and Undine clubs (late 1840s), Fletcher’s Boathouse (c. 1860), the Potomac Boat Club (1868), the Analostan Club (1868), the Anacostia (later Washington) Club (1869), the Columbian Boathouse (1880), Sycamore Island Canoe Club (1885), High Island Canoe Club (1899), and Dempsey’s Boathouse (1903).<sup>6</sup> The boathouses ranged in size and design based on use: some were built merely to store the boats, while others were a center for social activity. The members of some of these boathouses paddled canoes and kayaks, while other clubs featured rowing.

Despite the fact that the Washington Canoe Club is currently the only structure west of the abandoned

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1 Christopher N. Brown, *Washington Canoe Club* (Charleston: Arcadia Publishing, 2020), 9.  
2 National Register of Historic Places, Washington Canoe Club, Washington, DC, National Register # 90002151.  
3 Dulles, p. 201-202; Washington Canoe Club, National Register Nomination.  
4 Endicott, p. 1.  
5 Toro, p. 2; Endicott, p. 4.  
6 “Pioneer Potomac Boat Clubs,” *The Evening Star*, 10 August 1941, Peabody Room, DCPL; “The Balmy Days for Clubhouses Along the Patowmack,” and “Boat Club Reviving Old Potomac Rivalry,” n.d., vertical files, Peabody Room, DCPL.





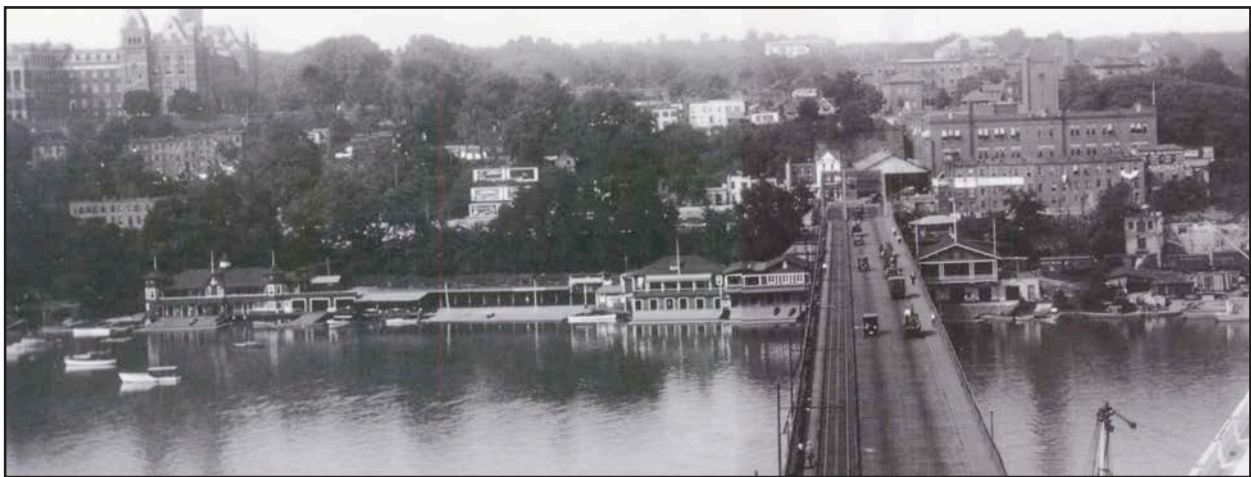
**FIGURE 03** The Sycamore Island Canoe Club as it appeared in the mid-twentieth century. Founded in 1885, the club is located on the Potomac several miles upriver from Washington DC and the Washington Canoe Club. Christopher Brown, *Washington Canoe Club*.



**FIGURE 04** 1900s postcard of the Potomac River near Haines Point showing people in canoes and small boats enjoying the water. Christopher Brown, *Washington Canoe Club*.

Aqueduct Bridge, for much of the first half of the twentieth century it was surrounded by various buildings, first a feed mill and a warehouse-type structure, and later by a sheds, docks, and other boathouses. This section of the Potomac River was specifically attractive to boat and paddle clubs because members sought to avoid the marshy conditions downstream (beyond what is now Memorial Bridge) and the traffic and pollution emanating from Georgetown's industrial waterfront. Boathouses that neighbored the Washington Canoe Club included:

- Dempsey's Boathouse, the Washington Canoe Club's eastern neighbor. Built next to the Aqueduct Bridge in 1903 by Georgetown University's rowing coach Patrick Dempsey, the boathouse expanded approximately 200 feet upriver in the 1910s to accommodate as many as 1,000 canoes.<sup>7</sup> By 1922, Dempsey's Boathouse featured a two-story building with a long boat shed and ramps to the water and a single-story building abutting the Washington Canoe Club's East Bay addition. The single story building was replaced by a two-story building by



**FIGURE 06** Image taken from Virginia looking north to the western end of the crowded Georgetown waterfront. The Washington Club is located at the left end of this image, seen between the one-story shed belonging to Dempsey's Boathouse to the east and several smaller sheds to the west, 2 September 1922. The Potomac Boat Club is visible directly to the east of Aqueduct Bridge. The People's Archive at the DC Public Library.



**FIGURE 05** Washington Canoe Club, centered, with Dempsey's Boathouse addition seen to the right and Warner's Canoe Club to the left, c. 1925. Brown, *Washington Canoe Club*.

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7 Brown, *Washington Canoe Club*, 37.

1925. By the 1950s, the buildings had fallen into disrepair, and in 1961, the main boathouse succumbed to a catastrophic fire.<sup>8</sup>

- The Potomac Boat Club constructed its third and current boathouse immediately east of the Aqueduct Bridge in 1908.
- By 1925, a long shed with ramps connecting to the River had been constructed directly to the west of the Washington Canoe Club for use by Warner's Canoe Club. It was subsequently destroyed in the 1936 flooding event.<sup>9</sup>

By the 1960s, the Washington Canoe Club was the only remaining building west of Key Bridge. Before any of the land could be redeveloped, the Chesapeake & Ohio (C&O) Canal National Park was designated in 1971, thereby protecting the Potomac waterfront and area around the C&O Canal from future building construction.

## BOATHOUSE ARCHITECTURE

The first boat houses were utilitarian frame buildings meant only as a temporary place to store boating equipment. These structures were gradually replaced with frame and masonry buildings and were often architect-designed houses, such as those at Boathouse Row along the Schuylkill River in Philadelphia and along the Charles River in Boston. The boathouses present in Boathouse Row, for instance, are all examples of architectural styles prevalent during the late nineteenth century, representative of the shift from utilitarian to eye-catching architecture of a variety of styles.



FIGURE 07 Boathouse Row along the west bank of the Schuylkill River in Philadelphia, undated. Library of Congress.

Boathouses became a place for architects to showcase their designs, as they were highly visible at races because of their location along the waterfront. Thus, characteristic elements of the building styles were confined to the façade that fronts on the water. Together, boathouses along a shore line create a “riverscape,” similar to townhouses in an urban setting.

Because boathouses were typically owned by organizations or clubs, the layout of space within the boathouse reflected social and community involvement. In addition to boating activities, clubs often sponsored events such as dances, dinners, and various other gatherings. To provide the space necessary for these events, boathouses were frequently designed with rooms for social or business functions, such as ballrooms and board rooms. Additionally, as boathouses were largely unconditioned, many

8 Brown, *Washington Canoe Club*, 48.

9 Brown, *Washington Canoe Club*, 45.

(including the Washington Canoe Club) featured fireplaces or wood stoves to allow members to gather at the club house year-round.

## THE WASHINGTON CANOE CLUB: CAMARADERIE AND COMPETITION

The Washington Canoe Club was chartered in 1904 for “mutual improvement, the promotion of physical culture, and the art of canoeing.”<sup>10</sup> Once chartered, the quest to design and build a club house commenced. As part of the fundraising efforts, club members participated in a subscription contest to *The Washington Post*, and grabbed the first prize money of \$1,000. They put on a minstrel show at Poli’s Theatre (demolished) that raised an additional \$700. A neighboring club, the Old Dominion Boat Club in Alexandria, sponsored a dance for them as well. With money to build, the Washington Canoe Club consulted with architect George P. Hales for the club house. Hales was a paddler from Boston, Massachusetts, and his design for the Washington Canoe Club was said to be an adaptation of the boathouses seen along the Charles River.<sup>11</sup>

Several of the founding members of the Washington Canoe Club had previously belonged to the rowing-focused Potomac Boat Club; however, they launched the Washington Canoe Club to concentrate on paddle sports, such as canoeing and



**FIGURE 08** Washington Canoe Club outfitted for a regatta, c. 1920. Brown, *Washington Canoe Club*.



**FIGURE 09** Photograph of Harry Knight, Jr. (future Olympian) and Elizabeth Smith competing in a Mixed Tandem race for the Washington Canoe Club, c. 1921. Washington Canoe Club.

10 While the original charter of the Washington Canoe Club barred membership of women, at the time of writing this report, formal language barring membership to minorities has not been found. That said, records reveal that the membership was originally limited to Caucasian males.

11 Washington Canoe Club, HABS No. DC-876, December 2013; DC Historic Preservation Office, Permit No. 0794, 18 September 1905; “Paddlers of Canoes,” *The Washington Post*, 3 September 1905, S4.

kayaking.<sup>12</sup> At the time of the Club's establishment, membership was limited to 100 men. Women enjoyed the club as guests, typically as passengers on the recreational canoes, cheering on the men in competitions, and participating in dinners and dances. Despite the fact that women were not granted early membership, the original building did include a "ladies' room", complete with a ceiling fan, in the southern portion of the second floor off the ballroom.<sup>13</sup>

As with other clubs, the Washington Canoe Club sponsored activities in addition to canoeing. Summer activities included boating excursions, regattas, lantern parades, swimming matches, and dining events. During the winter months, the ballroom was used for ladies' nights, dances, receptions, minstrel shows, and other theatre parties.<sup>14</sup>

As the social aspects offered by the club increased, so too did the need to expand the clubhouse's footprint. In 1909, Hales designed an addition to the building's east elevation. The addition provided symmetry to the building. Programmatically, several spaces were added, including a kitchen, grill room (a dining room), and board meeting rooms.

### **From Recreation to Olympics**

In a pattern typical of country and athletic clubs of the late-nineteenth and early-twentieth centuries, the Washington Canoe Club not only provided activities to fill increased leisure time, but also helped to set standards for competition in amateur sport.

In 1915, the Washington Canoe Club, along with the Potomac and Anostan Clubs and the Maryland Swimming Club in Baltimore, joined together to form the Southern Division of the American Canoe Association with the goal of entering national and international competitions. The following year, the Washington Canoe Club won the fourteenth annual regatta of the Inter-club Canoe Association, and by 1920, members of the Washington Canoe Club dominated the sport. As the Washington Canoe Club experienced more and more success, interest in fielding an Olympic team developed. At the time, six



**FIGURE 10** Stand up paddle race, 1922. Dock of the Washington Canoe Club seen in the foreground. Washington Canoe Club.

12 Blaise Rhodes to Virginia B. Price, personal communication, 13 August 2013; Ernie Brooks to Virginia B. Price, personal communication, 13 August 2013.

13 Brown, *Washington Canoe Club*, 49; "Washington's Latest Club: Success of New Canoe Organization Seems to be Assured," *The Washington Post*, 31 December 1905.

14 The Washington Canoe Club regularly hosted minstrel shows through its first decade of existence. Although research to date has not uncovered specific language of segregation, the shows are a good indication of the racial biases held by club members.

members of the Washington Canoe Club -- Harry Knight, Karl Knight, James Burch, Reginald Rutherford, Charles Wagner, and Fred Bammon -- held national titles.<sup>15</sup>

In the 1920s, paddling reached new prominence as a sport and the Washington Canoe Club hit its stride. As the Club began to seriously compete, they began to allow women athletes to join the club and participate in competitive races. In order to show their support for their female counterparts, an addition that included a women's locker room was added around 1920.<sup>16</sup>

In the first half of the twentieth century, clubs played a more direct role in the

Olympic competition due to the fact that the Olympic teams were determined by national races among clubs with the winning club representing the United States, rather than a team composed of individuals brought together for the specific purpose of Olympic training as they are today.

In 1923, an international federation was formed to set dates for regattas and codify classes of boats. Standards for racing class canoes and kayaks were then set as single, double, and four-man kayaks (K-1, K-2, and K-4) and single and double Canadian canoes (C-1 and C-4). At the encouragement of the Washington Canoe Club, the international organization succeeded in placing flatwater canoeing in the 1924 Paris Olympics as a demonstration sport, the preliminary step to full Olympic status. Four members of the Washington Canoe Club prevailed in national competition to represent the United States team, winning six medals.<sup>17</sup> Because too few countries participated in the sport at the Olympic level, it was not officially recognized as an Olympic sport until 1936. During the intervening years, however, the Washington Canoe Club swept national championships and major events.<sup>18</sup> Additionally, the Washington Canoe Club double-blade four was undefeated for six years during the 1920s, and the club was designated a "Center of Excellence" by the U.S. Olympic Committee.<sup>19</sup> Members of the Washington Canoe Club won places on every competing U.S. Olympic team from the 1936 games through 1996, the most of any other paddling club.

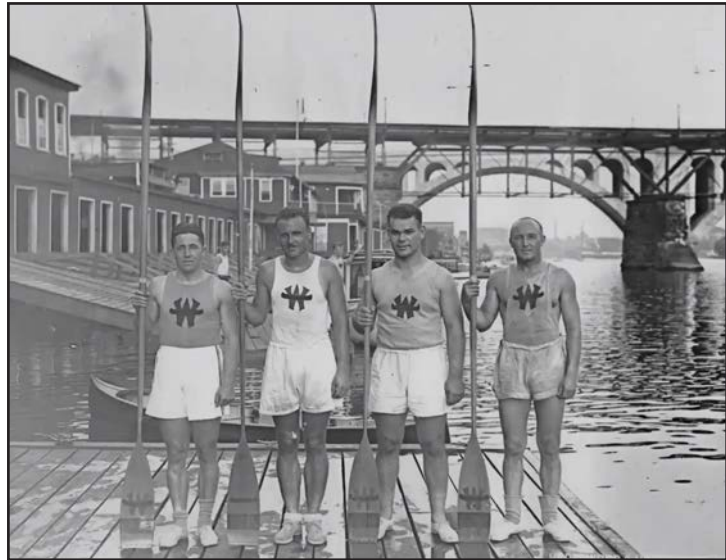


FIGURE 11 1924 Olympic double-blade paddling team at the Washington Canoe Club. Washington Canoe Club.

15 "Feature Canoe Race to Washington Club," *The Washington Post*, 31 May 1916, 12; "Washington Paddlers May Be in Olympics if Canoe Contests Are Added to the Program," *The Washington Post*, 8 January 1920, 9; Washington Canoe Club, HABS No. DC-876, December 2013.

16 Brown, *Washington Canoe Club*, 49.

17 Washington Canoe Club, National Register Nomination; Washington Canoe Club, HABS No. DC-876, December 2013.

18 "Washington Oarsmen to Compete in Olympics," *The Washington Post*, 23 March 1923, S1; "Washington Canoe Club in First Drill," *The Washington Post*, 6 April 1924, S1; "Canoeists Making Plans to Enter Olympic Games," *The Washington Post*, 20 April 1924, S2; Washington Canoe Club, HABS No. DC-876, December 2013.

19 Dacy, 393; Washington Canoe Club, National Register Nomination; Washington Canoe Club, HABS No. DC-876, December 2013.

Women's kayak events were added to the Canoeing National Championships in 1938 and to the Olympics in 1948. In 1952, Ruth DeForrest became the first female kayaker to qualify for the U.S. Olympic team; however, due to disagreements about training, budgets, and chaperones, the sport's governing body retracted her qualification, thereby denying her the opportunity to participate.<sup>20</sup> During the 1960 Rome Olympics, the U.S. finally succeeded in sending a woman kayaker -- again associated with the Washington Canoe Club -- to the sole women's event.<sup>21</sup>

The 1960s brought major changes to the paddle sport, particularly for women. Not only were women finally offered membership to the Club, but beginning in 1960, women affiliated with the Washington Canoe Club were on Olympic teams continuously through 1996.

## SITE HISTORY

### CONSTRUCTION OF THE WASHINGTON CANOE CLUB<sup>22</sup>

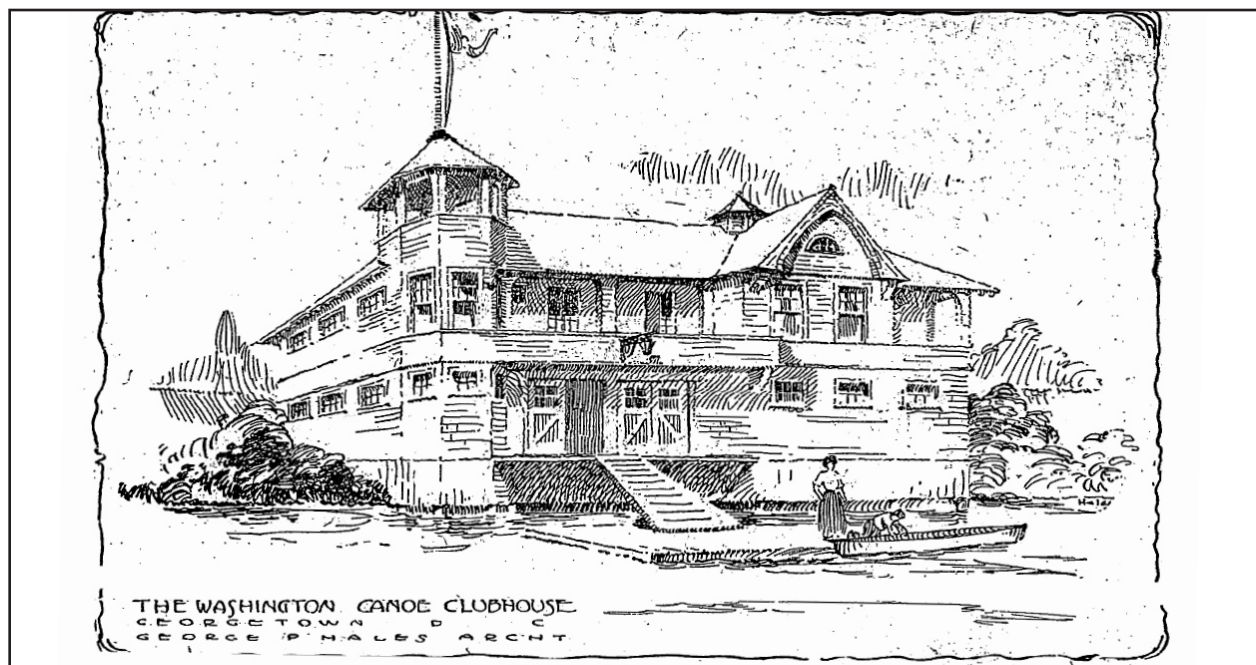


FIGURE 12 Sketch of the Washington Canoe Club. *The Washington Post*, September 3, 1905.

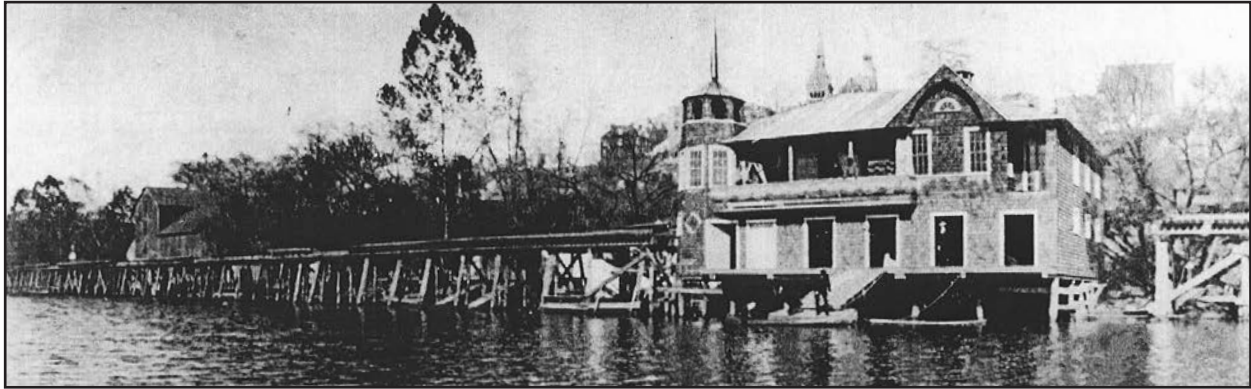
#### **Original Construction**

In 1905, *The Washington Post* announced that the “Washington Canoe Club, formed a few weeks ago, will begin to break ground for a clubhouse to be built about 100 yards above the Aqueduct Bridge,

20 While DeForrest was involved with the Washington Canoe Club, she was not granted full membership due to the rules and regulations Club.

21 Brown, *Washington Canoe Club*, 66.

22 This section is largely taken from Washington Canoe Club, HABS No. DC-876, December 2013.



**FIGURE 13** The Washington Canoe Club shortly after completion. Abandoned elevated railroad trestle extant on either side of the boathouse, c. 1906. The building's principal facade is the south (river facing facade). It incorporates several aspects of the Shingle style: uninterrupted shingle siding, complex massing, and octagonal tower Georgetown University Archives.

between the [C&O] Canal [towpath] and the River.”<sup>23</sup> The article provided a detailed description of the proposed building:

The exterior of the house will be plain, but attractive in appearance, and so built that should it be desired at any time to add to the building the addition may be made without marring the symmetry of the structure. At one corner there will be a tower, surmounted by a flagpole, from which will float the pennant of the club. The house will be 40 by 60 feet and two stories in height, with the top of the roof twenty-five feet above the level of the first floor, which will be at about six feet above the tide mark.

The second floor will be on a level with the Canal [towpath], which is on the embankment at this point, and may be reached by crossing a bridge to the door. Another means of access is afforded by a flight of steps to the door on the first floor.

The entire first floor will be used for storing canoes, and will have sufficient racks to accommodate 125 [canoes]. The members intend to have their canoes in the racks by October 1, if possible, and they continue to rush the completion of the house as they have the plans and the awarding of the contract they will probably succeed. The racks will be so placed that the canoe can be removed without moving any of the others.

The second floor provides for the indoor entertainment of the members and their guests. The ballroom will be about 40 feet square, with an alcove fitted up as a cozy corner, overlooking the river, and casement windows leading onto two balconies also commanding a view of the water. At one end of the ballroom are the ladies room and the smoking-room, and between them is the hall leading to the locker and bathrooms. The ladies' room will be handsomely furnished.

The lounging-room will be fitted up as a den. The locker room will contain 125 lockers, each one ventilated and very roomy. The clubhouse will be adequately heated. The shower and baths will be located off the locker-room. A stairway will lead from the

23 Club records date the organizations establishment to 1940. It is possible that the club was organized in 1904 and incorporated in 1905. "Paddlers of Canoes," *The Washington Post*, 3 September 1905.





FIGURE 14 Ballroom, looking northeast, c. 1909. William “Dusty” Rhodes family.



FIGURE 15 Ballroom, looking northwest, c. 1915-1935. Note that the interior was remodeled, likely as part of the c.1910 construction. Washington Canoe Club.

locker-room to the first floor.<sup>24</sup>

The building permit identified George Hales as the architect, and R.Z. Hazell & Bro. as the builder of record. Hales was an early member of the Canoe Club who practiced architecture in the District from 1905 to 1919. Originally from Boston, Hales' Shingle style design was likely inspired by the bathhouses along the Charles River.

As seen from early images, when constructed, the building was painted red and featured a roof that was clad in wooden shingles. The building stood on pilings, and a large, canted, wooden dock afforded members direct access to the Potomac River.



FIGURE 16 Washington Canoe Club after second phase of construction, looking northwest, c. 1910. Note red siding. W. B. Garrison, Inc.. "View northwest over the Potomac River to Georgetown University," Postcard Collection, DC History Center.

### **Subsequent Alterations**

As interest in the club and its social offerings flourished, it became apparent that the footprint of the building needed be expanded in order to accommodate an increased number of members and their families. During the fall of 1909, Hales presented a proposal to extend the boathouse to the east. The proposal was approved by the Washington Canoe Club's board of governors in October 1909, and in November of that year, contractors Howison & Skinker received a permit to build the two-story wood-frame addition that would sit on



FIGURE 17 Washington Canoe Club after second phase of construction, looking northwest. Catwalk bridge above train tracks visible in right side of image, n.d. Brown, *Washington Canoe Club*.

24 "Paddlers of Canoes," *The Washington Post*, 3 September 1905.



**FIGURE 18** The WCC boathouse as it appeared after completion of the second construction phase c. 1910. Downspouts visible on the east and west ends of the balcony, and rectangular drainage holes ran across the balconies. Washington Canoe Club.



**FIGURE 19** Catwalk bridge leading from C&O Canal towpath to entrance within tower at the north elevation, looking southwest, 1936. The elevated entrance comprised of double wood-panel doors with glazing. Note attached shed off of the northern elevation, as well as the openings at the first story level. Also note that by this time, the roof shingles had been replaced with some sort of composite. William "Dusty" Rhodes family

pilings.

As part of the scope, an overhead steel bridge was proposed to provide access to the clubhouse via the C&O Canal towpath.<sup>25</sup> This bridge was necessary because the construction of a new railroad spur (the Georgetown Spur) for the Baltimore & Ohio (B&O) Railroad laid directly to the north of the boathouse obstructed the building's original entrance.<sup>26</sup> The completed steel bridge connected to the building at the mezzanine level of the northeast tower. It is assumed that a small landing was located inside the tower, and a second set of stairs connected the landing with the second floor of the building (refer to Figure 19 for clarity). Also around this time,

the Washington Canoe Club entered into talks with the U.S. Army Corps of Engineers for placing protective riprap above the boathouse and sought a permit to do so. This work was completed in the early 1910s. Once all work was completed, the boathouse's address changed from the C&O Canal to

25 DC Build Permit No. 4884, 10 March 1910, The People's Archive.

26 "Boathouse Gossip," *Evening Star*, 28 February 1909.

Water Street, reflecting the development of the Georgetown waterfront.<sup>27</sup>

When completed, the *Washington Times* pronounced the Canoe Club as the finest boathouse on the Potomac. Descriptions of the completed building hailed the verandas and the corner towers and called attention to the shingled exterior that characterized its appearance and distinguished it architecturally.<sup>28</sup> Beyond this, the additional square footage allowed for an expansion of programmatic offerings for club members. On the ground floor, the expansion allowed for increased boat storage, a grill room, a kitchen, and a workshop area for canoe repair. The grill room, considered an innovative boathouse amenity, featured a frieze painted on detachable panels depicting club members drinking and paddling that was designed and implemented by political cartoonist for the *Evening Star* Felix Mahony. On the second floor, the addition allowed for the expansion of the ballroom, the addition of a meeting room for the board of governors, the expansion of the men's locker room, and the relocation and enlargement of the ladies room.

In 1913 the clubhouse was described as having been “enlarged and expanded” referencing this work and the growth of Georgetown's waterfront. The description continued, noting that:

The clubhouse is situated on the north bank of the Potomac River, about 50 yards above the Aqueduct bridge. It is an attractive frame two-story structure, with shingle sheathing. The first floor is taken up with canoe storage racks, grill room, kitchen and work room. The second floor contains the ball room, locker room with showers, board room, and ladies' room. Access to the house is by a steel bridge extending from the canal tow path across the railroad tracks to the main entrance.

The club has been financed entirely by members' dues and the proceeds of various entertainments and benefits.<sup>29</sup>

Other boat clubs along the Potomac also expanded their footprints during this era. Patrick Dempsey's boathouse, located to the east of the Washington Canoe Club and near the Aqueduct Bridge, planned for an addition that was approximately 200 feet in length to house approximately 1000 canoes. In May 1914, two rows of oak pilings were driven from the west elevation of Dempsey's to the Washington Canoe Club.<sup>30</sup>

On February 14, 1918, a major thaw caused an ice dam to form at the Fourteenth Street Bridge, which backed up the ice all the way to Chain Bridge. The dam caused the water to rise sixteen feet above normal levels in Georgetown, resulting in catastrophic damage to the boathouses located at the Georgetown waterfront. Beyond damages sustained to the Washington Canoe Club, which were estimated to be valued at approximately \$25,000, the canoes stored within also sustained damage.<sup>31</sup>

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27 DC Build Permit No. 3477, 26 November 1909, The People's Archive.

28 “Canoeists' Home Doubled in Size: Enlarged Quarters of Washington Canoe Club Considered Finest on the Potomac,” *Washington Times*, 12 March 1910.

29 “Washington Canoe Club has House on Potomac River,” *Christian Science Monitor*, September 26, 1913, 4.

30 “Erects Big Canoe House,” *The Washington Post*, 3 May 1914.

31 “Flood Danger Passed,” *The Washington Post*, 16 February 1918, 2; “30,000 Throng Aqueduct Bridge at Neighboring Roads to Witness Wreckage Left by Weeks' Flood,” *The Washington Post*, 18 February 1918, 2; “Crest of Flood is Receding But Damage Has Increased,” *The Washington Post*, 1 April 1924, 5; Washington Canoe Club, HABS No. DC-876, December 2013.



**FIGURE 20** Bird's-eye view of the boathouses along the Potomac River damaged by the ice jam, February 1918. Library of Congress.



**FIGURE 21** The west boat storage area sustained significant damage after a motor boat drove into the building during a flooding event, n.d. Brown, *Washington Canoe Club*.

In response to the growing number of women athletes allowed to participate in Club activities and races, in 1920, a simply constructed open-shed addition with three large openings was added to the east of the building with a small addition at the second story at the northwest corner.<sup>32</sup> In contrast to the main building, the shed was utilitarian and devoid of architectural detailing. The first floor was to be used for additional boat storage, while the second floor was to house a women's locker room.<sup>33</sup> The roof of the East Boat Storage Area was used as a deck. In response to the growing number of female athletes, the Women's Locker Room was expanded at some point between 1936 and 1939 to extend

<sup>32</sup> DC Build Permit No. 6432, 14 May 1920, The People's Archive.

<sup>33</sup> The ladies' lounge, which provided a space for the wives and children of club members, remained in use alongside the women's locker room -- a space specifically devoted to the women athletes.



FIGURE 22 Aerial photograph showing the completed one-story, three-bay East Boat Storage Area with the Women's Locker Room addition on the second floor in the northwest corner, June 30, 1931. NARA II.

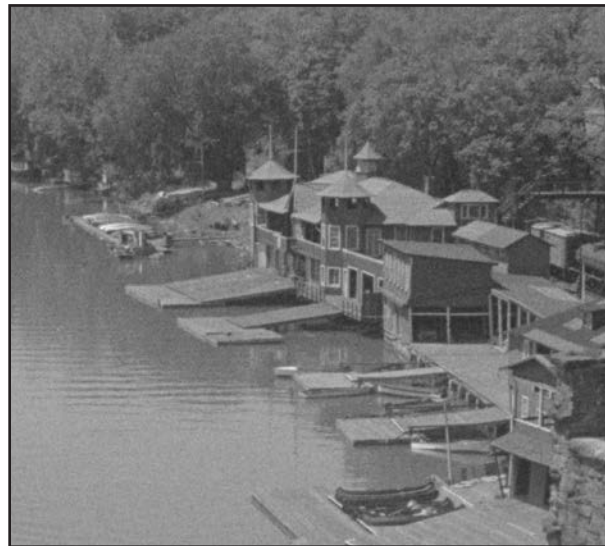


FIGURE 23 Addition of Women's Locker Room completed, c. 1939. The addition has a slightly darker roof coloring than the original (added c. 1920s). Library of Congress

the entire length of the East Boat Storage Area.

In March 1936, another major flooding event occurred following heavy rains and rapid snow melt.<sup>34</sup> A brass plaque located in the Board Room on the second floor marked the water line at about two feet above the floor. An article published in *The Washington Post* was ominously titled, "Washington Canoe Club Going Under," as the water covered the floats, piers, and ground floor. Only the second floor was visible, and the boathouse sustained significant damage.<sup>35</sup> In addition to cleaning, members repaired the leak in the radiator of the grill room. Around this time, club members also debated whether to replace the wood slat floor in the shower and proposed different solutions for securing the site, including the installation of barbed wire, suggesting the location of the boathouse made it vulnerable when unattended. Despite internal discussion, it does not appear that a fence was erected at this time.

In 1957, the boathouse was swept off its foundation piers after a flooding event that was the result of heavy rains and melting snow. The boathouse was swept five feet downstream, but was returned to its original position.<sup>36</sup> \$800 worth of lumber was requested to complete the necessary repairs to the West Boat Storage Area.<sup>37</sup> Although separate in nature, the women's locker room was painted and the furnace room door re-hung at this time.

In 1960, following the enactment of Public Law 86-515, the District constructed a sanitary sewer that connected the DC sewer system to Dulles airport. The sewer installation was a major project along the riverfront, and the riverbank area was filled to facilitate access upriver for emergency vehicles. A

34 The Washington Canoe Club has been effected by several major flooding events that have taken place with some regularity. These events occurred in 1924, 1936, 1937, 1942, 1948, 1952, 1955, 1972, 1985, and 1996.

35 "Washington Canoe Club Going Under," *The Washington Post*, 20 March 1936, 21.

36 Jack Brosius to Virginia B. Price, personal communication, 13 August 2013; Washington Canoe Club, HABS No. DC-876, December 2013.

37 Washington Canoe Club Log, 1936-57, vertical files, Washingtoniana Collection, DCPL.



**FIGURE 24** Images from the 1936 Flood. The upper image shows that the water was above the second flood level. Brown, *Washington Canoe Club*.



**FIGURE 25** Photograph of the boathouse with the expanded Ladies Locker Room above the northern portion of the East Boat Storage Area, 1958. Dan and Bonnie Havens.



**FIGURE 26** Installation of Potomac Inceptor Sewer Line, looking west, .c. 1965. Washington Canoe Club.

concrete deck was laid directly to the south of the Washington Canoe Club to shield the large pipe that was installed directly in front of the Club House. When completed, the finished grade elevation of the new concrete apron was approximately ten inches above the original floor level of the boathouse. Not only did this exacerbate the water infiltration into the building, but it also resulted in the loss of the building's original proportions and relationship of the first story to the ground plain. Around the same time, two concrete mixing companies donated the excess concrete generated during their work days and club members worked with that material to backfill

the sewer pipe and under the boathouse to mitigate standing water beneath the building. Most of the wooden floor boards were removed, and concrete was filled in around the piers. The result was an uneven and heavily textured concrete floor throughout the first floor.<sup>38</sup>

The entry for the Washington Canoe Club in the 1968 catalogue *Georgetown Historic Waterfront* includes a photograph of the south (front) façade with the concrete in-fill beneath the building in place and picnic tables and canoes out in front. The floating dock is in place as well. Regarding the building itself, the flagpoles are present, and the tower windows are open as are most of the ground-floor doors. Fenestration consisted of sash glazed with six-over-six lights, smaller square windows glazed with six

38 Jim Ross (Vice President, Washington Canoe Club), in discussion with the author, January 2021.





**FIGURE 27** Washington Canoe Club, 1968. *Georgetown Historic Waterfront* (Washington, DC: US Commission of Fine Arts, 1968).

lights, and the French or double doors opening from the ballroom onto the balcony. The description accentuates the romanticism of the Shingle style and notes of the floor plan:

The ground is given over almost entirely to the canoes, while the second floor houses the facilities. Recessed at the western end of the second floor is the men's dressing room and at the eastern end, the lounge. In between is a ballroom ornamented by columns supporting the hipped ceiling at either end and by built-in benches. At the north end, or inland side, is a brick fireplace, and at the opposite end, on the water side, is a wooden bandstand.<sup>39</sup>

Around 1970, the catwalk over the railroad tracks that was completed in 1910 to connect the C&O Canal towpath to the Washington Canoe Club's second story entrance on its north elevation was removed.<sup>40</sup>

In 1972, following another devastating flood caused by Hurricane Agnes, long-time club member Joe Lederle spearheaded several projects to repair the first floor of the 1905-1910 portions of the building, all of which were completed by 1976:<sup>41</sup>

1. Damaged wooden framing at the base of the exterior walls was removed from the west and north sides of the building. For this work, Lederle slightly raised the wooden building with heavy duty jacks, removed the lowest 24 inches of damaged wooden wall framing, and then placed three courses of concrete masonry units. He then inserted a new horizontal wooden plate and reconnected the wood structure to the new concrete block wall.

39 *Georgetown Historic Waterfront: A Review of Canal and Riverside Architecture*, s.v., "Washington Canoe Club," 80.

40 Brown, *Washington Canoe Club*, 46.

41 Smith, FAIA, "Appendix A: WCC Structural Renovations (1972-2005), *Washington Canoe Club Boathouse Rehabilitation 2015*, 1-5.

WASHINGTON CANOE CLUB  
Historic Structure Report



FIGURE 28 (LEFT) Elevated Second floor entrance accessed via catwalk, 1936. William “Dusty” Rhodes family. (RIGHT) Wooden porch and stairs added to shield the non-original entrance. North elevation of tower has also been infilled.



FIGURE 29 1972 flood. Water again completely encompassed first story of the Washington Canoe Club. Brown, *Washington Canoe Club*.

2. In order to align the first floor of the boathouse with the exterior concrete apron, the first floor slab was leveled and raised. In order to complete this, the limited extant wood flooring in the West Boat Storage Area was removed, and an eight-inch thick concrete slab with a four inch sand/gravel substrate was laid throughout the building's ground floor. The West Boat Storage Area was finished with a smooth concrete, while the areas within the c. 1910 portion of the building – the hallway, Kitchen, and Grill Room – were finished with a ceramic tile. The Kitchen area was topped with a two-inch thick leveling slab, resulting in a slight grade difference between it and the Grill Room. Not long after the project's completion, however, ground water entering the building from the north resulted in constant dampness and slippery conditions in the West Boat Storage Area. After several mitigation options were considered, trenches were chiseled in the top of the concrete floor to gather and direct the water along the north wall and then channel it toward the river.
3. Flood-damaged wall paneling in the Grille Room and Kitchen was removed entirely and a coating of cement plaster over galvanized metal lath was placed throughout. It is unclear why this treatment was not carried through into the hallway.
4. Steel columns and beams were added in the Grill Room and Kitchen to support the floors above.
5. Four small fixed windows were added to the exposed first story of the north elevation.

In the mid 1970s, the roof deck above the East Boat Storage Area was covered to allow space for a workroom on the second floor. Upon completion, it is likely that a door was added to the east elevation and accessed by a set of exterior wooden steps to provide another means of egress. In 2020, the stairs were removed; however, the door remains extant.

In 1992, as changing canoe standards necessitated the need to update the storage, two club members removed and replaced the entire structural support system in the East Boat Storage Area, including the interior boat storage racks and the floor of the second floor workroom. The renovation resulted in a thirty percent increase in boat storage capacity.<sup>42</sup>

In 1995, in an effort to provide ADA-compliant access, a ramp was added to the north elevation above the stairs that led to the porch. The ramp was not well maintained, and was removed by 2020.

Between 2005 and 2008, the wood floor and support frames of the balcony were reconstructed with all new materials due to severe deterioration. As part of this work, the south wall at the first story of the original portion of the building was reconstructed, as were the Boat Storage door openings and the sliding wood doors. The windows in the Grille Room were also replaced in kind.

In 2010, the National Park Service, owner of the Washington Canoe Club building and the land on which it is located, determined that the building was no longer structurally sound and that the structure presented a hazard with regard to life and safety standards. While temporary stabilization measures were taken, the building, except for the first floor East Boat Storage Area, has remained unoccupied since that time. In 2013, due to the renovations taken in 1992, the East Boat Storage Area was determined to be the only area of the building safe to occupy. The western bay was largely infilled,

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42 Jim Ross (Vice President, Washington Canoe Club), in discussion with the author, January 2021.

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**FIGURE 30** South elevation. NRHP, Office of Betty Bird, September 3, 1989.



**FIGURE 31** Front facade from dock. NRHP, Office of Betty Bird, September 3, 1989.



**FIGURE 32** Northwest corner of Grill Room. NRHP, Office of Betty Bird, August 27, 1989.



**FIGURE 34** Southeast corner of Board Room. Note carpeting. NRHP, Office of Betty Bird, August 27, 1989.



**FIGURE 33** North Wall of Ballroom. NRHP, Office of Betty Bird, August 27, 1989.

and a contemporary pedestrian door replaced a rolling garage door.

## LAND OWNERSHIP

In 1890, the Washington & Western Maryland Railroad Company devised a plan to extend its rail lines from western Maryland to Georgetown. This plan called for the construction of an elevated trestle along the Potomac River's edge just south of the C&O Canal, at that time the principal transportation route for raw goods coming from Western Maryland to Georgetown.

For reasons unknown, the project was halted after approximately 4,400 feet of trestle was built, and the tracks were eventually abandoned and torn down. In order to make way for the Washington Canoe Club, constructed between 1905 and 1906, a portion of the tracks were demolished. The remaining tracks were demolished in 1907.<sup>43</sup>

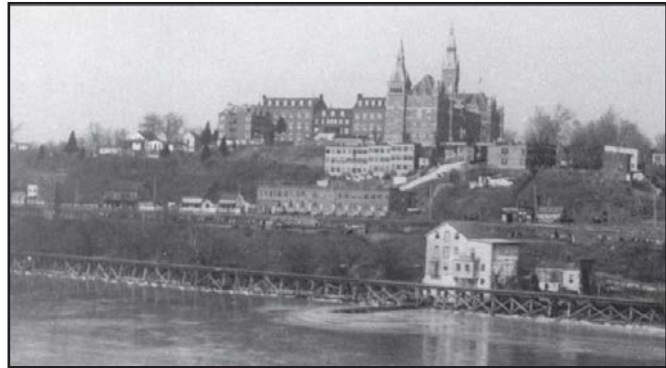


FIGURE 35 The shore of the Potomac as it appeared in 1889 showing a railroad trestle, mill, and various other structures with Georgetown University in the background. Washington Canoe Club.

In 1906, the Baltimore & Ohio (B&O) railroad proposed the construction of a new line -- the Georgetown Branch -- along the Potomac River to provide a connection between Silver Spring, Maryland and Georgetown. The new line was proposed to run along the same path as the trestles built by the Washington & Western Maryland Railroad Company; however, because the Washington Canoe Club had been built, the tracks were diverted to run along the north side of the club house at the base of the C&O Canal embankment. Construction began in 1908 and was completed in 1910.

A 1922 trust document confirms that the canoe club was located on land controlled by the B&O Railroad, identified as tax parcel 27/36, and encompassing 1/10th of an acre between the C&O Canal and the Potomac River. In September 1938, due to financial strains caused by the Great Depression, the B&O Railroad, which owned a controlling interest in the C&O Canal receivership, sold the entire C&O Canal to the National Park Service (Reservation 404, Palisades District).<sup>44</sup> Once the land was transferred to the government, leases and special use permits were issued to the boat clubs and to commercial entities along the waterfront. These leases and permits allowed for the continued use of

43 Brown, *Washington Canoe Club*, 30.

44 "A Canal Becomes a Park," *The Baltimore Sun*, 19 November 1939, M2; DC Recorder of Deeds, Liber 7272, Folio 068, 23 September 1938. The National Register of Historic Places nomination identified the boundary lines for the Washington Canoe Club property as Parcel 301/4 of the DC Surveyor's description of the club's improvements on Reservation 404.

the land on which the various buildings stood, as was the case for the Washington Canoe Club.<sup>45</sup> The Canoe Club's lease with the B&O Railroad/C&O Canal was canceled out by the 1938 sale, and a special use permit was issued in October 1938 to bridge the gap between lease agreements.<sup>46</sup> Another special use permit was issued by the US Department of the Interior in 1939.<sup>47</sup>

The 184.5-mile C&O Canal was declared a National Monument in 1961 and legislation was passed in 1971 to establish the C&O Canal National Historical Park. From the establishment of the park and continuing through 2007, special use permits supplemented the lease agreements and allowed for the continued operation of the boathouse by the Washington Canoe Club.<sup>48</sup> Short-term leases were negotiated with the club after 2007.<sup>49</sup> In 2019, a 60-year lease agreement was signed between the Washington Canoe Club and NPS.

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45 "Permit #NCR CHO 6000 422, C&O Canal NHP, Palisades District," Washington, DC. Details on a special use permit relate to a "parcel of land approximately 96 feet by 157 feet, located in the C&O Canal National Historical Park, beside the Potomac River upstream (west) of the Old Aqueduct Bridge, in the vicinity of Georgetown, DC, as shown on the enclosed map...." Appraisals for the boathouse in 1989 identified the property as part of Square 1180, Lot 1, Site No. 18, and as consisting of 36,850 square feet.

46 Chesapeake and Ohio Canal National Historical Park, administrative files, Hagerstown, Maryland.

47 Washington Canoe Club, National Register Nomination; Washington Canoe Club, HABS No. DC-876, December 2013.

48 DC Historic Preservation Office, Permit No. 0794, 18 September 1905; Washington Canoe Club, HABS No. DC-876, December 2013.

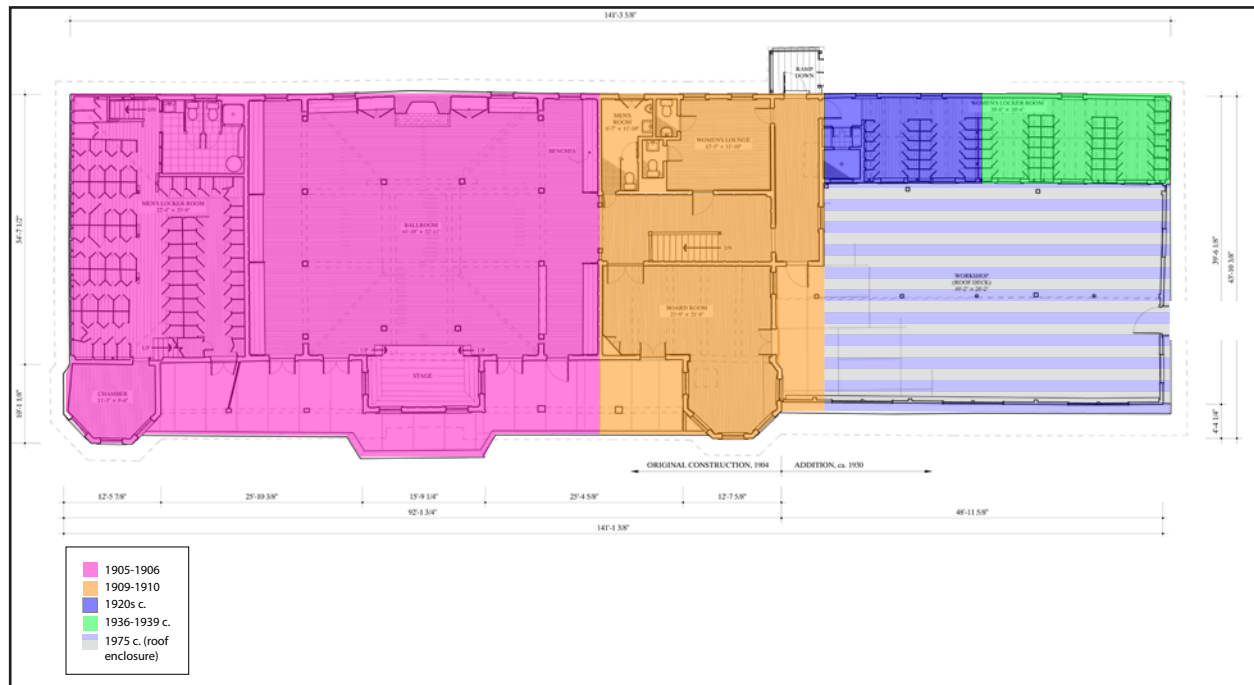
49 Washington Canoe Club, National Register Nomination; Washington Canoe Club, HABS No. DC-876, December 2013.

## BUILDING CHRONOLOGY

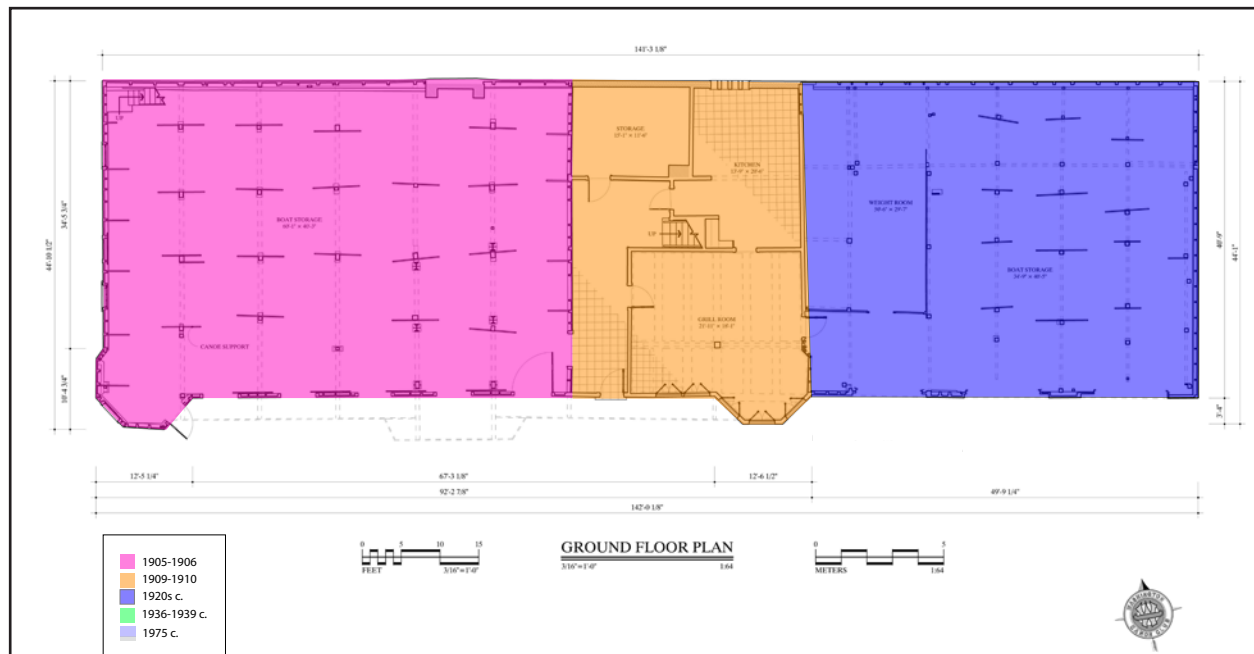
This section provides a timeline for additions and alterations that occurred to the Washington Canoe Club boathouse since its initial construction. The building has a Period of Significance that extends from 1904 through 1939, as defined by the NRHP documentation.

|                     |  |
|---------------------|--|
| <b>1905-1906</b>    | Phase 1 construction of the Washington Canoe Club completed.   |
| <b>1909-1910</b>    | Phase 2 construction included eastern addition to give the building a symmetrical design.  |
| <b>1910</b>         | Art panels around the perimeter of the Grille Room installed.  |
| <b>1910 c.</b>      | Construction of steel overpass pedestrian bridge over the Georgetown Branch of the B&O railroad to provide access to the first-floor of the clubhouse from the C&O Canal towpath.  |
| <b>1920 c.</b>      | Stone rip-rap filled in beneath building around pilings.   |
| <b>1920</b>         | Phase 3 construction included eastern shed addition.   |
| <b>1936-1939 c.</b> | Women's locker room extended; boat sheds to the west of the clubhouse are demolished.  |
| <b>1939</b>         | End of Period of Significance  |
| <b>1957</b>         | Ice flow pushed the WCC off its pier foundations and jacks were used to move the building back into place.   |
| <b>1960 c.</b>      | Potomac Interceptor installed; Concrete apron laid   |
| <b>1970 c.</b>      | Steel overpass pedestrian bridge connecting the clubhouse to the C&O Canal towpath is removed; new porch on north elevation constructed.   |
| <b>1972-1976.</b>   | Damaged wooden framing along west and north elevations removed; first floor raised to align with concrete apron; flood damaged wall paneling removed and replaced with plaster over galvanized metal lath; additional structural support added; four small fixed windows added to first story of north elevation |
| <b>1975 c.</b>      | Enclosure of roof deck at the east end of the clubhouse to create a workshop.  |
| <b>1992</b>         | Structure, joists, and columns in the East Boat Storage Area entirely updated (the structure under the Women's Locker Room remained); a new floor was installed in the Workshop  |
| <b>1995</b>         | Ramp added to non-original porch on north elevation to provide handicap accessibility to the second floor  |
| <b>2005-2008</b>    | Balcony structurally reinforced and reconstructed; first story of south elevation reconstructed, including doors and windows   |
| <b>2010-2013</b>    | Original portion of the building and c. 1909 addition closed; stabilization efforts undertaken by NPS  |

**WASHINGTON CANOE CLUB**  
Historic Structure Report



**FIGURE 36** Building Chronology, Second Floor. EHT Traceries, 2020.

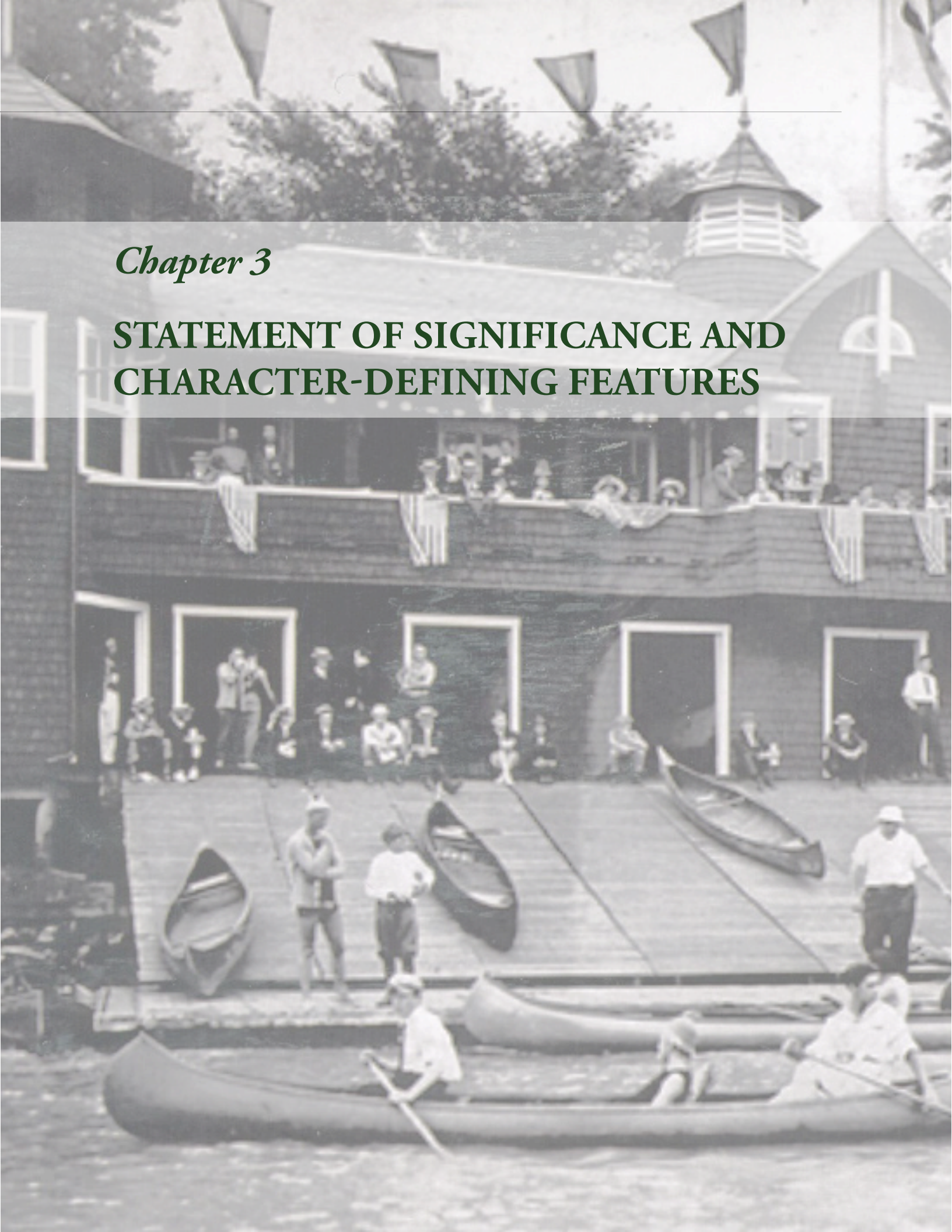


**FIGURE 37** Building Chronology, First Floor. EHT Traceries, 2020.



*Chapter 3*

**STATEMENT OF SIGNIFICANCE AND  
CHARACTER-DEFINING FEATURES**



## STATEMENT OF SIGNIFICANCE

The Washington Canoe Club was designated as an individual landmark within the DC Inventory of Historic Sites in 1973 and was listed in the National Register of Historic Places (NRHP) in 1990. It is also considered a contributing resource to the Georgetown Historic District and Potomac Gorge.

Below is the official statement of significance for the Washington Canoe Club, as provided by the NRHP documentation:

The Washington Canoe Club, constructed in 1904, is one of two remaining boat clubs along the Potomac River in Washington, DC. An excellent example of shingle style architecture, the building has served as the sole home of the Washington Canoe Club, which pioneered the development of flatwater racing as an Olympic sport and which continues to play an important role in Olympic competition. The Washington Canoe Club also represents the role of athletic clubs and active sports in the District of Columbia's recreational life in the early 20th century. The Washington Canoe Club meets National Register Criterion C because it embodies the distinctive characteristics of the shingle style. It meets Criterion A because of its association with the Olympic sport of flat water racing and because of the role it played in the social and recreational life of the District of Columbia in the early 20th century.<sup>1</sup>

## PERIOD OF SIGNIFICANCE AND INTEGRITY

The NRHP documentation identifies a period of significance as extending from 1904 through 1939. The NRHP identifies 1904 as a significant date as it corresponds to the year that the Washington Canoe Club was established. The NRHP further identifies 1924 as a significant date because it was the year that the Washington Canoe Club prevailed in national competition to represent the United States at the Olympics.

## CHARACTER-DEFINING FEATURES

The Technical Preservation Services Division of the National Park Service outlines an approach for identifying visual aspects of a building that contribute significantly to its architectural character and historic character. This process is documented in *Preservation Brief 17: Architectural Character - Identifying the Visual Aspects of Historic Buildings as an Aid to Preserving Their Character*.

The process of identifying and describing these distinguished characteristics - generally referred to as character-defining features - serves to establish an inventory of significant physical elements that are worthy of preservation. *Preservation Brief 17* outlines a hierarchical process that begins with a building's major formal qualities (including shape, size, and setting), moving to more detailed characteristics (such as openings, roof form and shape, and projections), and finally details observed at close range (such as materials and evidence of craftsmanship). Similarly, they provide a methodology for assessing

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<sup>1</sup> National Register of Historic Places, Washington Canoe Club, Washington, DC, National Register #90002151.

interior architectural character by establishing a hierarchy of significant spaces, features, and finishes. An inventory of the visual characteristics of the Washington Canoe Club is listed in the chart below.

| <b>Overall Visual Aspects</b>  |  |
|--|--|
| Form and Massing   | Rectangular massing with characteristics of shingle-style architecture including: shingled walls and roof, asymmetrical facade, irregular roof lines, moderately pitched roofs, crossed gables, expansive wide porches, small sash and casement windows with many panes, and polygonal shingled towers |
|  | Five-bay original structure featuring prominent central bay with cross gable roof and hooded canopy with pointed arch soffit motif   |
|  | Flanking three-story octagonal towers with third story observation decks and conical tower roofs with integral flag masts  |
|  | Full-length second-story overhanging porch with projecting central bay   |
|  | Modest three-bay east boat storage addition to main block with ground floor shed roof and two-story women's locker room with gable roof  |
| Roof and Related Features  | Hipped roof on main block of building  |
|  | Conical roofs over east and west octagonal towers  |
|  | Arched projecting cross gable over the south elevation central bay   |
|  | Symmetrical flanking towers of the main block  |
|  | Octagonal louvered cupola with conical roof at main ridgeline  |
|  | Flag masts on the tower roofs and on the gable roof  |
|  | Masonry chimneys   |
| Roof line including other minor roof features including the hipped roof over the north entry tower |  |
| Openings   | Placement of window and door openings on the main block  |
|  | Recessed balcony openings on the second floor of the main block  |
|  | Boat doors at river elevation  |
|  | Full-length double casement windows to access balcony  |
| Projections  | Wide roof overhangs and rafter tails on towers and main block  |
|  | Balcony overhangs on the second floor  |
|  | Hooded arched cross gable roof at center bay   |
| Trim and Secondary Features  | Traditional shingle style detailing w/ use of textured materials (wood shingles)   |
|  | Shingle-encased posts at second floor balconies  |
|  | Linear detailing of trim features at the balcony, roof eaves, and ridge.   |

| <b>Overall Visual Aspects</b> |  |
|-------------------------------|--|
| Setting                       | Location and orientation of the building on the banks of the Potomac River |
|                               | Immediate access to the river  |
|                               | Unobstructed views of the Potomac River, Key Bridge, and Rosslyn, VA       |

| <b>Visual Character Aspects at Close Range</b> |  |
|--|--|
| Materials                                      | Use of traditional wood detailing, wood doors, and wood windows      |
|  | Dark green-painted shingle exterior siding <sup>2</sup>              |
|  | Exposed brick chimneys above roof line                               |
| Craft Details                                  | Horizontal coursed patterning of original random-width wood shingles |
|  | Day-mark green with white trim exterior color of original building   |
|  | Louvered octagonal cupola on main block                              |
|  | Exposed roof sheathing and rafter tails on roof overhangs            |
|  | Flagpole piercing the central gable roof on the south elevation      |
|  | Washington Canoe Club logo sign                                      |

| <b>Visual Character of Interior Spaces, Features, and Finishes</b> |  |
|--|--|
| Prominent Individual Spaces  | Grill Room with a historic painted frieze depicting club members   |
|  | Entry Hall with prominent staircase, newel posts, and balustrade   |
|  | Boat storage area on the first floor   |
|  | Ballroom and Board Room on the second floor  |
|  | Locker Rooms and lockers   |
| Related Spaces and Sequences of Spaces                             | Direct access to river from boat storage areas on the first floor  |
|  | Architectural entrance into Ballroom and Boardroom at second floor hall  |
|  | Direct access to balcony from Men's Locker Room, Ballroom, and Board Room at second floor  |
|  | Relative isolation of the Men's Locker Room from other spaces (sequence on construction)   |
|  | Mezzanine level above the Men's Locker Room  |
|  | Original viewing platforms with openings in the upper levels in the towers (now converted to non-character-defining interior spaces) |

2 The building was originally painted red with white trim. A preliminary paint analysis leads to the conclusion that the building was likely completely repainted to green following the devastating 1936 flood, thereby falling within the building's period of significance.

| Visual Character of Interior Spaces, Features, and Finishes |   |
|---|---|
| Interior Features   | Detachable frieze hung in Grill Room  |
|   | Five-panel and six-panel wood doors (with hardware)   |
|   | Stair, balustrade, and newel posts  |
|   | Architectural entrance to Ballroom (columns w/ dropped beam)  |
|   | Side galleries and interior hipped ceiling of Ballroom  |
|   | Built-in benches and shelves in Ballroom and Board Room   |
|   | Brick fireplace and mantle in Ballroom  |
|   | Six-over-six double-hung wood windows   |
|   | Full-length double casement windows opening to balcony  |
|   | Historic door and window hardware   |
|   | Selected wooden locker units  |
| Surface Finishes and Materials                              | Painted tongue-and-groove wood paneling on walls and ceiling at first floor hallway & stair (vertical and horizontal orientation) |
|   | Stained vertical tongue-and-groove paneling in the Board Room   |
|   | Beaded tongue-and-groove paneling in the Ballroom   |
|   | Stained hardwood floors   |
|   | Fabric covered wall panels and decorative trim in Ballroom (likely Phase 2 construction era ca. 1910)                             |
| Exposed Structure   | Exposed second-floor framing in west boat storage areas   |
|   | Exposed roof framing and sheathing in the locker rooms  |

## PRESERVATION ZONING

Preservation zoning is a decision-making tool widely used by federal agencies, cultural institutions, and historic preservation professionals to guide the treatment of historic buildings. Preservation zones are often developed to accompany Historic Structure Reports, Cultural Landscape Reports, and Building Preservation Plans. Preservation zones establish a hierarchy of significance and integrity for interior and exterior architectural and landscape components. The adoption of preservation zones allows for the preservation of significant historic features while also providing for flexibility to incorporate new requirements, technology, and program.

The following zone definitions and treatment descriptions have been developed following the Secretary of the Interior’s Standards for the Treatment of Historic Properties (“Standards”). The Secretary of the Interior outlines four treatment approaches: Preservation, Rehabilitation, Restoration, and Reconstruction. Although these words are sometimes used interchangeably in the general discourse, each has a specific meaning when applied to professional historic preservation practices. **Restoration** is defined as “the act or process of accurately depicting the form, features, and character of a property as

it appeared at a particular period of time by means of the removal of features from other periods in its history and reconstruction of missing features from the restoration period.” **Preservation** is defined as: “the act or process of applying measures necessary to sustain the existing form, integrity, and materials of an historic property.” **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.” Finally, **Reconstruction** is defined as “the act or process of depicting, by means of new construction, the form, features, and detailing of a non-surviving site, landscape, building, structure, or object for the purpose of replicating its appearance at a specific period of time and in its historic location.” Each preservation treatment has a series of associated standards and guidelines, developed by the Technical Preservation Services division of the National Park Service.<sup>3</sup>

The development of preservation zones for an historic building or landscape should be guided by a close understanding of the property’s history, significance, and evolution over time. Archival documentation and physical inspection will inform an understanding of the building as originally constructed and/or during the period of significance. When analyzed against existing conditions, this understanding will allow for the identification of significant individual spaces and building elements. This in turn will allow for the creation of specific and general recommendations for the treatment of the resource.

Survey, research, and analysis undertaken in 2015, 2016, and in 2020 have resulted in the identification of three zones that reflect the architectural and historical significance of the Washington Canoe Club: Restoration, Preservation, and Rehabilitation. This hierarchical classification reflects the associated architectural, historical, and/or landscape importance within the historic property. When considering potential alterations to the building, it is most important to maintain the layout, materials, and finishes of Zone 1 spaces. Changes to non-original materials but not to layout may be considered in Zone 2 spaces. Greater alterations are permissible in Zone 3 and 3A spaces, as long as they do not negatively affect spaces designated Zone 1 or 2.

### ***Restoration (Zone 1)***

Restoration is the most rigorous treatment designation and has been applied to areas of high integrity and/or architectural and historical significance. These spaces should be restored or maintained to their appearance during the period of significance (not necessarily to its original appearance). Areas designated as Restoration Zones shall retain their historic use and distinctive materials, features, and finishes or, if necessary, replaced in kind. Replacement of missing features from the Period of Significance is recommended, but shall be based on sound documentary evidence. The limited and sensitive modernization of building systems and equipment necessary for functionality, safety, and accessibility is appropriate.

### ***Preservation (Zone 2)***

Preservation Zones apply to areas of moderate architectural and/or historical significance containing significant details that should be preserved or restored as part of any repair or alteration project. Similar

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<sup>3</sup> “The Secretary of the Interior’s Standards,” Technical Preservation Services, National Park Service, accessed February 26, 2016. <http://www.nps.gov/tps/standards.htm>.

to Restoration, a Preservation treatment mandates the retention, repair, and maintenance of extant historic features; however, Preservation does not specify the replacement or recreation of missing historic features. Changes to a property that have acquired historic significance in their own right—including those outside the period of significance—will be retained and preserved.

### ***Rehabilitation (Zone 3)***

Rehabilitation Zones apply to the areas with the least degree of architectural and/or historic significance, including those that exhibit a diminished degree of historic integrity. Rehabilitation makes possible an efficient contemporary use while preserving those portions and features of the property that are significant to its historical, architectural, and cultural values. Significant historic features should be retained and repaired if possible. New work shall be compatible, yet clearly differentiated, from the old. Repairs and/or alterations in Rehabilitation Zones should not adversely affect Restoration or Preservation zones.

### ***Rehabilitation (Zone 3A)***

Spaces within the Zone 3A designation should be rehabilitated. Unlike Zone 3 spaces, Zone 3A spaces have been significantly altered outside the Period of Significance; therefore, additional flexibility should be afforded when repairing or altering the spaces. As with Zone 3, significant historic features should be retained and repaired if possible. New work shall be compatible, yet clearly differentiated, from the old. Repairs and/or alterations in Rehabilitation Zones should not adversely affect Restoration or Preservation zones.

## **PRESERVATION ZONING DIAGRAMS**

Preservation zone diagrams for the Washington Canoe Club are located on the following pages. The application of these zones is a reflection of the significance and integrity of those component parts and the associated priorities for treatment, maintenance, and continued use.

WASHINGTON CANOE CLUB  
 Historic Structure Report

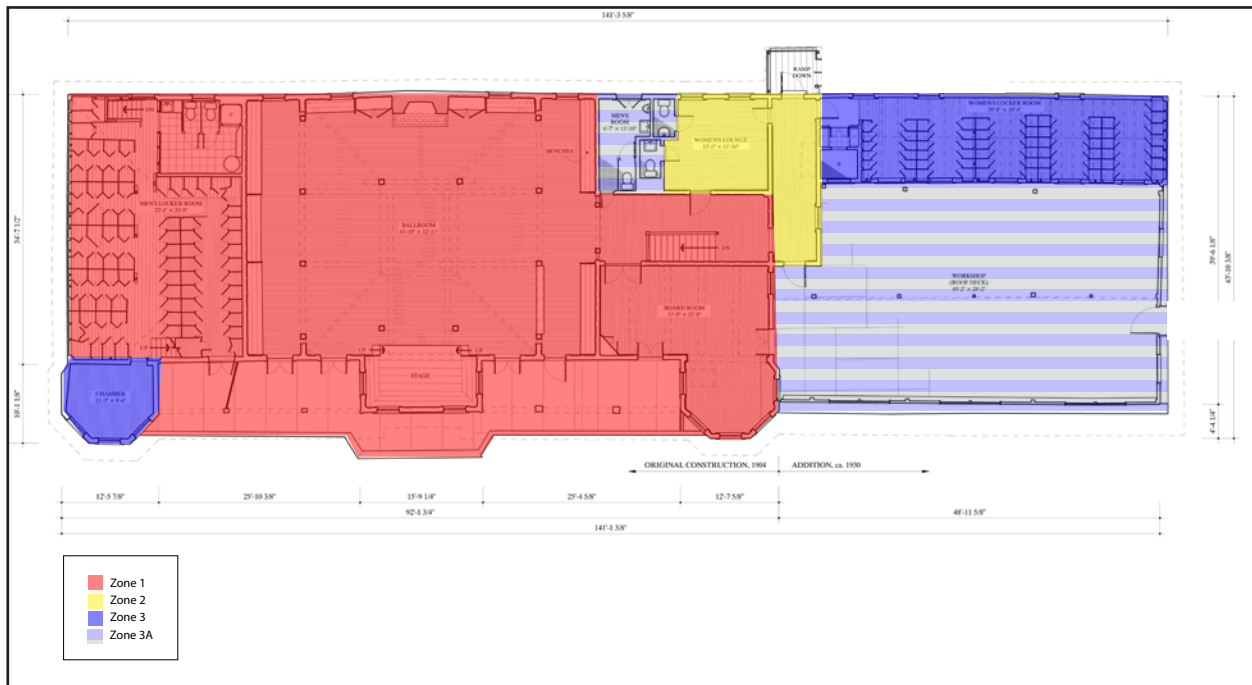


FIGURE 38 Preservation Zoning Diagram, Second Floor. EHT Tracerics, 2020.

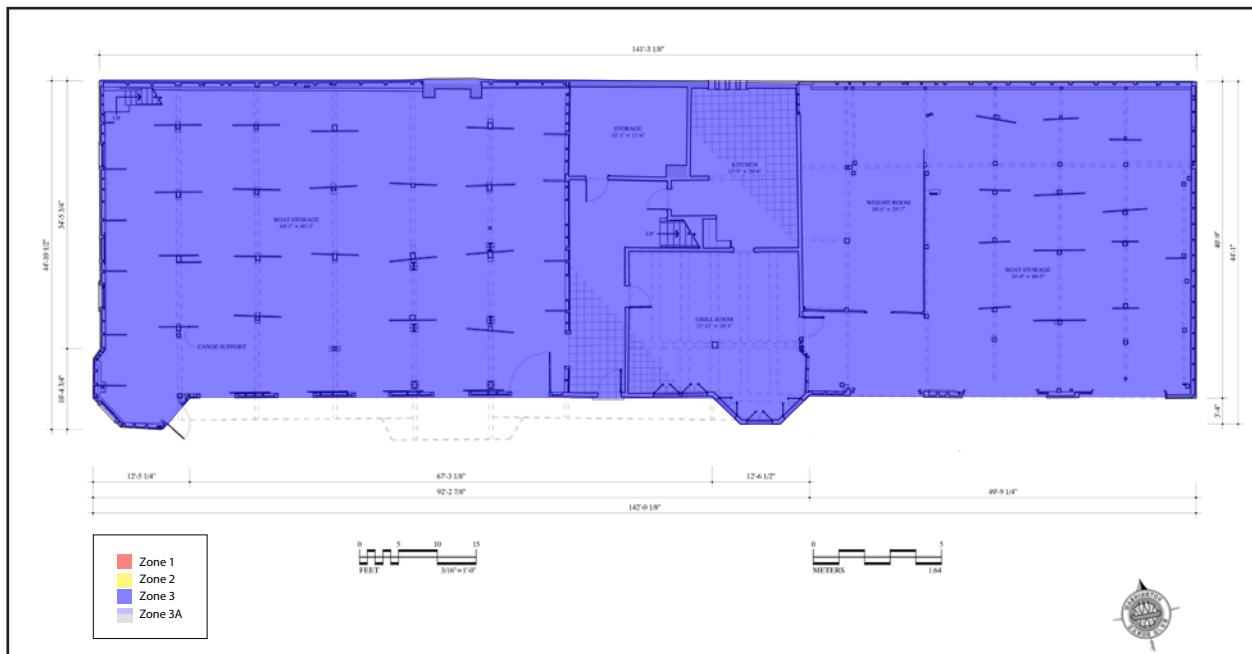


FIGURE 39 Preservation Zoning Diagram, First Floor. EHT Tracerics, 2020.



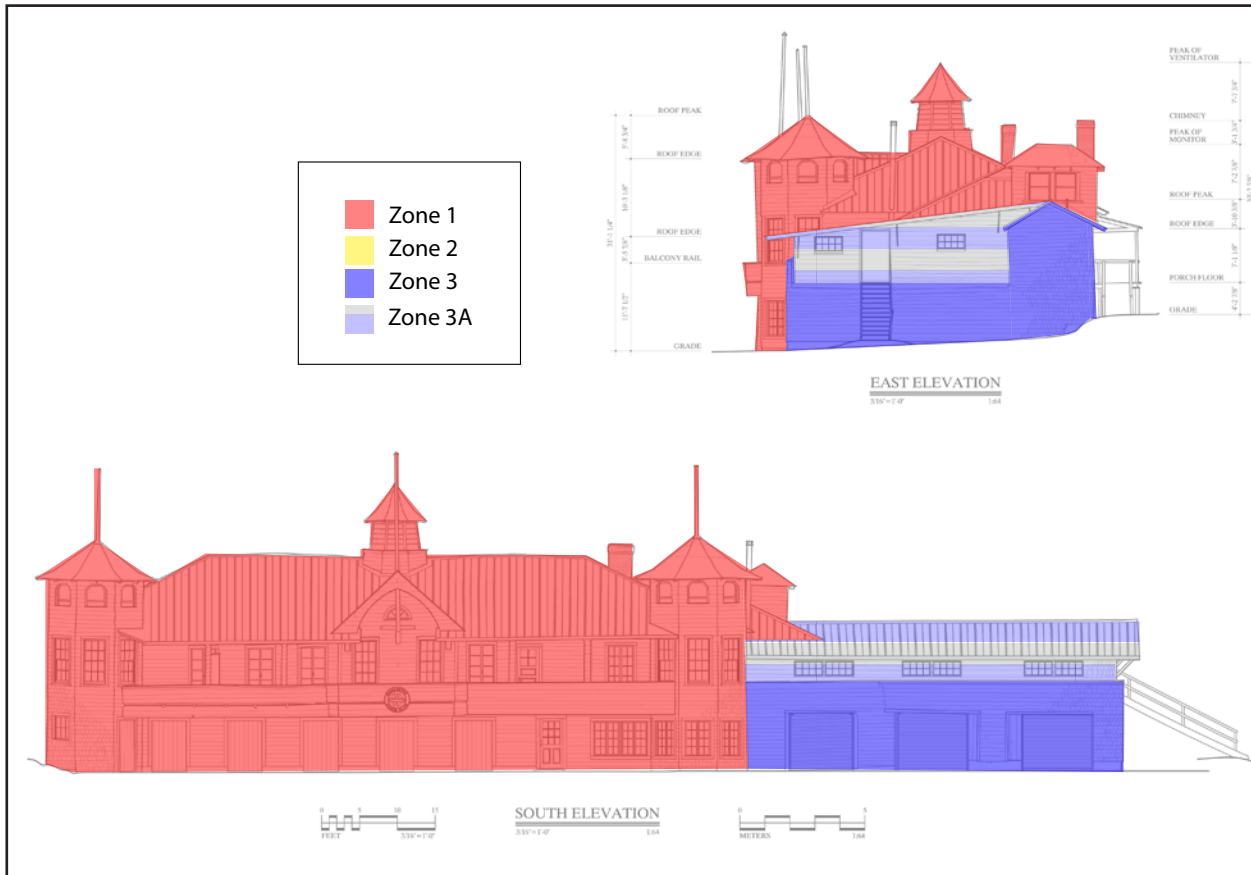


FIGURE 40 Preservation Zoning Diagram, South and East Elevations. EHT Traceries, 2020.

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*Chapter 4*

**EXISTING CONDITIONS  
SURVEY AND ASSESSMENT**

## INTRODUCTION

This chapter provides an overview of the condition of the Washington Canoe Club through a detailed analysis of its features and feature types. The condition assessment addresses site and landscape components, building structure and exterior envelope, interior finishes and fixtures, casework, and miscellaneous specialized components found throughout the building.

Based on the current conditions of the building as seen during our exterior assessment, EHT Tracerics has determined the Washington Canoe Club to be in overall poor condition. The condition of the Washington Canoe Club has been assessed based on the following scale:

**Excellent:** The building is structurally sound, intact, functioning as intended, has no or few cosmetic imperfections, is well maintained, and does not need repairs.

**Good:** The building is structurally sound, intact, functioning as intended, has some cosmetic imperfections, needs minor repairs, and needs limited maintenance such as general cleaning painting.

**Fair:** The building shows signs of wear and age, and has some failure and deterioration of elements and materials. It needs repairs and it needs general maintenance. Some components may be missing and need replacement.

**Poor:** The building is no longer functional, significant elements are missing, require extensive repairs and/or replacement, and areas of the structural systems poses a threat to life safety.

**Beyond Repair:** The building is no longer functional, significant elements are missing or substantively deteriorated, evidence of hazardous materials that are beyond remediation, the structural system poses a threat to life safety, and there appears to be no way to return the building to active use without demolition of significant portions.

The conditions assessment does not address major building systems including electrical, plumbing, mechanical, or fire and life safety systems. These systems have been designated for total replacement during the forthcoming rehabilitation project; therefore, the functionality of the non-character-defining historic systems was not determined to be relevant for this report.

## SOURCE MATERIAL

Between 2010 and 2015, extensive survey was conducted on the Washington Canoe Club and corresponding condition assessment reports were prepared. These reports have created the foundation for this chapter. Specific reports include:

1. McMullan & Associates, *Draft Report of Findings and Recommendations*, prepared for NPS in 2010.
2. Protection Engineering Group, Inc., *Structural Investigation of the Washington Canoe Club: Condition Assessment Report*, prepared for NPS in 2014.
3. Historic Preservation Training Center, *Historic Structure Assessment Report: Washington Canoe*

- Club*, prepared for NPS in 2014.
4. *Boathouse Rehabilitation 2015*, prepared for the Washington Canoe Club in 2016.

These reports have been included as appendices to this document. This report is not intended to replace or supersede these documents; rather, it is intended to provide an update on conditions and combine information from all reports into a single, accessible reference document.

## CONDITION OVERVIEW

The physical condition of the building was described in the 2014 HSAR to be poor, perhaps unstable. That report also provided a detailed assessment and listing of the character-defining features of the building. The determinations found in the HSAR are cited in the lease agreement between the NPS and WCC and form the basis for WCC use of the building. The HSAR determined that the building was unsafe to occupy with the exception of the east storage room.<sup>1</sup>

The following conditions assessment has been largely been taken from the HSAR documentation prepared in 2014. Several conditions have been updated to reflect the building's appearance as of November 2020.

## SITE AND LANDSCAPE

The site is bound to the north by the Capital Crescent Trail and to the south by the Potomac River. The site itself is marked with a chain link fence and includes three distinct parcels: the outside boat storage area to the west of the building, the concrete apron in front of the boathouse, and the outside boat storage area to the east of the building. The western outside storage area was temporarily and significantly enlarged by approximately 2,018 square feet in 2020 to off-set the loss of the eastern outside storage area that will result from the rehabilitation (as agreed upon in the long-term lease agreement between WCC and NPS).<sup>2</sup>



FIGURE 41 West elevation with outside boat storage visible in forefront

Notable site features inside the current NPS boundary include: floating docks on the river, riprap along the shoreline, concrete apron (which serves as the cover for the Potomac Interceptor), and mature trees.

There are considerable concerns about site drainage, due both to the building's current setting below flood level and due the grade change of the site. The existing structure is located in the flood zone of the Potomac River. The building has experienced major flooding events in 1918, 1924, 1936, 1937,

2 Exhibit A, Lease Agreement between the United States of America acting through the National Park Service and Friends of the Washington Canoe Club, made 10 December 2019.



**FIGURE 42** Detail of southwest corner of building with drainage trough cut into concrete slab with water discharging from the building.



**FIGURE 43** Excavation at northwest corner of the building reveals lack of waterproofing and drainage system at the foundation area.

1942, 1948, 1952, 1955, 1972, 1985, and 1992. Based on past records, the worst flood took place in 1936, where water levels reached a height of about fifteen inches above the second floor level of the boathouse. FEMA has established flood zones for the Potomac River and this property is located in a Special Flood Hazard Area (SFHA) Zone “AE”, Flood Insurance Rate Map (FIRM) 1100010014C, effective September 26, 2010. One of the most concerning drainage issues occurs at the building’s north elevation, where the perimeter grade is adjacent to and sloping towards the foundation wall. There is no drainage system at this location, resulting in surface water shedding towards and against the building’s exterior wall rather than away from it. This problem is further exacerbated by the fact that there are no roof gutters. The continuous drainage through the wall is discharged via a series of troughs cut into the concrete floor slab on the building’s ground floor. These troughs carry the drainage water through the building, across the concrete apron between the river elevation of the building and the shore of the river.

## EXTERIOR

The Washington Canoe Club’s boathouse has a rectangular footprint measuring about 142’ by 45’. The building faces south, overlooking the Potomac River, and the rear (north) elevation backs up to the former rail line, now the Capital Crescent Trail. The steel footings for the connecting walkway remain in situ near the boathouse. The original section of the building, the western portion of the structure including what is now the central pavilion, measures about 61’ by 45’. The 1909 section tacked another 30’ onto the east, including the corner tower/east turret, resulting in the building’s overall footprint increasing to 92’ x 45’. The ca. 1920s eastern extension measures approximately 50’ by 44’ (front by east end).

The 1905 to 1909 structure is five bays across, with each bay marked by a large square opening designed to provide room to access the canoe storage areas. Rolling doors slide horizontally on interior tracks to open the four westernmost portals; the doors are made of wood and are painted white. The easternmost of the five openings is a single door made of wood and painted white; it is mounted on hinges and opens inward. The ca. 1920s eastern extension adds another three bays to architect George



FIGURE 44 Partially obstructed south elevation, looking northeast.



FIGURE 45 East and partial south elevation of c. 1920s addition, looking west.



FIGURE 46 North and partial east elevation, looking west.



FIGURE 47 Obstructed west and south elevation, looking east.

Hales's 1905/1909 design. Originally one-story with a small second story at its northwest corner, it is characterized by contemporary overhead doors wherein the doors are mounted on tracks and roll up to open the space.

The present configuration of the eastern extension includes the gable-roofed addition for the women's locker room; this narrow, east-to-west addition joined the main building on the north end of the east elevation. To the south of the locker room was a roof-deck defined by a parapet-like balustrade. This was later enclosed, covered by extending the southern slope of the gable roof into a long shed roof and filling in the walls. The changes are particularly evident on the east elevation. Presently the east elevation fenestration consists of the single contemporary door and two inward-swinging awning windows both now covered with plywood and painted to represent glazing of eight lights per opening.<sup>3</sup>

3 With the removal of the plywood coverings, the architectural field team saw that these windows are inward-swinging awning windows; the windows in the women's locker room are hopper windows. Robert Arzola, Paul Davidson, and Daniel DeSousa to Virginia B. Price, personal communication, July 2013.



FIGURE 48 Green painted wood shingle siding with white trim on south elevation. Areas of replacement and missing shingle evident. Note that the balcony structure is leaning away from the building.



FIGURE 49 Newer shingles on south elevation of east bay.



FIGURE 50 Wood shingle siding on north elevation

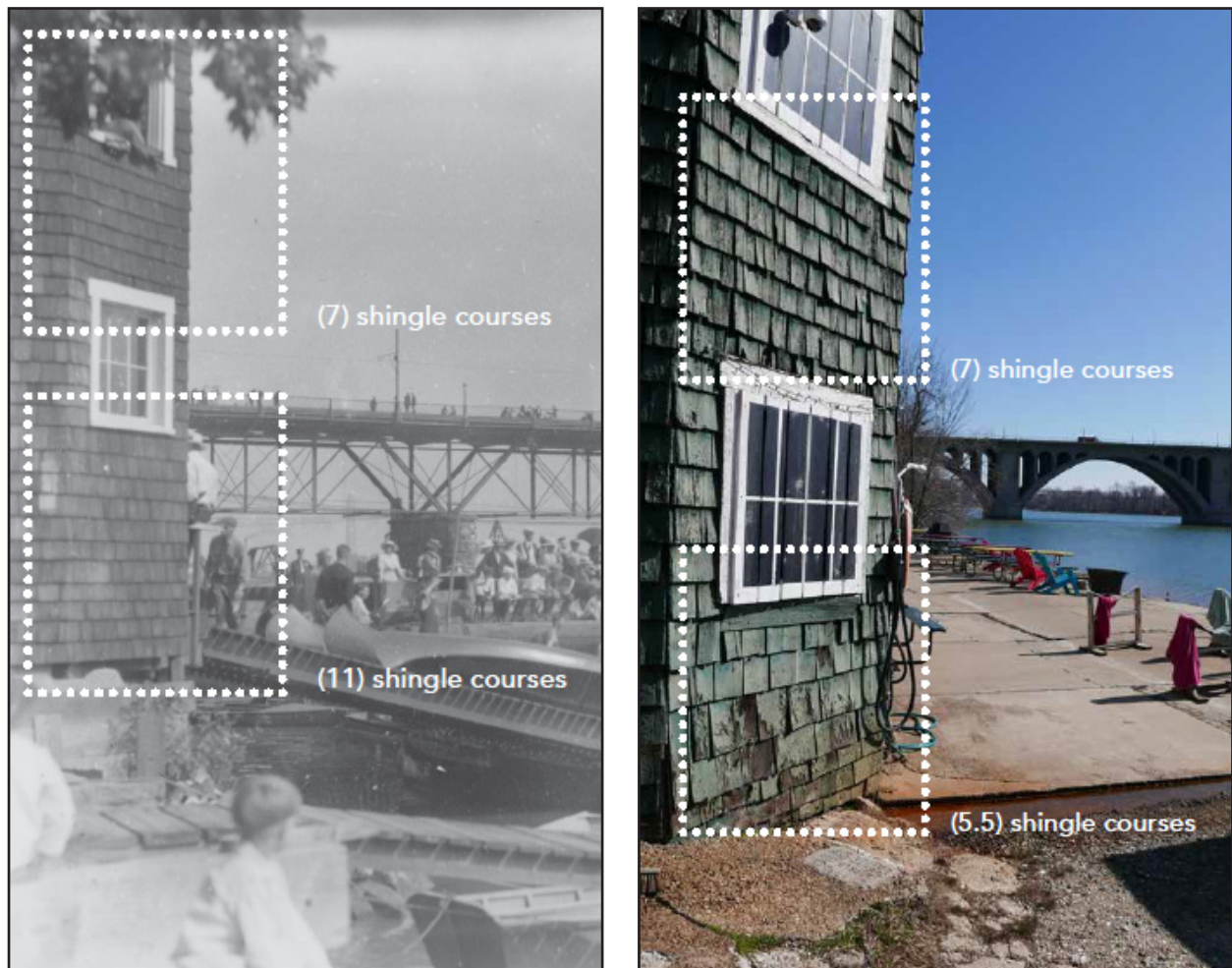


FIGURE 51 Detailing of weathered, cracked, missing, and dislodged shingles on the west elevation. Mold visible. Red paint (possibly original) exposed.



FIGURE 52 Detailing of weathered, cracked, missing, and dislodged shingles on the west elevation.





**FIGURE 53** Image on left, dated c. 1910 compared to image on the right, dated c. 2020, provides evidence that the building's relationship to the ground has changed since its initial construction. Cox Graae + Spack, 2020.

## ***Exterior Envelope***

### *Exterior Walls*

The exterior wall surface of the building consists of painted green wood shingle siding that covers all elevations of the building. The trim on the building is painted white. Between 2005 and 2008, south elevation at the first story was removed and reconstructed.

An initial paint analysis undertaken by EHT Tracerics in March 2021 indicates that the building was originally painted a dark red with white trim. The paint analysis was undertaken at eight locations on the building's north elevation. Nearly every sample had the same red layer (color identified as SW 6055), including samples taken from the north elevation of the Women's Locker Room.<sup>4</sup> This finding is consistent with the building's depiction in a c. 1910 colorized postcard (Figure 14 of this report). Based on stratigraphy, which showed several layers of green paint, the building has been repainted several times using various hues of green. It is most likely that the building was completely repainted green following the devastating 1936 flood. The paint analysis can be referenced in Appendix A of this Report.

The shingles are random widths with approximately eight inches of exposure. A comparison of historic and existing photographs shows that the number of shingles between the bottom of the window opening and the ground has greatly reduced. This reflects the introduction of the concrete apron following the installation of the Potomac Interceptor sanitary sewer pipe. The shingle siding varies in condition. Severe deterioration of the shingles is seen in many areas across all elevations, characterized by cracked, warped, and missing shingles. Generally, the shingles themselves are in fair condition; however, the majority have failing finishes. Replacement cedar shingles were installed by club members at various locations, including the reconstructed south elevation, between 2005 and 2008, and by NPS on the southern elevation of the east bay in 2011. These newer, replacement shingles are in good condition.

### *Cupola Louver Panels*

The roof cupola provides passive ventilation to the attic space and Ballroom areas of the building through the updraft or "chimney effect" method. The cupola is a prominent feature of the roof being eight-sided with a shingled base, white-painted louver panels and a conical roof topped with a pinnacle.

The louver panels exhibit UV deterioration to the wooden members, loose joints, failing paint, and poor flashing.



FIGURE 54 . Detail of deteriorated wood louver panels.

4 Color matches from the paint analysis are approximations from the samples. Sherwin William codes were used in lieu of Munsell colors.



FIGURE 55 Balcony, looking northeast.



FIGURE 56 Detail of western balcony.



FIGURE 57 Detail of brackets under balcony, looking northwest, c. 1950s. Washington Canoe Club.



FIGURE 58 Balcony without brackets. Noticeable sag in the cantilevered balcony structure visible.

## **Projections**

### **Balcony**

There is an integral balcony extending to either side of the central pavilion that terminates at the towers. Between 2005 and 2008, the wood floor and support frames of the balcony were reconstructed with all new materials due to severe deterioration. The walls of the balcony on the south elevation consist of painted wood shingle siding similar to the other elevations of the building. The siding on the west and center sections of the balcony is in particularly poor condition with many warped, cracked, and broken shingles; water penetrates the core of the structure and may be causing accelerated deterioration of the support structure. The siding on the eastern section of the balcony appears to be newer and is in fair to good condition.

A cantilevered balcony projects from the center of the south elevation. Originally, the balcony was supported by wood brackets; however, they were removed at some unknown date after the concrete apron was laid. The balcony is in poor condition with a clearly noticeable sag in the structure.

### Porch

The non-original north entrance is sheltered by a small, non-original, wood porch with a shed roof and a wooden staircase. The paint is peeling, and there are signs of rot. Neither the porch nor the stairs are structurally sound.

### **Roof**

The building features a standing seam metal roof that is not original to the building. Based on research conducted to date, by the 1910s, the roof comprised of either sheet metal pans or some type of synthetic asbestos-cement shingle.<sup>5</sup> Several areas exhibit severe rusting and corrosion. The flashing is also deteriorating. Secondary roofing, such as the turrets, cupola, and dormers, feature a modern roll roofing membrane. It appears that these roofs have reached the end of their useful life and should be replaced.

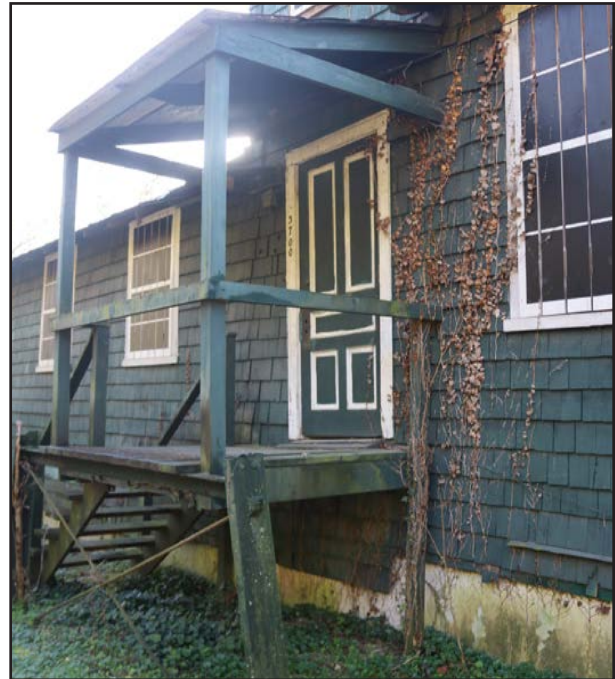


FIGURE 59 Porch sheltering north entrance.

The south elevation (principal façade) of the Washington Canoe Club features a complex roof that has many overhanging and recessed soffit areas, including: the overhang of the balcony roofs (part of the main hipped roof), the east and west tower and cupola overhanging roofs and the overhanging eaves of the other roof systems. The overhang at the balcony was extended using supplemental rafters to protect the balcony deck from the weather.



FIGURE 60 Washington Canoe Club, looking west, c. 1910-1920. The building's original roof likely featured wood shingles. By the 1910s, however, the roofing comprised of either sheet metal pans or some type of synthetic asbestos-cement shingle (widely available after 1920). Washington Canoe Club Historic Structure Assessment Report.



FIGURE 61 1920 c., Distinctive roof patterns indicate sheet metal or early composition shingles on the main gable roof. Cupola and towers feature sheet metal. Note gutters on either side of balcony, and drainage slots across the front of the balcony. Washington Canoe Club.

5 Research to date has not definitively uncovered the original roofing material.



FIGURE 62 Detail of exposed sheathing and missing wood.



FIGURE 63 Shed roof enclosure of southern portion of East Storage Bay overlapping gable roof of Ladies Locker Room.



FIGURE 64 Soffit detail on east tower and east bay (right)



FIGURE 65 Roof on north elevation, looking south from C&O Canal toepath. Extensive rusting visible at northwest corner of the building.



FIGURE 66 Roof on south elevation, looking north floating dock. Extensive rusting visible.



**FIGURE 67** South portion of Women's Locker Room clad in green-tinted mineral surfaced roll roofing material installed above plywood substrate visible as seen from Workshop.



**FIGURE 69** North side of chimney that serves the ballroom..



**FIGURE 68** Exterior view of second floor Board Room with painted mothball panels attached.

The recessed arch feature in the central gable is generally in fair condition. The roof edges are deteriorated. The underside of roof shows exposed rafter tails and unpainted replacement roof deck plywood sheathing that is in poor condition.

The east storage shed has two roofing types: the older gable roof at the rear over the Ladies Locker Room and an overlapping shed roof over the Workshop. The north elevation of the Women's Locker Room has several structural issues that creates a wavy roof edge. The original roofing material for this part of the building -- a heavy weight green-tinted mineral surfaced roll roofing material installed over a plywood substrate -- is visible from the exposed shed roof in the workshop.

This roof overhangs the exterior walls on the south and east elevations. It is supported by the lightweight roof frame and plywood roof deck. There is a vertical fascia board on both elevations. Materials are generally in fair condition.

### Chimney

There are two masonry chimney stacks, both placed in the north rear of the building. The main chimney served the fireplace in the ballroom, while the secondary chimney historically served the boiler room (now a storage closet). The boiler room chimney is east of the original building, in the 1909 portion.

Both chimneys are failing and lack adequate flashing. Bricks are missing and displaced, and loss of mortar is visible. Where visible, the interior condition of the brick work appears to be in fair condition. The condition of the flues is unknown but likely to be poor since both chimneys are open to the weather.

### Openings

#### Windows

Originally many of the windows were not glazed,

such as those in the west tower. Later a mixture of wood sash glazed with six-over-six lights or eight-over-eight lights and sash glazed with one-over-one lights was used along with six-light and eight-light casement windows and pivot windows. The windows vary in terms of operation. Virtually all of the window assemblies were covered in plywood as a protective measure by NPS between 2010 and 2012. The plywood has been painted to represent the glazing of the sash behind it. Thus, windows were observed from the interior only, and appear to have varying conditions.

The first floor of the main block has four windows located in the west wall of the West Boat Storage Area. The windows appear to be original and consist of a painted wood fixed sash with pegged sash joints and six lights. The windows are in poor condition. Some glass and window frames have been damaged, and the overall condition of the sash and frames is poor.

The first floor of the c. 1909 addition has five windows located in the south wall of the Grill Room. The windows in this room were



FIGURE 72 Windows in Grill Room, looking south. Windows are in fair condition.



FIGURE 70 Detail of window in West Boat Storage Area.



FIGURE 71 Acrylic panel covering Kitchen window.

reconstructed between 2006 and 2008. The windows consist of newer painted wood double casements that open to the interior space. Each window set is similar and has two eight-light sashes with a brass casement latch, modern inset hinges, and surface bolts at the top and bottom of one sash. All windows



FIGURE 73 Typical double-hung window in Ballroom around the stage. This particular example has missing muntins.

rosette, key escutcheon, pull chain bolt at the top, surface bolt at the bottom, and brass curtain rods at top and bottom. The windows are in fair condition with some minor areas of wood damage, finish failure, and missing hardware components.

Four six-over-six double-hung wood windows surround the stage located in the central bay on the south elevation. The windows have thinner muntins than other similar windows in the Ballroom and may be later replacements. The windows are in poor condition with cracked or missing panes, wood damage, and missing muntins. Four similar double-hung windows are located on the north wall of the Ballroom and are in fair condition. Two of the windows appear to be original sash.

The window located in the Men's Toilet Room on the second floor is a four-light double casement window with obscure glass. The window appears to be original to the 1909 construction and is in fair condition. Hardware includes a casement latch, surface bolt, and butt hinges with ball finials.

Two six-over-six double-hung wood windows are located in the north wall of the Women's Lounge. The

are in good condition.

The Kitchen has a single window opening in the concrete foundation wall on the north elevation. This window was added in the 1970s. The opening is divided into four openings by concrete blocks encased in painted wood. The exterior side of the opening has a single clear acrylic panel covering the opening. The acrylic panel is loose and in poor condition.

The windows on the second floor of the main block consist of wood double-hung windows, wood double casement windows, wood hopper windows, wood awning windows, and some modern windows. Generally, most of the windows are in fair condition based on the interior visual inspection.

The windows in the south wall of the Ballroom are original full-length double casement windows with five lights per sash. The windows swing out and provide access from the Ballroom to the exterior Balcony. The windows are currently removed from the openings and stored in the Ballroom. Each set of casement windows has a stained interior finish and a painted exterior finish. Original hardware includes a mortise latch set with a brass knob, rosette, and key escutcheon on the exterior face. The interior hardware includes a brass lever,



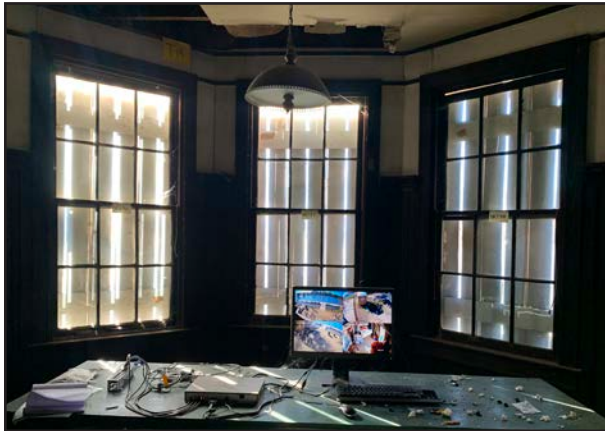


FIGURE 74 Six-over-six windows in Board Room.



FIGURE 75 Window openings on south side of Ladies Locker Room (originally exterior wall). Some windows have been painted over while other windows have been removed from their frames.



FIGURE 76 Three-light hopper window in the Men's Locker Room.

windows are similar to the double-hung windows in the Ballroom but with obscure glass installed. The interior casings consist of stained flat stock with a wide recess on the face. This trim detail is found throughout the building. The windows appear to be original to the 1909 construction period and are in fair condition.

The Board Room has five 6-over-6 double-hung wood windows located around the perimeter of the tower. The room also has two full-length double casement windows that provide access to the Balcony and to the Workshop, respectively. These windows are similar to those in the Ballroom and are in fair condition.

The windows on the north wall of the Women's Locker Room consist of two six-over-six double-hung wood windows and one six-over-one double-hung wood window. The windows on the south wall of the locker room are six-light hopper windows that open outward (into the Workshop). The windows have strap hinges and chain sash holders, and the glass has been painted. The sash in the window has been removed and stored in the Workshop. All windows are in generally fair condition; however, they all require some repair and maintenance.

The windows in Workshop consist of eight 8-light hopper windows that open inward toward the interior. The windows were added when the rooftop of the east boat storage addition was enclosed to create a workshop. The sashes are painted and have simple strap hinges and surface bolts. All windows are in fair condition.

The gable on the south elevation of the main roof has a single 4-light fan window. The window is painted on both sides and is in fair condition with some areas of failing paint.

The west elevation has a small dormer with a 3-light fixed currently non-operable sash that provides light into the Men's Locker Room. The



FIGURE 77 . Detail of deteriorated dormer.



FIGURE 78 Windows in upper level of west tower.

window is in poor condition with deteriorated frame, broken glass, failing paint finish, and screening tacked on the exterior.

The east and west towers have eight window openings in the upper-most level (third floor) of the towers. These openings originally had no sash and simply provided ventilation and views of the river. These rooms were retrofitted into sleeping chambers at some time in the past (no longer in use). The West Tower Chamber has awning-style sash installed in some of the openings and framing has been installed to decrease the size of the openings. The exteriors of all of the openings are covered with typical painted wood planks and screening for ventilation. These windows are considered to be in poor condition due to the modifications to the original windows openings.

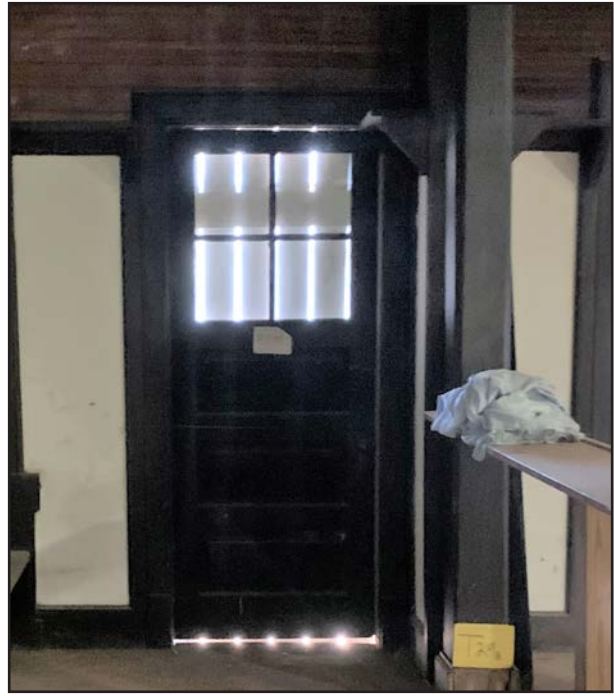
### Doors

**Pedestrian Doors:** The canoe club building has several door types. All door surrounds are made of wood and the members are butt joined. The various doors include the following:

1. A nine-light, two-panel exterior door is located on the first floor on the south elevation. The door opening is located at the eastern end of the original building; however the door itself is most likely a replacement door. The door is in fair condition with some areas of minor wood deterioration, paint failure, but otherwise structurally viable;
2. An eight-light double door leads from the Board room to the southern Balcony. The door is in fair condition, but has been boarded up from the outside for protection and ventilation;
3. An eight-light double-door leads from the Board room to the Workshop that originally led to a balcony. The door is in fair condition. Original and contemporary hardware are extant;
4. A four-light, three-paneled door leads from the Ballroom to the exterior Balcony. The door has original hardware. It is in fair condition with some areas of deteriorated wood components, failing finish and missing panes of glass;
5. A four-light, three-paneled door leads from the North Entry Hall into the Workshop and was constructed as part of the second phase of construction. The door has original hardware. It is in fair condition with some areas of deteriorated wood components, failing finish and missing panes of glass.



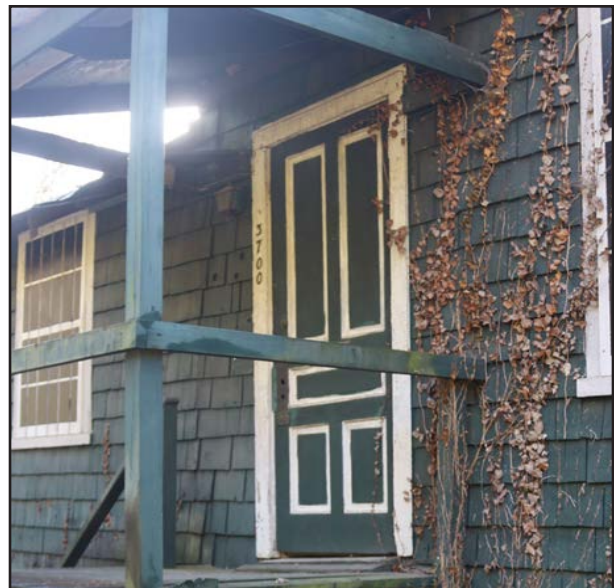
**FIGURE 79** Eight-light double door leading from Board Room to Workshop.



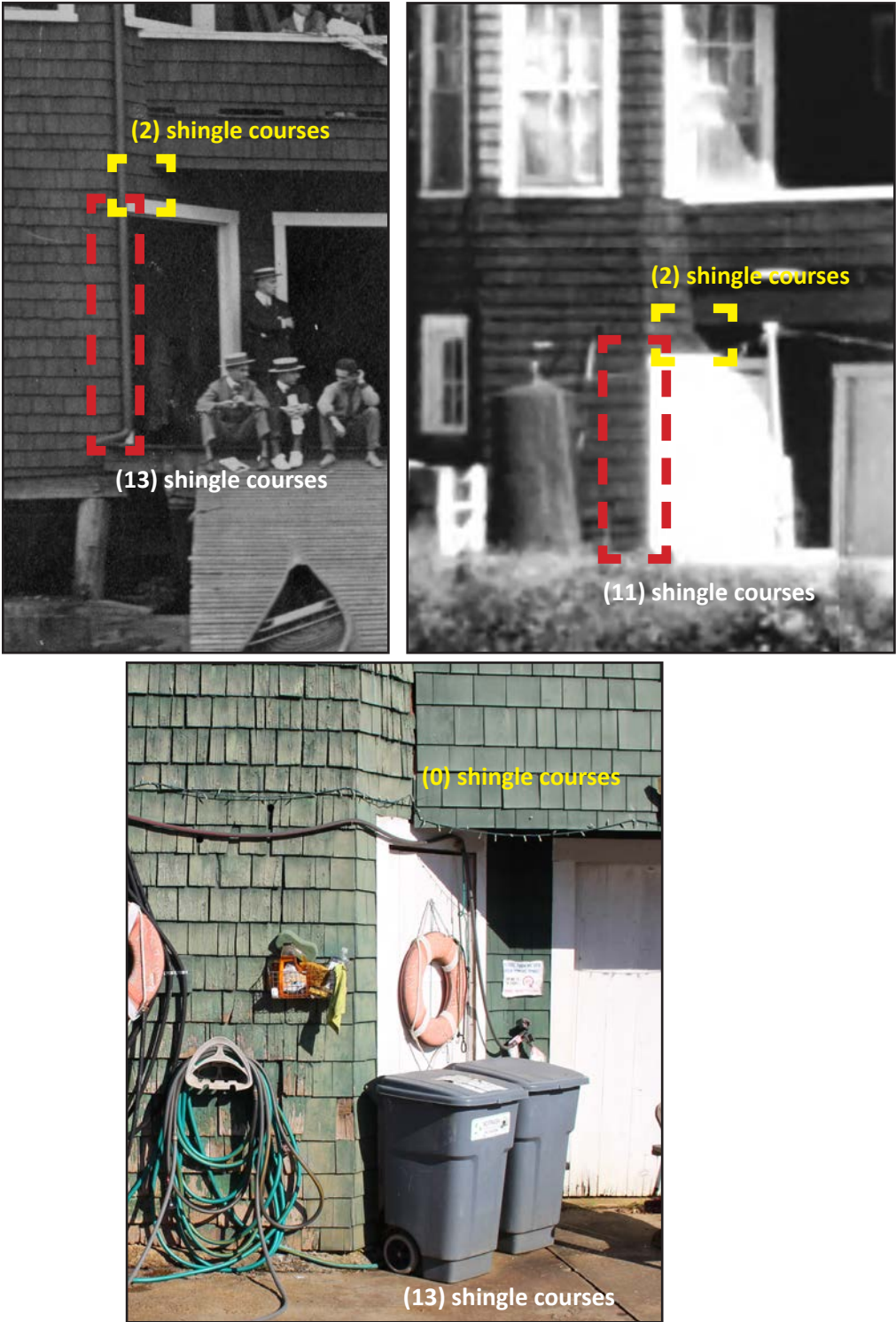
**FIGURE 80** Four-light, three paneled door leading from Ballroom to Balcony.



**FIGURE 81** Interior of north entrance door with contemporary ADA hardware.



**FIGURE 82** Exterior of north entrance door. Hardware has been removed.



**FIGURE 83** Image on upper left, dated c. 1930s, shows original height of the openings of the West Boat Storage Area as compared to the balcony. Image on upper right, dated 1989, shows that reduced height of the door opening following the installation of the concrete apron. All of the doors within the openings were cut to accommodate the reduced door opening height. Bottom image, dated 2020, shows the restored height of the door openings (completed as part of the 2005-2008 scope). The relationship between the top of the frame to the bottom of the balcony, however, was compromised as part of this effort.



**FIGURE 84** Non-original exterior door in the West Boat Storage Area.



**FIGURE 85** Openings of south side of East Boat Storage Area. The eastern and middle bay feature metal roll-up doors; the western bay has been infilled.

There are several kinds of solid exterior doors that are all in fair condition, and include:

1. There are five rectangular boat ports in the West Boat Storage Area. The openings feature sliding and non-original swinging barn-style doors. Following the addition of the concrete apron and the subsequent raising of the Club's first floor level, the height of the openings was reduced, and the original wood sliding/swinging doors were cut down. As part of the 2005 to 2008 reconstruction of the south elevation, the height of the door openings were restored. The original doors were removed and replaced in-kind (hardware was reused);
2. A non-original five-panel wood door with raised panels is located at the north entrance. Contemporary ADA-compliant hardware has been added; and
3. A contemporary metal door located at the second floor of the east elevation of the East Storage Bay. It is not compatible with the building, and is no longer accessible.

The three bay doors in the East Boat Storage Area consist of modern overhead metal roll-up doors. Although research to date has not uncovered the original design of the East Boat Storage Area doors, it is likely they were either wood garage-style doors or wood sliding doors. The western-most door opening was infilled in 2011 to provide pedestrian access to the building after the main club house was determined unsound. The infilled opening features wood shingle siding to match the existing siding. A modern metal man-door has been installed within the infill. All doors are in good condition.

## STRUCTURAL

In 2010, the structure was surveyed by the structural engineering firm McMullan & Associates Structural Engineers. Their report concluded that the structural system was in poor condition and was inadequate to support the required loads. The wood posts that make up the structure exhibited moderate to severe rot, and they sat slab-on-grade with no foundation or connection, instead sitting on pieces of blocking at the base.<sup>6</sup>

6 McMullan & Associates, *Draft Report of Findings and Recommendations*, prepared for NPS in 2010.



FIGURE 86 Temporary pipe columns installed in West Boat Storage Area.



FIGURE 87 Cross bracing in West Boat Storage Area.



FIGURE 88 Bracing in the Ballroom.



FIGURE 89 Bracing in Ballroom.

In response to this report, NPS temporarily stabilized the structure of the building between 2010 and 2012 in two phases based on the design provided by McMullan & Associates. The first phase of the structural stabilization -- the overall stabilization of the building -- occurred between September and December of 2010. As part of this phase, temporary pipe columns and wood cross-bracing were added in the West Boat Storage Area, Ballroom, and Workroom to support the failing structure. The second phase was completed between November 2011 and January 2012. The second phase focused on the East Canoe Storage Area, which was to remain the only usable portion of the building. This phase also included selected roof repairs.

A second report was completed in 2014 by Protection Engineering Group, Inc. (PEG) for the National Park Service. The report provided a conditions assessment for all of the components of the structural framing system. The following conditions assessment is taken from this report.<sup>7</sup> As no additional stabilization work has been completed following the issuance of this report, it is assumed that all

7 Protection Engineering Group, *Structural Investigation of the Washington Canoe Club: Conditions Assessment Report* (Contract No. P09PC60802, prepared for NPS, April 2014).



**FIGURE 90** Concrete foundation with channel at the right hand side of the image.



**FIGURE 91** Missing section of concrete floor in West Boat Storage Area.

conditions have worsened.

### **Foundation**

Originally the building was built partially over the water, on pilings. In the 1960s, the Corps of Engineers demolished the Aqueduct Bridge and used the stone as riprap along the shoreline at the Washington Canoe Club. The riprap and the installation of the Potomac Interceptor sewer line caused water to stagnate under the boathouse. The sewer pipe ran between the boathouse and the Potomac River; the Corps filled around the pipe and covered the whole with a 15' wide concrete apron. This created the concrete pad or deck on the south (river) side of the building seen today, and necessitated a change in docks and floats, and produced space for a parking lot and grassy area.<sup>8</sup>

In order to align the first floor of the boathouse with the exterior concrete apron, the first floor slab was leveled and raised. The existing slab-on-grade is in poor condition with visible cracks with water seepage.

In 2013, NPS's Historic Preservation Training Center (HPTC), in coordination with Protection Engineering Group, Inc. (PEG), attempted to expose the foundation of the building for examination in two locations from the exterior of the building. Concrete slabs were encountered in both areas. HPTC began to remove the slab on the northwest exterior corner of the building; however it was found to be over 16" thick, so the test pit was halted.

HPTC also sawcut and removed a portion of the interior slab in an attempt to expose the foundation from inside the building. It was discovered that the interior slab in the west boat storage area consists of a 2-1/4" to 4-1/2" top slab with 3" of gravel/sand, then a 15"+ thick lower slab. The lower slab core was broken and removed at approximately 15" long when the coring drill reached its maximum depth. PEG was unable to view the foundation since the bottom of the lower slab was not found; however, fragments of wood at the base of one of the concrete cores was observed, suggesting that wood piles

8 Bird, "Washington Canoe Club," NRHP, Sec. 7:3; Christopher Brown and Jim Ross, "Chronology", outline draft dated April 2013.

may be embedded in the lower slab. Both slabs appear to be unreinforced.

Additionally, significant water infiltration was documented. It was noted when the water was removed from the slab openings, they immediately fill with water again. Further, in order to contain the water, a series of channels have been cut into the floor slab to allow water to drain from the north retaining wall, through the building, across the concrete apron to the south of the building, and into the Potomac River.

## ***Structural System, Framing***

### ***Roof Framing***

The roof framing over the men's locker room on the west side of the building consists of 2x6 rafters at approximately 28" on center (spacing varies). The rafters are supported by the exterior wall and 2x8 hip beams. An additional support frame made of modern lumber has been added, presumably due to deflection in the rafters. 2x posts have also been added under the hip beam. Connections to the hip beams are with toe nails. This roof has apparently remained intact in the past through interconnection of the roof framing and decking, three-dimensional geometry, and the nature of wood to absorb deformation beyond code recognized limits. There has been some movement of the framing that is evident at the top of the exterior wall has pushed out. The hip beams and rafter will need to be strengthened to meet code requirements.

The typical roof rafter framing over the ballroom and boardroom room consists of 2x6 rafters with a 2x ridge nailer and 2x6 collar ties that act as a truss. These trusses support the wood ceiling over the ballroom, which frames into a collar tie on two sides. The collar tie and connection supporting the ceiling is overstressed and exhibiting excessive deflection. Through discussion with the Canoe Club members, it was discovered that the roof trusses originally spanned to the exterior walls and the porch beams. The 5-1/2" x 11" interior beams with posts were added at a later date to prop the roof rafters. The rafters have multiple miscellaneous shims to the 5-1/2"x11" beams which are not mechanically connected. Beyond the hung ceiling, the rafters have been propped with 2x members down to the exterior walls. The members are not adequate to support the required loads.

The roof over the women's locker room is supported by trusses that span approximately 11 feet to bearing walls on either side. The roof trusses appear in good condition, however the balloon wall framing on the north wall shows signs of rot and movement and requires repair. Shoring has been installed for temporary support.

The roof over the workshop consists of modern 2x6 wood rafters at 24" on center. This framing appears to have been added to the original structure to enclose a portion of the porch area. Each rafter consists of four pieces of 2x6 nailed together over three spans. However, no one piece is continuous to at least two supports (see Figure 9). It is likely that there are enough nails in these members that they have been transferring load adequately to remain intact. However, this condition is structurally deficient under code-required loads.

The beam along the north wall is a single 2x8 spanning up to 16'-10". Despite the addition of diagonal supports, there is substantial deflection and multiple areas of water infiltration in this area. This has led





FIGURE 92 Rotted post on block in west boat storage area.



FIGURE 93 Framing in men's locker room.



FIGURE 94 Severe rot in roof sheathing over workshop.

to rot in some members and in the roof sheathing. Local areas of severe rot in the sheathing are in danger of collapse (see Figure 12 below). Repairs are required.

### Floor Framing

The men's locker room has permanent wood lockers on two levels. The lower level lockers appear to support the Mezzanine level and upper level lockers, which makes the lower level lockers load bearing. The Mezzanine level floor framing size and spacing varies, however 2x4s at 16" o.c is common. There are penetrations through the joists to allow for a conduit line. The mezzanine level has been added to allow access to the southwest turret. Both levels of lockers are supported by the second floor framing. The additional dead load from the mezzanine level and the upper lockers reduces the live load capacity of the second floor. The mezzanine level and the upper level lockers should be removed. See repair plan for strengthening and replacement options.

The second floor framing over the west boat storage area supporting the men's locker room and ballroom floors consists of 2x10 joists at 16" on center. Floor joists are supported by five lines of beams and posts. The beams and posts vary in size, but are typically 5-1/2x7-1/2" wood beams supported on 5-1/2"x7-1/2" wood posts. Galvanized wide flange columns and beams were added at the south side of the space, and several steel adjustable-height posts have been added over the years. The wood posts in this space are typically not pressure-treated and exhibit moderate to severe rot at the base. The four posts in the ballroom that support the 5-1/2" x 11" beams sit on blocking over the floor girders which is not nailed. Termite tunnels were observed in this area.

The floor framing over the east boat storage area consists of older members supporting the women's locker room and more modern framing supporting the Work Shop floor. Framing typically consists of

2x10 floor joists at 16" on center. The joists are supported by six lines of girders and columns, and one wood bearing wall on the west end of the space. The girders are (2) 2x12 pieces nailed together to form a continuous member. The support columns vary but are typically 5-1/2" x 5-1/2". There is a line of (2) 2x12 beams which run east-to-west in the space which support the locker room wood bearing wall above. Some of the framing in this space is pressure-treated and some is not. The wood posts typically exhibit moderate to severe rot at the base and are sitting on the slab-on-grade with no foundation and no connection. There are two posts that are loose and do not make contact with the beam above. These conditions require repairs.

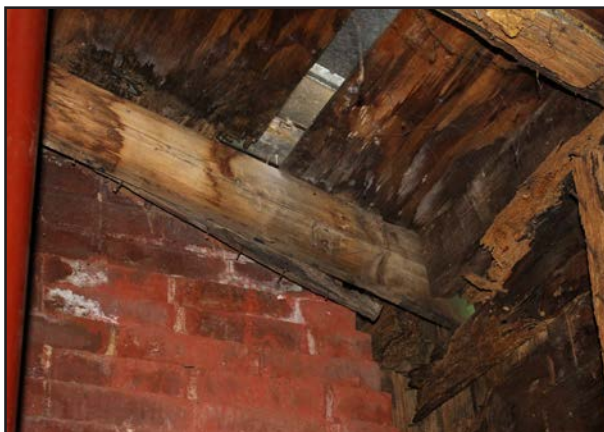
Floor framing is generally inadequate to support the required loads. Floor joists and beams should be strengthened under the men's locker room, ballroom, women's locker room and work shop. The upper level of lockers and upper floor in the men's locker room should be removed. The loose posts under the women's locker room need to be repaired. The floor should be brought back to level, particularly in the ballroom.

### Walls

The north bearing wall which supports the roof trusses is heavily damaged by rot, particularly visible around the fireplace on the second floor. Temporary shoring has since been installed in this area to support the roof.

Between 1972 and 1976, damaged wooden framing at the base of the exterior walls was removed from the west and north sides of the building. For this work, the building was slightly raised with heavy duty jacks, the lowest 24 inches of damaged wooden wall framing was removed and replaced by three courses of concrete masonry units (CMUs). The wood structure was then replaced and connected to the concrete block wall via a horizontal wooden.

The wood framing primarily consists of 4x4 studs at 34" on center (spacing varies) which sits on the CMU. It appears that there has been water infiltration in this area, and the 4x4's exhibit moderate to severe rot at the base. There is also water damage along the north wall. The concrete/CMU wall does show some signs of water infiltration, but only minor cracking was noted. At the second floor the wall



**FIGURE 95** Rot in rafters, wall studs, and top plate around the fireplace due to water intrusion.



**FIGURE 96** Water damage, cracking, and biological growth at north wall of west boat storage area.

consists of 2x4 studs at 24" on center. There was substantial rot/termite damage noted to the women's locker room wall.

The east, west and south walls are made up of CMU blocks at the base with wood framing above. The south wall framing is typically not connected to the foundation in these areas, but rather hangs from the second floor framing above. The National Park Service has recently replaced much of the south wall.

The east wall in the west boat storage area appears to have racked at the rear of the space. The upper level west walls in the ballroom and men's locker room have rotated out at the roof, and in at the floor as a result of the thrust from the roof rafters. This movement appears to be the cause of the ballroom floor being out of level. These walls need to be brought back to plumb and repaired. Signs of damaged studs and wall plates in the south wall were also observed. There is a mixture of wood materials used for wall sheathing and much of it shows signs of deterioration.

Most of the exterior walls, as well as some interior walls have substantial rot which should be repaired or replaced. In addition, the second floor walls should be brought back to plumb and secured to the floor framing. New plywood sheathing should be added to provide lateral stability.

# INTERIOR

## Space Utilization

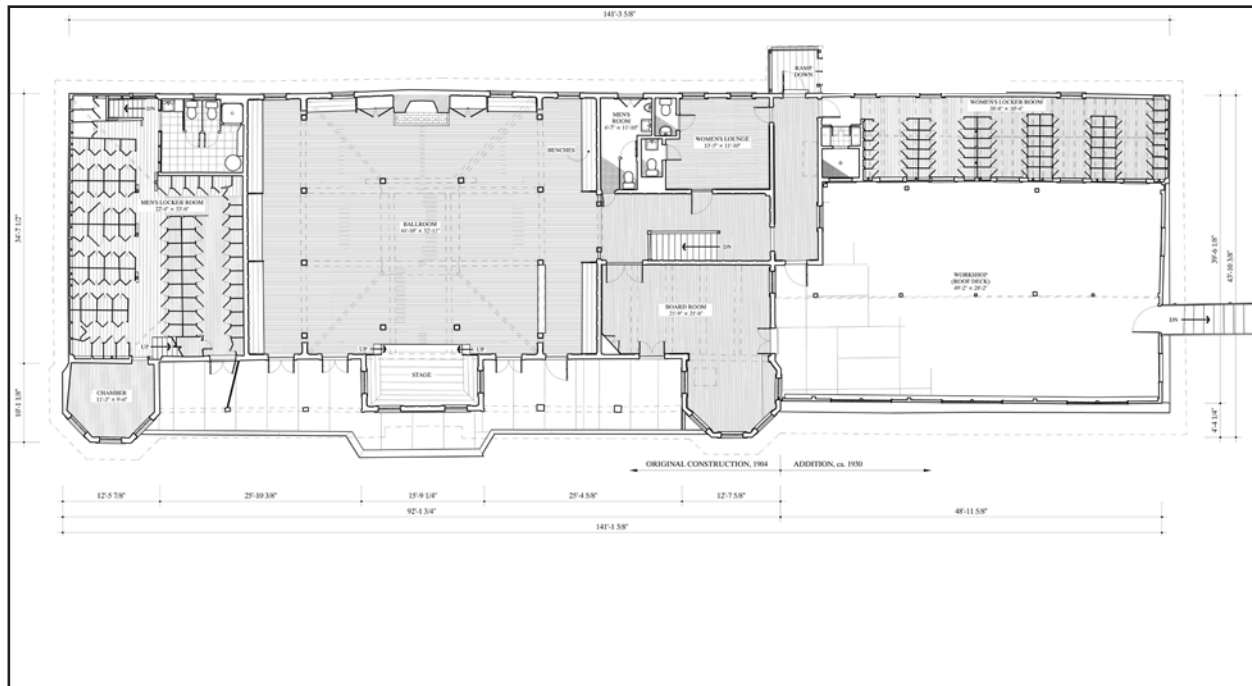


FIGURE 97 Second Floor. HABS, 2013.

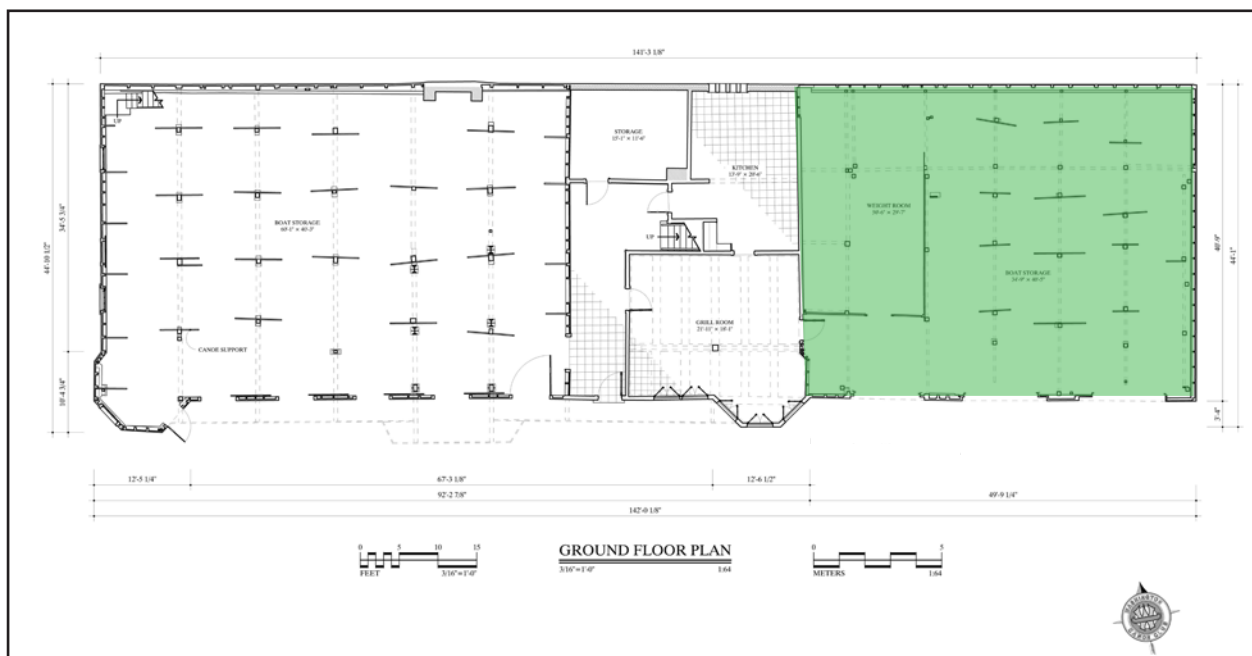


FIGURE 98 First Floor. Highlighted area is the only portion of the building currently occupiable. HABS, 2013.

## **General**

### First Floor

The majority of the first-floor plan is open and devoted to canoe storage. A central hallway provides access to the grill room that is east of the hall, kitchen that is north of the grill room, and storage located to the rear (north) of the hall. While the West (original) Boat Storage Area remains completely open, a weight room was partitioned from the Eastern Boat Storage Area.

As described in the report entitled *Washington Canoe Club Boathouse Rehabilitation 2015*, the condition of the ground floor ranges from poor to fair. The conditions are summarized easily into three conditions, basically moving from west to east. The western section of the old boathouse is in poor condition with combinations of original framing and many generations of wooden and steel temporary support. This section has been damaged by floodwaters on many occasions. The central core, which includes the Grill, Kitchen and Storage Rooms, is in good condition. Steel beam/columns have been added to support the floor above and the walls were coated in the 1970s with hard cement plaster which remains today in very good condition. This coating has protected the underlying wooden framing. The condition of the East Boat Storage Area is fair to good as all the structural framing was replaced in the 1992.

### Second Floor

The second-floor plan features the ballroom in the center of the building, with a stage to the south and a fireplace to the north and ceiling rising up to where the ventilator (also referred to as a louvered lantern) is placed. In the west end and tower is the men's locker room, with a bathroom in the rear and banks of lockers filling the remainder of the space. At the mezzanine level, there are additional lockers and access to the tower chamber. East of the ballroom, in the space that was appended in 1909, is the boardroom; the boardroom opens into the east tower. The main staircase and bathrooms for men and for women are to the north of the boardroom. Both bathrooms open off the stair hall. In the later addition (extending eastward and in line with the north elevation), the present workshop occupies the roof deck and the women's locker room runs along the north wall. The enclosure of the deck happened in the mid 1970s, outside of the building's Period of Significance.<sup>9</sup>

The interior spaces on the second level are in generally good condition because of the continuous maintenance by WCC. Most historic finishes and features remain, along with some modern and recent temporary structural bracing. The ballroom, measuring about 35 by 45 feet, is the most notable and most decorated space in the building. The floor level in the ballroom drops almost 8 inches from north to south at the western corner.

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9 Washington Canoe Club, HABS No. DC-876, December 2013.



FIGURE 99 Grill Room, first floor, looking north.



FIGURE 100 Kitchen, first floor, looking north.



FIGURE 101 West Boat Storage Area, first floor, looking north.



FIGURE 102 East Boat Storage Area, first floor, looking east.



FIGURE 103 Weight Room, East Boat Storage Area, first floor, looking north.



FIGURE 104 Central Hallway, first floor, looking south.



FIGURE 105 Central Hallway, second floor, looking east.



FIGURE 106 Workroom, second floor, looking east.



FIGURE 107 Boardroom, second floor, looking southeast.



FIGURE 108 Ballroom, second floor, looking southwest towards the stage.



FIGURE 109 Ballroom, second floor, looking northwest.



FIGURE 110 Men's Locker Room, second floor and mezzanine, looking north.



FIGURE 111 Main staircase, looking west.

### **Stairways**

There are two staircases on the interior of the building. In the northwest corner of the ground floor, in the West Boat Storage Area, there is a staircase with a quarter turn near the bottom. It is in poor condition. The lower steps have been removed to accommodate temporary shoring and the landing has been replaced with a flimsy section of plywood. The steps to the second floor lack adequate support and a handrail.

The other stair -- the main stair -- is in the center of the building and leads from the first floor hall to the main hall on the second floor. The stairs consist of painted wood treads and risers with wall-mounted wood handrails. A wood balustrade with newel posts and decorative balusters surrounds the stair opening on the second floor. All stair components are in fair condition. The treads have worn nosings and a scuffed finish from years of foot traffic.

### **Flooring**

Originally, wood plank flooring was featured throughout the building. In order to combat the standing water that infiltrated the building following the installation of the concrete apron, the first floor slab was leveled and raised. In order to complete this, an eight-inch thick concrete slab with a four inch sand/gravel substrate was laid throughout the building's ground floor. The West



FIGURE 112 Non-compliant and flimsy stairs in northwest corner of West Boat Storage Area.

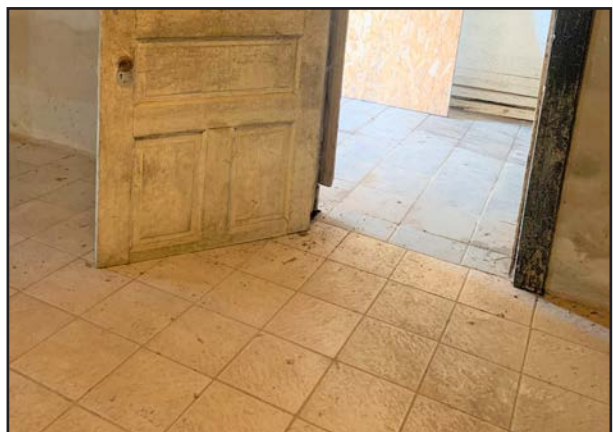


FIGURE 113 Tile in Grill Room and hall, first floor. Note cut down interior door.





FIGURE 114 Wood floor in Ballroom, second floor.



FIGURE 115 Wood floor, second floor.



FIGURE 116 Wood plank flooring in Men's Locker Room.

Boat Storage Area was finished with a smooth concrete, while the areas within the c. 1910 portion of the building – the hallway, Kitchen, and Grill Room – were finished with a ceramic tile. The Kitchen area was topped with a two-inch thick leveling slab, resulting in a slight grade difference between it and the Grill Room.

The second floor features narrow wood boards on the second floor, wood plank flooring in the Men's Locker Room, non-original tile in the bathrooms, and some carpeting (in the tower sleeping rooms).

Generally the floor finishes are in fair condition. The finish on the wood flooring is worn and scratched from years of foot traffic. The concrete

floors in the boat storage areas have cracks in some areas. Also, several large sections of concrete floor have been sawcut and removed as well as cores drilled to inspect the floor and foundation conditions.

### **Wall and Ceiling Finish**

The interior of the Washington Canoe Club boathouse is a mixture of finished and unfinished spaces, with bead board walls and ceilings throughout except for the boat storage areas in which the framing is exposed. A Burlap covering is used to create the effect of wainscoting on the second floor. Also on the second floor, the wood trim for the door architraves, balustrade, benches, trophy cases, piers, and shelving is stained a dark brown, almost black color. Generally the wall finishes are in fair to good condition with some areas of failing paint finish or broken or missing boards. Some areas of wall finishes have been removed for structural investigation. The wall material in these areas will be re-installed or replaced during rehabilitation.



FIGURE 117 Wall treatment in Ballroom. Note areas of peeling and bubbling paint.



FIGURE 118 Wall treatment in Boardroom.



FIGURE 119 Wood in hallway on first floor is of early 20th C. wood construction. The wall cavity was filled with silt from periodic inundation during Potomac River floods. Portions of the wall were removed in 2014 for investigation.



FIGURE 120 Painted bead board, first floor.

The ceiling finishes in the canoe club building include painted bead board, painted tongue-and-groove paneling, and exposed framing. Generally the ceiling finishes are in fair condition with some cracked boards and localized areas of failing paint finish. Several sections of ceiling boards have been removed in various areas for structural investigation. These materials have been retained and are available for reinstallation or repair during an overall building rehabilitation.

**Doorways and Doors**

Most of the doors are wood and paneled; the architraves are mitered or butt joined at the corners. Several are embellished with backbands, such as the cavetto molding seen on the main floor doorways.

Generally, most of the solid doors are in fair condition and still retain the original door hardware. Other doors are in poor condition with missing hardware, damaged or cracked components, and failing paint finishes. Some doors at the first floor have been trimmed substantially in order to accommodate the



**FIGURE 121** Original five-panel wood door with original hardware. Note that the door was cut down to fit in the opening after the floor was raised.



**FIGURE 122** Right door in the double five-panel door leading from the hall to the Board Room.

changes in floor levels.

### ***Decorative Features and Trim***

The majority of the decorative features are located in the Ballroom. Besides the stage or bandstand, decorative features include built-in benches with curving ends, bracketed shelving, a corbelled fireplace, built-in glass-front trophy cases, and the piers with concave moldings. The built-in wood cabinets are not original but were likely installed during the second phase of construction. The cabinets consist of a stained wood frame with two glass doors and two storage compartments below with hinges doors and with glass pulls. Each cabinet has two glass shelves on the interior. The cabinets are in poor condition with broken or cracked wood components, cracked door glass, and missing hardware.

Possibly the most notable feature in the Canoe Club, however, is a detachable decorative frieze that lines the perimeter of the Grill Room.<sup>10</sup> The frieze, painted by Felix Mahoney in 1910, was executed in oil paint on card or paper that was marouflaged to pressboard or Masonite panels that are nailed

<sup>10</sup> Over the years, the decorative frieze has incorrectly been referred to as a mural. According to the Merriam-Webster dictionary, a mural is “applied to and made integral with a wall or ceiling surface.” This nomenclature does not reflect the frieze because the panels are not part of the building’s fabric.



FIGURE 123 Bench with curving ends under bracketed shelf, Ballroom.



FIGURE 124 Trophy case adjacent to fireplace, Ballroom.



FIGURE 125 Detail of frieze.



FIGURE 126 Section of the frieze falling off of the south wall; another section showing an illustration of the Canoe Club.

or screwed into the wall substrate. Mahoney was known for his cartoons and political images in the *Washington Evening Star*. The frieze in the Grill Room depicts the artist and club members engaging in rambunctious antics, drinking beer, and paddling.<sup>11</sup> The frieze was extensively restored by Charles W. Lundmark in 1981 to 1982. Portions of the artwork panels have recently been removed from the walls as they were found to be in conflict with the goals and ideals of the current membership.

In December 2018, EverGreene Architectural Arts completed a cursory investigation of the frieze. EverGreene's report, issued in January 2019, determined that the frieze is in fair to poor condition. There are several areas of paint loss or discoloration and paper delamination. There are also some instances of water damage and mold growth.

EverGreene also investigated the feasibility of removing the panels. After examining a variety of options, including leaving the panels as they are with no treatment; undertaking minimal treatment in situ; documenting and storing on-site in purpose built racks; and documenting and storing off-site,

11 EverGreene Architectural Arts, *Washington Canoe Club: Cursory Mural Investigation* (January 31, 2019).

EverGreene concluded that, even though the panels are extremely fragile, removing, treating, and storing them off-site is the best solution for the frieze's long-term preservation.

## **EAST BAY**

In 1920, a simply constructed open-shed addition with three large openings was added to the east of the building for additional boat storage. A small second story mass was constructed atop the addition's northwest corner and was to serve as a locker room for women. The remaining space above the boat storage area was used as a roof deck. The women's locker room was expanded at some point between 1936 and 1939. In the mid 1970s, the roof deck was enclosed so it could be converted into a workshop. In order to support the structural loads of the new second floor, all the floor framing was replaced and upgraded, along with the columns. In 1992, the entire structural support within the first floor of this portion of the building was again upgraded. The roof structure above the workshop was not altered; however, the floor of the workshop was also completely replaced. The floor is now in poor condition, with several areas of staining and water damage visible. Additionally, a section of the floor adjacent to the Ladies Locker Room has been removed and is temporarily patched with plywood.

In 1992, as part of the work completed on this section of the building, wood roll-up doors were replaced with modern overhead metal roll-up doors. In 2011, the western-most door opening was infilled to provide pedestrian access to this area of the building after the main club house was determined structurally unsound. The infilled opening features wood shingle siding to match the existing siding. A modern metal-door has been installed within the infill. All doors are in good condition.

Overall, the condition of the East Bay is fair. This is because large parts of the structure have been replaced at several points during the second half of the twentieth century. The replacement and upgrading of historic framing has allowed Club members to continue to occupy the first floor of the East Boat Storage Area. The floor of the second floor and the roof structure above the workshop, however, is not structurally sound and should be replaced. Limited work has been undertaken at the northern end of the East Bay. The north elevation of this section of the building is in poor condition, as evidenced by an undulating roof edge.

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*Chapter 5*

**RECOMMENDATIONS**

## PRESERVATION PHILOSOPHY

The purpose of this chapter is to support the rehabilitation preservation philosophy for the Washington Canoe Club and to identify specific treatment recommendations in alignment with that philosophy. The philosophy and recommendations are grounded in the documentation and analysis presented in the previous chapters. These recommendations address physical deterioration throughout the building, preservation best practices, and priorities for the preservation and rehabilitation of the building.

## EXISTING USE

The majority of the building is no longer in use due to structural and fire and life safety concerns. After NPS undertook efforts to temporarily stabilize the oldest sections of the building, the Washington Canoe Club was permitted to re-occupy only the East Boat Storage Area and weight room. The area in the immediate vicinity of the boathouse continues to be used by the Washington Canoe Club members for boat storage and for launching the canoes. A chain link fence secures the site.

## PROPOSED USE AND TREATMENT

The ultimate goal of the proposed project, which will be undertaken by the Washington Canoe Club in coordination with NPS, is to secure the building against future flood events, stabilize the structure, and have the Washington Canoe Club once again occupy the building for club-related functions. As part of this, several project objectives have been developed:

- Preserve the building's connection with the Potomac River to the south;
- Rehabilitate the building with careful consideration to the building's character-defining features;
- Working within the footprint of the historic building, reconfigure the building to create more efficient space utilization so it can better serve the programmatic needs of the Club as well as meet all applicable codes (building, accessibility, life and safety);
- Plan for flood resiliency by utilizing sustainable design and building techniques wherever possible as a model for waterfront development; and
- Integrate the building into the planned Georgetown Waterfront Non-motorized Boat Zone.

## GENERAL PRESERVATION GUIDANCE

The Secretary of the Interior's Standards for the Treatment of Historic Properties ("Standards") are the most commonly accepted national standards of good preservation practice. The Secretary of the Interior outlines four treatment approaches:<sup>1</sup>

**Preservation** is defined as the act or process of applying measures necessary to sustain

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<sup>1</sup> Anne E. Grimmer, *The Secretary of the Interior's Standards for the Treatment of Historic Properties with Guidelines for Preserving, Rehabilitating, Restoring, and Reconstructing Historic Buildings* (Washington, DC: US Department of the Interior, National Park Service, Technical Preservation Services, 2017).



the existing form, integrity, and materials of an historic property. Work, including preliminary measures to protect and stabilize the property, generally focuses upon the ongoing maintenance and repair of historic materials and features rather than extensive replacement and new construction. The limited and sensitive upgrading of mechanical, electrical, and plumbing systems and other code-required work to make properties functional is appropriate within a preservation project. However, new exterior additions are not within the scope of this treatment. The Standards for Preservation require retention of the greatest amount of historic fabric along with the building's historic form.

**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. The Rehabilitation Standards acknowledge the need to alter or add to a historic building to meet continuing or new uses while retaining the building's historic character.

**Restoration** is defined as the act or process of accurately depicting the form, features, and character of a property as it appeared at a particular period of time by means of the removal of features from other periods in its history and reconstruction of missing features from the restoration period. The limited and sensitive upgrading of mechanical, electrical, and plumbing systems and other code-required work to make properties functional is appropriate within a restoration project. The Restoration Standards allow for the depiction of a building at a particular time in its history by preserving materials, features, finishes, and spaces from its period of significance and removing those from other periods.

**Reconstruction** is defined as the act or process of depicting, by means of new construction, the form, features, and detailing of a non-surviving site, landscape, building, structure, or object for the purpose of replicating its appearance at a specific period of time and in its historic location. The Reconstruction Standards establish a limited framework for recreating a vanished or non-surviving building with new materials, primarily for interpretive purposes.

Although these treatments are sometimes used interchangeably in the general discourse, each has a specific meaning when applied to professional historic preservation practices. Each preservation treatment has a series of associated standards and guidelines, developed by the Technical Preservation Services division of the National Park Service.

## REHABILITATION TREATMENT

The Washington Canoe Club is a significant both for its continued use as an athletic club in Washington and as an excellent example of the Shingle style. Its physical integrity allows it to convey its architectural character during its period of significance that extends from 1904 to 1939.

As the Washington Canoe Club prepares to mitigate future flood risks and complete a renovation to the building to allow for its continued use, it was determined that a more rigorous preservation approach, such as a restoration to a specific period of significance, would neither address the flood risks nor meet

their needs and priorities for creating a twenty-first century facility. Similarly, a preservation treatment approach would not provide the desired level of flexibility. Therefore, a rehabilitation treatment has been identified as the most appropriate approach.

The Secretary of the Interior recommends rehabilitation “...when repair and replacement of deteriorated features are necessary; when alterations or additions to the property are planned for a new or continued use; and when its depiction at a particular time is not appropriate...”<sup>2</sup> Rehabilitation allows for the preservation of significant features while also allowing other conditions and programmatic shortcomings to be addressed. Finally, a rehabilitation approach accommodates changes to a property over time and the interpretation of multiple periods of history, which is important for preserving the physical legacy of the Washington Canoe Club, and acknowledges the continual evolution of the building from its original construction to the most recent changes at the east bay.

The *Secretary of the Interior’s Standards for Rehabilitation* have been codified in the Code of Federal Regulations (36 CFR 67) as:

1. A property shall be used for its historic purpose or be placed in a new use that requires minimal change to the defining characteristics of the building and its site and environment.
2. The historic character of a property shall be retained and preserved. The removal of historic materials or alteration of features and spaces that characterize a property shall be avoided.
3. Each property shall be recognized as a physical record of its time, place, and use. Changes that create a false sense of historical development, such as adding conjectural features or architectural elements from other buildings, shall not be undertaken.
4. Most properties change over time; those changes that have acquired historic significance in their own right shall be retained and preserved.
5. Distinctive features, finishes, and construction techniques or examples of craftsmanship that characterize a property shall be preserved.
6. Deteriorated historic features shall be repaired rather than replaced. Where the severity of deterioration requires replacement of a distinctive feature, the new feature shall match the old in design, color, texture, and other visual qualities and, where possible, materials. Replacement of missing features shall be substantiated by documentary, physical, or pictorial evidence.
7. Chemical or physical treatments, such as sandblasting, that cause damage to historic materials shall not be used. The surface cleaning of structures, if appropriate, shall be undertaken using the gentlest means possible.
8. Significant archaeological resources affected by a project shall be protected and preserved. If such resources must be disturbed, mitigation measures shall be undertaken.
9. New additions, exterior alterations, or related new construction shall not destroy historic materials that characterize the property. The new work shall be differentiated from the old and shall be compatible with the massing, size, scale, and architectural features to protect the historic integrity of the property and its environment.
10. New additions and adjacent or related new construction shall be undertaken in such a manner

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2 “Rehabilitation as a Treatment,” National Park Service, Technical Preservation Services, accessed 12 January 2021, <http://www.nps.gov/tps/standards/four-treatments/treatment-rehabilitation.htm>.

that if removed in the future, the essential form and integrity of the historic property and its environment would be unimpaired.<sup>3</sup>

## GUIDELINES ON FLOOD ADAPTION

In 2019, the National Park Service published *Guidelines on Flood Adaption for Rehabilitating Historic Buildings* to provide information about how to adapt historic buildings to be more resilient to flooding risk in a manner that will preserve their historic character and will meet *The Secretary of the Interior's Standards for Rehabilitation*. The Guidelines on Flood Adaption are meant to be used in conjunction with the Standards for Rehabilitation and are meant to be applied only to historic properties that have an established risk of flooding.<sup>4</sup>

An initial review of the FEMA 100-year flood zone map for this area indicates that the Potomac River flood stage would be at an elevation of about 17.30 feet. The average daily elevation of the river is at an elevation of 3.5 feet, thus the 100-year floodplain is about 13.8 feet higher. The current elevation of the first floor level of the boathouse is about 6.57 feet and the current elevation of the second floor level is about 15.82 feet, both of which fall below the established FIRM (Flood Insurance Rate Map) flood elevation.<sup>5</sup> With evidence of severe floods in 1918, 1924, 1936, 1942, 1948, 1952, 1955, 1972, 1985, and 1996, and with its location within the floodplain, the Washington Canoe Club has an established risk of flooding.

The Guidelines on Flood Adaption offer that:

A project is considered to meet the Standards when the overall effect of all work is consistent with a property's historic character. Treatments that might not be considered in other rehabilitation contexts because of their impact on the historic character of the property may be acceptable in the context of adapting the property to flooding hazards. Even in this context, the selected treatment should always be one that minimizes the changes to the building's historic character and appearance. Adaptation treatments should increase the building's resilience to flooding risks as much as possible, but should do so without destroying significant historic materials, features, or spaces.<sup>6</sup>

In order to protect the Washington Canoe Club from further catastrophic flooding, it has been determined that the most appropriate treatment is to elevate the building on a new foundation. Given the current elevation of the Washington Canoe Club, the building should be elevated on a new foundation to raise the second floor level above the floodplain. Based on the current elevation of the second floor level and the Potomac River flood stage, the building will only need to be raised approximately 24 to 30 inches. Further investigation is needed to determine the right height for the

3 Grimmer, *The Secretary of the Interior's Standards for the Treatment of Historic Properties with Guidelines for Preserving, Rehabilitating, Restoring, and Reconstructing Historic Buildings*.

4 Local and federal rules and regulations, such as the District Department of Energy (DDOE) floodplain management guide, should also be considered.

5 Smith, *Boathouse Rehabilitation 2015: Part II - Rehabilitation Concept*, 20.

6 Jenifer Eggleston, Jennifer Parker, and Jennifer Wellock, *Guidelines on Flood Adaption for Rehabilitating Historic Buildings*, (Washington, DC: US Department of the Interior, National Park Service, Cultural Resources, Partnerships & Science, 2019), 6.

first floor relative to the surrounding grades so as not to adversely effect the adjacent area.

While raising a historic building can have adverse effects on the historic character and integrity of the building, the *Guidelines on Flood Adaption for Rehabilitating Historic Buildings* explains that buildings can generally be elevated at least a nominal amount without a major impact on the property's historic character. There is no universal standard for how high any given building can be elevated; instead, size, scale, height, and massing of a building will affect how much change in height may be acceptable without impacting the historic character of the property or the historic spatial and architectural relationship between the building, the C&O Canal, and the Potomac River. Generally, there is less perceived impact on the character of a historic building when the proportional massing relationships of the foundation to the body of the building and the overall vertical or horizontal emphasis of the building are maintained.<sup>7</sup> In the case of the Washington Canoe Club, raising the building would not only mitigate the risk of flooding for the programmed spaces of the building, but it would also allow for the restoration of the building's original first story proportions and relationship to the ground plain -- a preservation benefit.

## RECOMMENDATIONS FOR TREATMENT<sup>8</sup>

### SITE

#### ***Flood Protection***

- Raise the historic building (main block and 1909 addition) approximately 24 to 30 inches so that the second story elevation is above the floodplain. Care should be taken to reestablish the first story's original proportions relative to the surrounding grade without adversely effecting adjacent areas and site access.
- Repair any structural deficiencies before beginning work to separate the building from the existing foundation. A new mat foundation should be laid on micro-piles with formed concrete perimeter knee walls to support the wood framing and lateral soil pressures at portions of the building perimeter.
- Construct low concrete walls designed to support the existing wood framed exterior and interior walls and to resist future anticipated flooding.
- Anchor and laterally brace the structure, where necessary, to prevent movement or collapse of the historic building.
- Install flood doors or break-away wall panels at the new foundation along the west, south, and east walls to allow flood water to enter the building without damage and to allow the water to recede as quickly as possible.

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<sup>7</sup> Eggleston, Parker, and Wellock, *Guidelines on Flood Adaption for Rehabilitating Historic Buildings*, 34-35.

<sup>8</sup> This section utilizes and builds upon the recommendations included in the Historic Structure Assessment Report prepared by the National Park Service Historic Preservation Training Center in 2014, the *Structural Investigation of the Washington Canoe Club: Condition Assessment Report* prepared by Protection Engineering Group in 2014, and the *Boathouse Rehabilitation 2015: Part II - Rehabilitation Concept* prepared by Baird Smith.

- Retain the historic access locations and approach/orientation of the building.
- Relocate all utilities above the established flood risk level or protect them in place with a watertight or impermeable enclosure.
- New floor finishes on the first floor should be highly water-resistant, such as concrete or ceramic tile, due to the high probability of flooding events.
- In instances where new lumber is required, cedar; white oak; and/or teak should be used. All three of these wood species have a natural ability to repel rot, moisture, and insects. New wood should match
- Retain historic materials, features, and finishes that are flood-damage resistant on the floor. If historic features need to be replaced due to damage or deterioration, use substitute materials that match the design and appearance of the historic component but that are more flood-damage resistant.
- Local rules and regulations, including the District Department of the Environment (DDOE) floodplain management guideline, should be considered.

### ***Site Improvements***

- Improve the Potomac River's edge through careful site planning and the introduction of compatible strategic plantings that takes into account storm water issues, habitat creation, and riparian health.
- Repair or cover severely cracked and deformed concrete apron located to the south of the building.

### ***Site Security***

- Install a new perimeter fence around the property.

## **EXTERIOR**

### ***Exterior Envelope***

- Raise the building approximately 24 to 30 inches to reestablish the building's original first story proportions (i.e. the full building elevations relative to the surrounding grade).
- Remove the existing wall sheathing to allow for direct access to repair deficient wall framing and to plumb displaced walls. In order to remove the wall sheathing, the exterior skin (wood shingles) will also have to be removed. Effort should be made to salvage the existing historic wood shingles as much as possible during removal, or leave selected areas of original shingling (with red stain seen on reverse of shingle) in-situ; however some amount of damage and loss of shingles is expected. After the siding has been removed and the framing repairs have been completed, installation of plywood wall sheathing is recommended per the structural engineering report for increased lateral stability. The exterior shingle siding should then be

re-installed to match the original appearance.<sup>9</sup>

- Replace in-kind any warped, cracked, broken, or missing wood shingles to match the adjacent wall shingles. It is recommended that any replacement shingles be of 100% heartwood cedar (red or white) as this wood is naturally resistant to decay. Other materials, such as a naturally water and decay resistant wood species; pressure treated wood; or thermally treated wood, may be appropriate replacement shingles as well. Replacement shingles should be edge-grained, as these tend to split and warp less than flat-grained. If wood shingles are in good condition, detach, vertically align with extant adjacent pattern, and re-secured to the substrate.
- All wood trim should be sorted. If in poor condition, the trim should be replaced in-kind to match the size and profile of the original feature. If the material is in fair condition, it should be re-used. Any pieces identified for reuse should be documented and tagged during their removal.
- All shingles and trim should be prepared, primed, and repainted with quality exterior-grade paint, with attention paid to the end grain. As part of the preparation, remove loose and peeling paint, loose fibers, and gently clean. Prime replacement wood on all sides. Following manufacturer's instructions, it may be helpful to thin the primer when applying to the end grain to allow it to penetrate the surface further.
- Most preservatives treatments can only be applied to bare wood, so treatment of new wood will be the easiest. Otherwise, finishes will need to be removed. One possible product to consider are Bora-Care with Mold-Care to deter wood-destroying pests, mold, and decay fungi. In outdoor applications, sealants need to be used with this product. Application methods and compatibility with finishes should be determined following the manufacturer's instructions and through testing. Though the structure is obviously not a bridge, *Guide for In-Place Treatment of Wood in Historic Covered and Modern Bridges* ([https://www.fpl.fs.fed.us/documnts/fplgtr/fpl\\_gtr205.pdf](https://www.fpl.fs.fed.us/documnts/fplgtr/fpl_gtr205.pdf)) has additional relevant information. Water-repellent preservatives slow the absorption of liquid water. These are often applied to new wood through using vacuum pressure or dipping, but can also be brush applied to bare wood during refinishing after loose paint has been removed. Special attention should be paid to treating the end-grain, as this is the most susceptible to moisture. They likely will not perform as well on weathered wood. Manufacturer's recommendations should be followed, and one should be selected that can be used with the selected finish. Wolman Woodlife Classic Clear Wood Preservative is one paintable option to test. See *Applying a Water-Repellent Preservative to Wood* ([https://www.gsa.gov/technical-procedures/applying-water-repellent-preservative-wood?Form\\_Load=88473](https://www.gsa.gov/technical-procedures/applying-water-repellent-preservative-wood?Form_Load=88473)) for more guidance.
- Preliminary paint analysis undertaken in March 2021 by EHT Tracerics indicated that the building was originally painted a dark red with white trim. The paint analysis was undertaken at eight locations on the building's north elevation. Nearly every sample had the same red layer at as the base color, including samples taken from the north elevation of the Women's Locker Room. It is likely that the building remained red throughout much

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9 Protection Engineering Group, *Structural Investigation of the Washington Canoe Club: Condition Assessment Report*.

of its Period of Significance. At some point, possibly after the devastating 1936 flood, the building was repainted a dark green. The stratigraphy shows that the building has been repainted several times with various hues of green. The building remains green today. When the building is rehabilitated and paint colors are chosen, it is important to remember that Shingle Style buildings are characterized by colors reminiscent of wood. Dark brown or red stains are most common; however, darker greens and grays are also appropriate. Appropriate colors, or similar colors, include: Baize, Gedney Green, Pointed Fir, Winter Balsam, Moss Glen, Pettingill Sage, Burnished Pewter, Woolly Thyme, Milkweed, Pitch Pine, Sturgis Gray, Britches, Portobello, Tankard Gray, Hitching Post, Cummings Oak, Tyson Taupe, Bargeboard Brown, Rawhide, Chocolate, Monument Gray, Fieldstone, and Gropius Gray.<sup>10</sup> Trim should be painted in a neutral color that contrasts with the paint color chosen for the building (i.e. white, beige, or tan).

- The appropriate finish will be dependent on what type of finish is already present as they will need to be compatible. The red, early layer observed on the shingles is likely oil-based. Oil-based paints will help to protect the substrate from liquid and water vapor, but because they are film-forming, when water inevitably infiltrates, they are slow drying. Oil-based paints do brittle with age and can crack as wood expands seasonally. Latex paints, which are also form filming, are less resistant to damage from expansion; however, these are likely not compatible with previous finishes and may be less durable. Regardless of the finish, regular upkeep will be required to ensure the wood stays sealed. The service life of finishes on weathered wood will be less than that of new wood.

### **Cupola Louver Panels**

- Damaged or deteriorated louvers on the cupola should be repaired or replaced in-kind. The flashing at the base of the louvers should be replaced with new corrosion resistant metal flashing. The interior metal screening should be inspected and resecured to the louvers or replaced as required. All wood components of the louver panels should be prepared, primed, and repainted.

### **Balcony**

- The structural framing for the balcony walls should be inspected and stabilized as required when the shingles are removed and repairs conducted as per the overall rehabilitation of the building. Historically accurate brackets (Figure 55 of this report) should be re-installed and the original drainage slots observed in historic photographs (Figures 17, 21, and 25 of this report) should be reopened for drainage.
- The walls of the balcony should be repaired as required. The north interior face (north elevation) of the balcony walls should be sheathed and shingled to match the exterior walls.
- Any warped, cracked, broken, or missing wood shingles should be replaced in-kind to match the adjacent wall shingles. Existing historic shingles (if in good condition) should

10 *Historic Colors of America: A Guide to Style, Color, and Architectural Periods*, Historic New England, <https://www.historicnewengland.org/preservation/for-homeowners-communities/your-old-or-historic-home/historic-colors-of-america/> (accessed 1 April 2021).

be detached, vertically aligned with extant adjacent pattern, and re-secured to the substrate. All shingles and trim should be prepared, primed, and repainted with quality exterior-grade paint.

- The top railing boards and trim boards should be replaced with weather-resistant wood to match existing boards.
- The contemporary awnings that have been affixed to the balcony should be removed, and the drainage slots restored.
- The support brackets historically under the balcony should be restored.

### **North Porch**

- The north porch is not original and does not contribute to the significance of the building; therefore, the porch can be removed in its entirety. As the project architects investigate accessibility in the building, this may be a location for a new stair and ramp designed and constructed in compliance with the 2010 ADA Standards for Accessible Design. All components should be rebuilt according to applicable egress and building codes.

### **Roof**

- Based on research conducted to date, by the 1910s, the roof comprised of either a sheet metal pans or some type of synthetic asbestos-cement shingle. The existing standing seam metal roof is in poor condition, and should be replaced. Repairs to the roof are critical to securing the building and making it weather-tight. As the extant roof must be replaced in its entirety, the roof should be replaced with a sheet composition roofing material or some other material that is compatible with the style and age of the building. Any roof finishes should be installed according to the manufacturers recommendations and should receive regular inspection and maintenance.
- All flashings on the main block hipped roof should be removed and replaced during the roof replacement including hips, valleys, counter flashing and side wall flashing against the gables and towers. New flashings should be installed in accordance with manufacturer's recommendations. Hip and valley flashings may also include roll roofing depending on the final roof finish. All flashings should receive regular inspections and maintenance.
- The exposed soffits should be repaired as needed during the roof repairs. The exposed rafters should be repaired or replaced to maintain the original exposed framing appearance. The exposed sections of roof sheathing should be repaired or replaced with dimensional planking to match the original appearance. The remainder of the concealed sheathing can be replaced with plywood sheathing. All soffit components should be prepared, primed, and painted to match the exterior color or other approved color.
- The ceiling height above the non-original Workshop does not meet code. As this section of the roof is not original to the building and does not contribute to the building's significance, it should be removed and the pitch reconfigured to meet applicable code requirements.
- Currently no roof drainage system exists on the building; however, historic photographs



show gutters and downspouts on the south side of the original section of the building. Additionally, as noted in the balcony recommendations section, rectangular drainage holes were located across the balcony. A new drainage system should be designed and installed on the building to include gutter and downspout components that are compatible with the roof types and styles. A system of half-round gutters and round downspouts is recommended. Gutters should be installed at the eaves of all sloped roofs on all elevations. Gutters are not required on the octagonal tower roofs or on the cupola roof. The downspouts should lead to subsurface drains that direct the runoff to an approved outlet area or drainage system. Discharge or roof runoff into the river is not recommended.

- Gutters and downspouts should receive regular maintenance, including cleaning of gutters and flushing of downspouts.

### ***Chimney***

- As the scope of work is finalized or when a General Contractor is on board and can engage a restoration mason, it may be helpful to undertake a mortar analysis of both the pointing and bedding mortars should be conducted to determine the mortar's original color, texture, and bonding strength. Determine the type of binder, mix ratios, and any additives. Aggregate should match in grading, shape, and color.
- Loose or missing mortar in the joints of the brick chimney should be replaced with appropriate new mortar that matches the original in color, texture, and bonding strength.
- The corbeled cap of the chimney should be dismantled and reconstructed with existing bricks and new mortar that matches the original in-kind.
- A new compatible cement wash should be installed on the top of the chimney.
- The existing metal chimney cap should be replaced with a new custom-fitted, vented, and screened non-corrosive sheet metal (stainless steel, copper, or galvanized metal) cap to prevent water and animals from entering the chimney flue.
- If the chimneys must be reconstructed, the existing chimney flashing should be removed and replaced. New flashings shall be copper or other approved metal and shall be installed using traditional flashing details.

### ***Windows***

- An overall strategy should be developed for the windows. All of the exterior wood panels covering the window openings should be removed and an assessment made as to the condition of window sashes and frames to determine if restoration is the appropriate approach. If determined that the windows should be replaced, they should be replaced with wood or aluminum-clad wood windows that match the configuration of the original windows.
- All loose or missing glazing compound on all window sashes should be replaced in-kind with new oil-based glazing compound.
- If the windows are determined to be salvageable, the sashes, frames, and trim should be stripped of all failing paint, prepared, primed, and repainted. A chemical paint stripper can

be used such as Citristrip Paint and Varnish Stripper. Prior to removal of paint, a paint sample should be taken for analysis to ascertain the original color of the wood mullions and windows. Following the stripping of the paint, the mullions should be inspected to determine if there are any previously covered areas of rot or damage.

- When cleaning wood, gentle methods should be used. Harsh chemicals should be avoided as they can raise the grain of the wood. If the finish needs to be removed, odorless mineral spirits can be used. Always test chosen mineral spirit in a small, inconspicuous area prior to treating the entire surface. In general, the nonpainted wood in the building should respond to a gentle cleaning first using a soft brush directed into a HEPA vacuum, with care not to scratch any surfaces, damage the grain, or catch bristles on rough areas. If more work is needed, a qualified conservator should be consulted.
- If there is damage to wood components, it should be repaired with patching or a dutchman, as appropriate, using a wood of the same species, cut, grade, and hardness. Replacement may be permissible depending on the severity of the damage.
- All existing original window hardware should be removed, cleaned, reinstalled, and adjusted to operate properly. Missing hardware should be replaced with new hardware to match the existing components.
- The two modern windows on the east elevation of the North Tower should be removed and replaced with a palladian-style window to match the original window at this location. The modern slider window should be removed and the opening in-filled or a new wood window should be installed to be more compatible with the styles and configurations of the rest of the building. Additionally, the acrylic panel in the window opening in the Kitchen should be removed and replaced with permanent units such as glass block or a wood-frame fixed sash.

### **Doors**

- The glazed doors on the second floor should be repaired as required including the frames and casings. Broken or cracked glass should be replaced with new glass that matches the quality and appearance of the original glass as closely as possible.
- The non-original sliding wood garage doors in the West Boat Storage Area should be removed and replaced with doors that fill the expanded opening. The new doors should be made of water-resistant wood, and their design should be compatible with the historic building.
- The non-historic solid exterior boat bay doors in the East Boat Storage Area are in good condition; however, as they are not original, they may be replaced. Replacement doors should be compatible with the historic building. The westernmost opening should be reopened to restore the addition's original appearance.
- Failing paint should be removed from all doors, jambs, and trim. All door components shall be prepared, primed, and repainted or stained.
- All existing original door hardware should be cleaned of paint, reinstalled, and adjusted to operate properly. Missing hardware or non-compatible hardware should be replaced with new hardware to match the original components.

- New heavy duty deadbolt locks should be installed on all exterior doors for added security.

## STRUCTURE<sup>11</sup>

- Construct a new mat foundation on micro-piles with formed concrete perimeter knee walls to support the wood framing and lateral soil pressures at portions of the building perimeter.
- Install new reinforced concrete columns designed to cantilever from the mat foundation and carry both gravity and lateral loads down to the new foundation.
- A sub-drainage system under the mat should be installed to prevent the intrusion of ground water into the lowest floor level during non-flood events.
- A perimeter sub-drainage system should be installed to collect water behind the below-grade walls during non-flood events.
- Roof framing is generally inadequate to support the required snow loading. The roof rafters and hip beams over the men's locker room and for the trusses over the ballroom and club room should be strengthened or replaced. The ceiling over the ballroom should be removed or, as determined by a structural engineer, additional support should be installed in concealed locations or in a manner that is sensitive to the original design. Joist hangers and hurricane ties should be installed. Roof framing over the Workshop should be completely replaced with full-length rafters, beams and columns that are able to support the required live load of the roof. Columns should stack with supports below, and have blocking installed. New plywood roof sheathing should be added to provide lateral stability.
- The water that travels through the structure from behind the north retaining wall should be diverted around the building with a new drain tile and foundation drain or other system such as a pump. Porous backfill to improve drainage should also be considered. Waterproofing and flashing should be installed during repair procedures so that new framing will remain in good condition.
- Floor framing is generally inadequate to support the required loads. Floor joists and beams should be strengthened under the men's locker room, ballroom, women's locker room and work shop. The loose posts under the women's locker room should be repaired. The floor should be brought back to level, particularly in the ballroom.
- Any areas of deteriorated interior wall framing or wall sheathing should be repaired or replaced with a compatible water-resistant alternative material. Removal of existing wall finishes may be necessary to access wall framing. Existing wall finishes should be removed carefully and, if possible, salvaged for re-installation. Document and tag each piece upon removal. If the historic fabric is taken off-site, the storage facility should have a similar temperature and relative humidity to that of the Canoe Club.
- Wet wood is attractive to subterranean termites. These termites require access to the soil, which they may get through direct contact with wood or by building tubes to connect the

<sup>11</sup> These recommendations are derived from the *Structural Investigation of the Washington Canoe Club Condition Assessment Report* and the *Geotechnical Engineering Narrative and Investigation Report*. To review these documents in full, please refer to Volume 2 of this HSR.

wood to the soil. Metal shields may be installed to limit the ability of termites to make contact with wood.

- New plywood sheathing should be added to provide lateral stability.

## **INTERIOR**

Significant interior features and materials, including the flooring, doors, and the beaded wall paneling, should be carefully evaluated for re-use. Spaces identified as Zone 1 spaces should be restored to their appearance during the building's period of significance. Changes to non-original materials but not to layout may be considered in Zone 2 spaces. Greater alterations are permissible in Zone 3 and 3A spaces, as long as they do not negatively affect spaces designated Zone 1 or 2.

### ***Stairways***

- All components of the main stair should be inspected, re-secured, and repaired, including treads, risers, handrails, balusters, and newel posts. If necessary, components can be replaced in-kind. The balustrade should be prepared and repainted, and the stair treads should be refinished when the wood floors are refinished.
- The stair in the northwest corner of the West Boat Storage Area should be removed in its entirety and reconstructed according to applicable egress and building codes. The new stair should meet all requirements including stair width, tread and riser sizing, handrails, and egress signage.

### ***Flooring***

- New floor finishes on the first floor should be highly water-resistant, such as concrete or ceramic tile, due to the high probability of flooding events.
- The flooring on the second floor should be leveled and assessed for damage and ability to be refinished. The typical tongue-and-groove wood strip flooring throughout the building should be refinished, stained, and sealed where possible. Wood floors can only be sanded a limited number of times before the wood needs to be replaced. Therefore, sanding should only be used as a last resort and even then, only if there is enough thickness remaining to do so. The existing finish can be carefully stripped mechanically or chemically (without introducing too much water) and then a new finish applied once dried. Modern polyurethane finishes should never be applied to historic floors. Preservation grade treatments such as Tongue Oil should be used instead. For areas that are missing, or irreparably damaged, wood of a matching species can be used as replacement. Or, preferably, if any areas of wood are approved for permanent removal during construction, the wood should be salvaged and used as replacement.
- All floors should receive regular maintenance.

### ***Wall Finishes***

- Loose boards should be re-secured to the wall framing. Boards that have been removed for

structural investigation should be re-installed.

- Broken or missing boards should be replaced in-kind to match adjacent paneling. Holes and cracks in plaster walls should be repaired in kind so as to match the adjacent wall surface.
- Torn or damaged sections of painted cloth should be replaced to match the original finish as close possible.
- All painted walls should be cleaned, prepared, and repainted.
- All stained wall finishes should be cleaned, touched-up, and resealed as required.
- Biological growth should be removed from the frame walls. Trees and shrubs should be cut back at least a foot from the building to prevent additional biological growth.

### ***Ceiling Finishes***

- Ceiling finishes consist primarily of painted tongue-and-groove paneling and beaded board paneling. Loose boards should be re-secured to the ceiling framing.
- Boards that have been removed for structural investigation should be re-installed.
- Broken or missing boards should be replaced in-kind to match adjacent paneling.
- All ceilings should be cleaned, prepared, and repainted or stained. Areas with exposed ceilings can remain exposed.

### ***Doors***

- The interior doors, frames, and trim should be repaired as required. Original doors that have been modified to accommodate changes in building's ground floor height should be restored to their original height once the boathouse has been raised.
- When cleaning wood, gentle methods should be used. Harsh chemicals should be avoided as they can raise the grain of the wood. If the finish needs to be removed, odorless mineral spirits can be used. In general, the nonpainted wood in the building should respond to a gentle cleaning; however, if more work is needed, a qualified conservator should be consulted.
- Wood doors and trim should be retained and repaired as necessary. If repair is needed, as much of the historic material should be retained as possible and new matching or compatible (not too hard) wood cut in as a dutchman. Automatic door openers and/or power-assisted door openers can be added to meet accessibility requirements.
- Modern, incompatible doors should be replaced with new wood panel doors that are compatible with the building style and the other interior door styles.
- Doors that have been trimmed or modified should be restored to fit their opening after interior rehabilitation has been completed. All door finishes shall be prepared for repainting or re-staining.
- If a door opening is within an inch or two of meeting the 32" (81 cm) clear opening requirement, it may be possible to replace the standard hinges with off-set hinges to increase the size of the door opening as much as 1" (3.8 cm). Historic hardware can be retained in place, or adapted with the addition of an automatic opener, of which there are several types.

Door hardware can also be retrofitted to reduce door pressures. As feasible, existing original door hardware should be removed, cleaned, reinstalled, and adjusted to operate properly. Missing hardware or non-compatible hardware should be replaced with new hardware to match the original components.

### ***Decorative Features and Finishes***

- The broken components of the wood cabinets should be repaired or replaced in kind. New components should match the original material as closely as possible. The cabinet boxes and drawer boxes should be re-secured and straightened as needed. Broken or cracked glass should be replaced with new glass that matches the quality and appearance of the original glass as closely as possible. The wood finish should be cleaned. If areas of damage in the wood are found, the damaged finish should be stripped carefully with odorless mineral spirits, allowed to dry, and then a matching finish applied. All existing hardware should be removed, cleaned, reinstalled, and adjusted to operate properly. Missing or broken hardware should be replaced with new hardware to match the original components.
- The corner built-in cabinet should be repaired and re-secured as needed. The glass shelves should be cleaned and the wood finish should be cleaned or stripped and re-applied. All existing hardware should be removed, cleaned, reinstalled, and adjusted to operate properly. Missing or broken hardware should be replaced with new hardware to match the original components.
- Prior to undertaking any work related to the frieze, the frieze should be documented in place, stabilized, and cleaned.
- Use an aqueous cleaning solution, such as ammonium hydroxide (pH 8.5), ammonium citrate (pH 5.5), or distilled water to remove spatter and surface dirt from the frieze. Any cleaning should be done carefully, and solutions should be applied with a cotton swab.
- In consultation with a trained conservator, carefully remove the artwork panels from the walls of the Grill Room. Store the panels off-site at a conservation facility for the duration of construction. In consultation with the DCSHPO, determine the best location for re-installation. Alternatively, remove the panel and donate it to the DC History Center for long-term curatorial storage and archival protective measures.

## **EAST BAY**

### ***East Bay***

The East Bay was originally constructed in 1920 as a one-story utilitarian addition to accommodate boat storage. This addition was devoid of any shingle-style ornamentation to tie the architecture back to the original building. Instead, the East Bay was a simply constructed open-shed with three large openings for boat storage. A small second story massing was constructed at the northwest corner of the shed to serve as the women's locker room, while the remaining space above the boat storage area was used as a roof deck.. The women's locker room was expanded at some point between 1936 and 1939. When the roof deck was enclosed in the mid-1970s all the floor framing was replaced and upgraded,

along with the columns to support the new loads. In 1992, the entire structural support within the first floor was again upgraded. More recently, the westernmost boat storage opening was infilled, and contemporary metal garage doors were added to close off the remaining two opening.

The significant loss of historic fabric, coupled with the changes to the roof deck, results in the diminished integrity of this portion of the building, and provides opportunities for change and reconstruction that will better accommodate the WCC program without compromising the integrity of the original building and 1909 addition.

- The East Bay may be reconstructed to meet modern code requirements.
- Any new construction should be referential to the main block of the building, but contemporary in feeling and materiality.
- The design for the new second floor should be pulled back from the parapet to return the front portion to its original use as a roof deck.

## MISCELLANEOUS

### *Monitoring*

- The site's proximity to the Potomac River and foliage, coupled with its history of water infiltration puts the structure at risk for continued deterioration from pests and fungal decay. Regular inspections (seasonal or biannual) should be conducted to monitor for rot and pest activity. Special attention should be made to vulnerable areas, such as the north wall adjacent to the embankment and where wall framing members meet the foundation. Look for wet areas (wood with a moisture content greater than 15% is typically considered wet), new holes, new damage, frass, tunnels, tubes, and nests. Remove any accumulated plant materials. Document any observations or interventions.

### *Building Systems*

- Replace and upgrade all existing electrical, plumbing, and sanitary sewer systems to meet current code requirements.
- Implement a thoughtfully designed and controlled strategy to conceal piping for new systems.

### *Accessibility*

- The entrance on the north elevation is not original, so it may be adapted for ADA compliance. The porch and staircase can be removed in its entirety. A new a new stair and ramp should be designed in a manner that is compatible with the historic building and constructed to comply with the 2010 ADA Standards for Accessible Design. All components should be rebuilt according to applicable egress and building codes.
- If required, a limited use elevator (LULA) may be added within a Zone 2 or Zone 3 areas of the building. Zone 1 areas should not be adversely effected by the addition of the elevator. Care should be taken to contain any mechanical equipment required for the elevator within

the building's existing attic space.

### **Fire Suppression**

- Applicable building codes should be consulted. At a minimum, install a full smoke detection system and place hand-held fire extinguishers throughout the building.

## **ADDITIONAL GUIDANCE**

The Technical Preservation Division of the National Park Service (NPS) develops and maintains guidance on the preservation and rehabilitation of historic buildings and landscapes. These publications are widely available online and in print. The following selected publications are relevant to the treatment of the historic building.

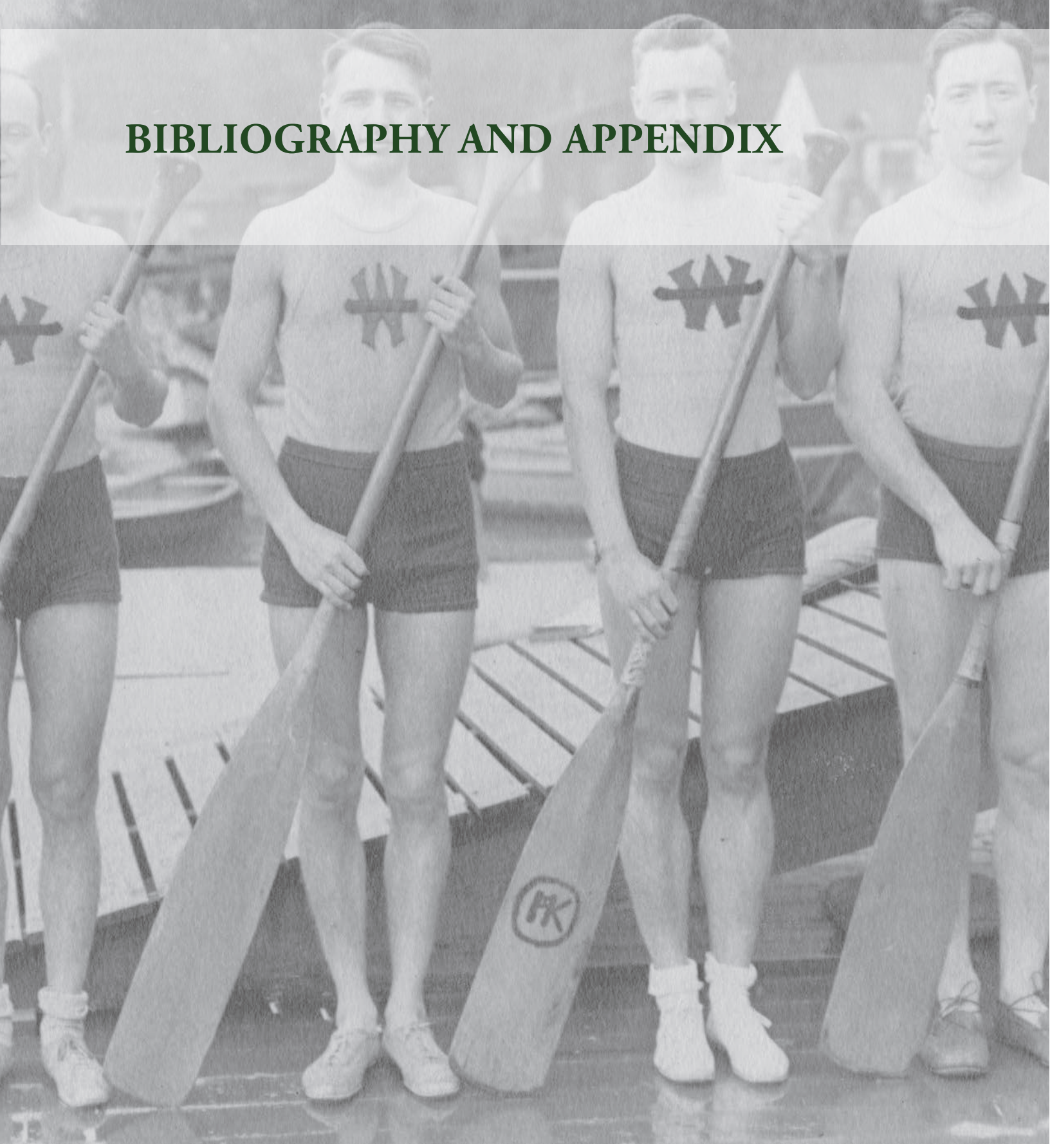
- Preservation Brief 3: Improving Energy Efficiency in Historic Buildings
- Preservation Brief 4: Roofing for Historic Buildings
- Preservation Brief 9: The Repair of Historic Wooden Windows
- Preservation Brief 10: Exterior Paint Problems on Historic Woodwork
- Preservation Brief 14: New Exterior Additions to Historic Buildings: Preservation Concerns
- Preservation Brief 24: Heating, Ventilating, and Cooling Historic Buildings: Problems and Recommended Approaches
- Preservation Brief 32: Making Historic Properties Accessible
- Preservation Brief 40: Preserving Historic Ceramic Tile Floors

The DC HPRB and HPO use written design standards and guidelines to review construction affecting historic properties in the District of Columbia. These standards and guidelines are available online via the DC Office of Planning. Applicable topics include:

- Door Repair and Replacement
- Window Repair and Replacement
- Walls and Foundations
- Roofs
- Additions to Historic Buildings
- Sustainability Guide for Existing and Historic Properties
- Accommodating Persons with Disabilities
- Energy Conservation



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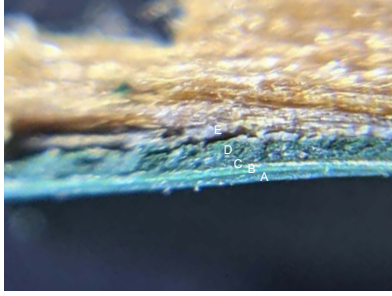
Requirements.” January 1999.

“Washington Canoe Club, Washington, DC.” Survey, Historic American Buildings Survey, National Park Service, Department of the Interior, 2013. From Prints and Photographs Division, Library of Congress (HABS No. DC-876).

## **APPENDIX A: 2021 PAINT ANALYSIS**

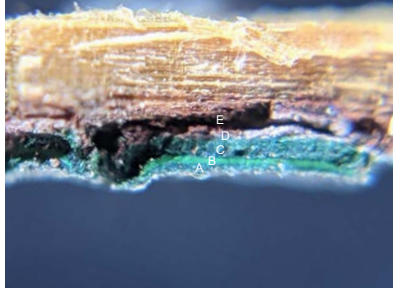
# WASHINGTON CANOE CLUB: NORTH ELEVATION FINISHES ANALYSIS

**SAMPLE 1: SHINGLE**



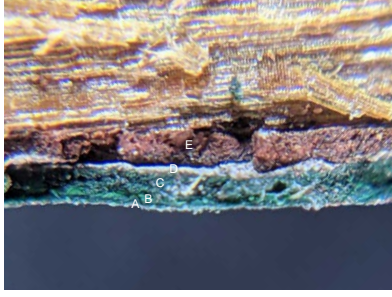
| SUBSTRATE |
|-----------|
|           |
|           |
| SW 6747   |
| SW 0041*  |

**SAMPLE 2: SHINGLE**




| SUBSTRATE |
|-----------|
| SW 6055   |
|           |
|           |
| SW 6747   |
| SW 6195   |

**SAMPLE 3: SHINGLE**



| SUBSTRATE |
|-----------|
| SW 6055   |
|           |
|           |
| SW 6747   |
| SW 0041   |

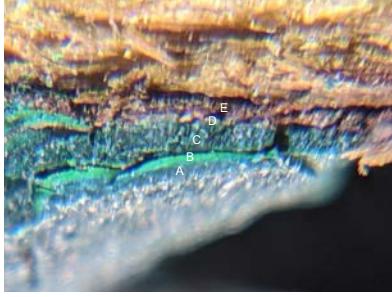
**SAMPLE 4: WINDOW TRIM**



| SUBSTRATE |
|-----------|
|           |
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|           |
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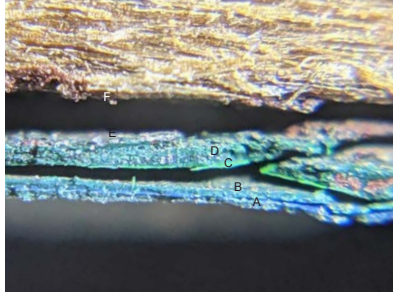
(SW 6055 was not visible in the stratigraphy, but was apparent directly on the substrate where the above layers had failed.)

**SAMPLE 5: SHINGLE**



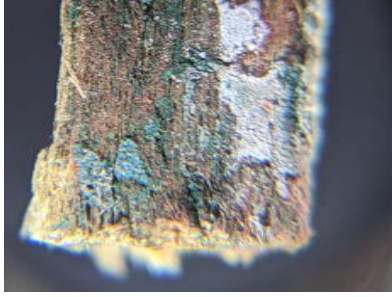
| SUBSTRATE |
|-----------|
| SW 6055   |
|           |
|           |
| SW 6747   |
| SW 0041   |

**SAMPLE 6: SHINGLE**



| SUBSTRATE         |
|-------------------|
|                   |
|                   |
|                   |
| SW 6747           |
| PRESUMED GRAFFITI |
| SW 0041           |

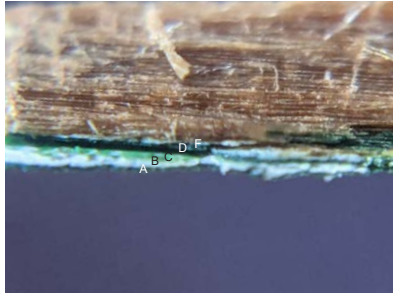
**SAMPLE 7: SHINGLE**



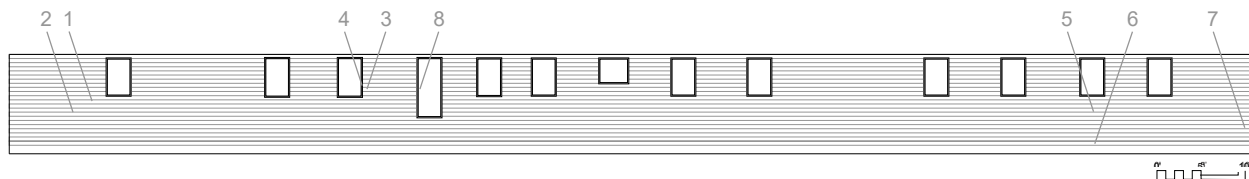
| SUBSTRATE |
|-----------|
|           |

The full stratigraphy for Sample 7 could not be determined. The sample was not viable as a result of brittleness.

**SAMPLE 8: DOOR STILE**



| SUBSTRATE |
|-----------|
|           |
|           |
| SW 6747   |
| SW 0041   |



Sampling conducted March 5th, 2020.

\*Colors matches are approximations from the samples. Sherwin Williams codes are used in lieu of Munsell colors. These are for matching purposes and are not an endorsement of or recommendation for a manufacturer or type of paint. Matches to clean, exposed paint should be confirmed on a larger scale on site with natural light. Additional trim samples are recommended.

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EHT|||TRACERIES  
HISTORIC PRESERVATION

**From:** [Mia Maloney](#)  
**To:** [Alyssa Stein](#)  
**Subject:** WCC Paint Analysis  
**Date:** Thursday, March 11, 2021 11:31:13 AM  
**Attachments:** [WCC\\_PaintAnalysis.pdf](#)

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Hi Alyssa,

Attached are the stratigraphies from the finish analysis. Nearly every sample had the same red layer on the substrate. The latest four layers on the door stile resembled that of most of the shingles. If we know when the door was installed, that might help to date the later layers on the shingles. Additional information on potential coatings, materials and substitute materials is below:

The shingles themselves are in pretty good condition, despite the failing finishes.

Because the current shingles are holding up well, replacement in kind is recommended, following wood identification. Otherwise, 100% heartwood cedar (red or white) is may be a good choice as it is naturally resistant to decay. These should be edge-grained, as these tend to split and warp less than flat-grained. It looks like the current shingles may be red cedar.

Options for other wooden element include:

- Though not typically in kind with historic structures, pressure treated wood is an option where other materials and interventions fail, particularly near the ground and other places where the wood will be exposed to high levels of moisture. *Guide for Use of Wood Preservatives in Historic Structures* ([https://www.fpl.fs.fed.us/documnts/fplgtr/fpl\\_gtr217.pdf](https://www.fpl.fs.fed.us/documnts/fplgtr/fpl_gtr217.pdf)) is a good resource for determining what type of pressure treated wood is appropriate in different applications.
- Thermally treated wood: This has a higher decay resistance, retains less moisture, and is more dimensionally stable than untreated wood.
- Wood-plastic composites: These are typically less susceptible to moisture. However, they are susceptible to ultraviolet radiation and heat.

Most preservatives treatments can only be applied to bare wood, so treatment of new wood will be the easiest. Otherwise, finishes will need to be removed. One possible product to consider are Bora-Care with Mold-Care to deter wood-destroying pests, mold, and decay fungi. In outdoor applications, sealants need to be used with this product. Application methods and compatibility with finishes should be determined following the manufacturer's instructions and through testing. Though the structure is obviously not a bridge, *Guide for In-Place Treatment of Wood in Historic Covered and Modern Bridges* ([https://www.fpl.fs.fed.us/documnts/fplgtr/fpl\\_gtr205.pdf](https://www.fpl.fs.fed.us/documnts/fplgtr/fpl_gtr205.pdf)) has additional relevant information.

Water-repellent preservatives slow the absorption of liquid water but allow the wood to breathe. These are often applied to new wood through using vacuum pressure or dipping, but can also be brush applied to bare wood during refinishing after loose paint has been removed. Special attention should be paid to treating the end-grain, as this is the most susceptible to moisture. They likely will not perform as well on weathered wood. Manufacturer's recommendations should be followed, and one should be

selected that can be used with the selected finish. Wolman Woodlife Classic Clear Wood Preservative is one paintable option to test. See *Applying a Water-Repellent Preservative to Wood* ([https://www.gsa.gov/technical-procedures/applying-water-repellent-preservative-wood?Form\\_Load=88473](https://www.gsa.gov/technical-procedures/applying-water-repellent-preservative-wood?Form_Load=88473)) for more guidance.

The appropriate finish will be dependent on what type of finish is already present as they will need to be compatible. The red, early layer observed on the shingles is likely oil-based. Oil-based paints will help to protect the substrate from liquid and water vapor, but because they are film-forming, when water inevitably infiltrates, they will slow drying. Oil-based paints do brittle with age and can crack as wood expands seasonally. Latex paints, which are also form filming, are less resistant to damage from expansion. However, these are likely not compatible with previous finishes and may be less durable. Regardless of the finish, regular upkeep will be required to ensure the wood stays sealed. The service life of finishes on weathered wood will be less than that of new wood.

New wood should be primed on all sides, with attention paid to the end grain. Following the manufacture's instructions, it may be helpful to thin the primer when applying to the end grain to allow it penetrate the surface further.

**Mia Maloney**

Historic Preservation Specialist

**EHT TRACERIES** | historic preservation

440 Massachusetts Avenue, NW

Washington, DC 20001

☎ (202) 393-1199

☎ (717) 253-6506

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# Historic Structure Assessment Report



**Washington Canoe Club Building**  
Washington, DC

## **Chesapeake and Ohio Canal National Historical Park**

May 2014

Cover Photo by HPTC. Tom Vitanza, 12/31/13.

# Historic Structure Assessment Report

## Washington Canoe Club Building 3700 Water Street, NW Washington, DC

Project Agreement  
Between the  
C&O Canal NHP  
and  
National Park Service  
Historic Preservation Training Center

Project # 203457  
Provide Historic Structure Assessment Report for  
Washington Canoe Club Building

May 2014



Submitted by:  
Historic Preservation Training Center (HPTC)  
Office of Learning and Development  
Workforce, Relevancy and Inclusion Directorate  
U.S. Department of the Interior, National Park Service  
Frederick, MD

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**Chesapeake & Ohio Canal National Historical Park**  
**Washington Canoe Club Building**  
**Historic Structure Assessment Report, May 2014**



**Chesapeake & Ohio Canal National Historical Park**  
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**Chesapeake & Ohio Canal National Historical Park**  
**Washington Canoe Club Building**  
**Historic Structure Assessment Report, May 2014**



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## CHAPTER 1

### Overview

The National Park Service's Historic Preservation Training Center (HPTC) was engaged by the Chesapeake and Ohio Canal National Historical Park (CHOH) to prepare a Historic Structure Assessment Report (HSAR) for the Washington Canoe Club Building (WCCB) in the Georgetown neighborhood of Washington, D.C. in fulfillment of PMIS # 203457 – Produce Historic Structure (Assessment) Report for Washington Canoe Club building.

An HSAR provides an assessment survey of the architectural fabric and building systems of a particular structure. It identifies maintenance deficiencies in the physical condition of the features, materials and building systems. It also provides a written and illustrated narrative of the important character-defining features as required by NPS policy and guidelines.

The HSAR team uses non-destructive observation-based architectural fabric investigation and evaluation survey techniques to determine condition ratings for all building features. Subsequently the HSAR presents treatment recommendations for building features and components (extant historic architectural fabric/ materials) and important building systems with maintenance deficiencies to return them to good condition.

This report will also recommend an appropriate level of treatment for the WCCB to meet the agency's mission requirements as outlined in *NPS-28 Guidelines for the Management of Cultural Resources* (NPS-28) and *The Secretary of the Interior's Standards for the Treatment of Historic Properties* (the Standards).

### Scope and Objectives

This project consists of the preparation of a Historic Structure Assessment Report (HSAR) as defined by the project agreement. The HSAR includes the following chapters:

- Project Overview (administrative information);
- Physical Description, Context & Chronology – a brief architectural description, definition of the character-defining features; and a summary of the evolution of the building (context is derived from referenced National Register and HABS History Data materials)
- Standards and Definitions – references for agency systems, policies and guidelines that inform the project;



- Condition Assessment Survey – description of fabric investigation, architectural fabric survey and assessment, summary of condition ratings (maintenance deficiencies);
- Recommended Treatments – prioritized recommendations for treatment (Preservation Maintenance/ Rehabilitation) to meet the stated project goals for treatment.

The HSAR team conducts the inspection and assessment during a series of field visits to the building. The character-defining features of the structure are determined through the field survey referencing the NPS *Preservation Brief No. 17 Architectural Character: Identifying the Visual Aspects of Historic Character as an Aid to Preserving Their Character* (PB17). An established building feature master list (adjusted specifically for the WCCB from the NPS master feature list) is used as a guide for conducting the inspection and assessment, and for preparing recommended treatments.

The condition assessment survey is part of a larger administrative process known throughout the federal government as the asset management process, and internally in the agency as the Capitol Asset Management process. The NPS and other federal agencies apply this process to their historic structure portfolio in an effort to determine their condition, inform the management process and maintain them in good condition.

The historic structure assessment process includes establishing a Building Feature Master List. This list is derived from *Uniformat II*<sup>1</sup> as developed and widely adopted by the federal government for use in the asset management process. The list is used as the guideline for the inspection and condition assessment.

Once identified, the building features are assessed using Qualitative Condition Ratings to determine if they are in *Good, Fair, or Poor* condition. They are also assigned a Maintenance Deficiency Rating of *Critical, Serious, or Minor*; this allows for development of immediate, short and long term treatment strategies. An approximate time period is selected in which the life-cycle assessment (service life) is assessed and on which the treatment recommendations are prioritized for planning purposes. In this project a three (3) to five (5) year time period was selected for long term treatment cycle and a one (1) to three (3) year time period represents the short-term life-cycle assessment and treatment period.

An HSAR uses these industry-wide standards for the assessment criterion. The methodology used to determine building system features as well as the

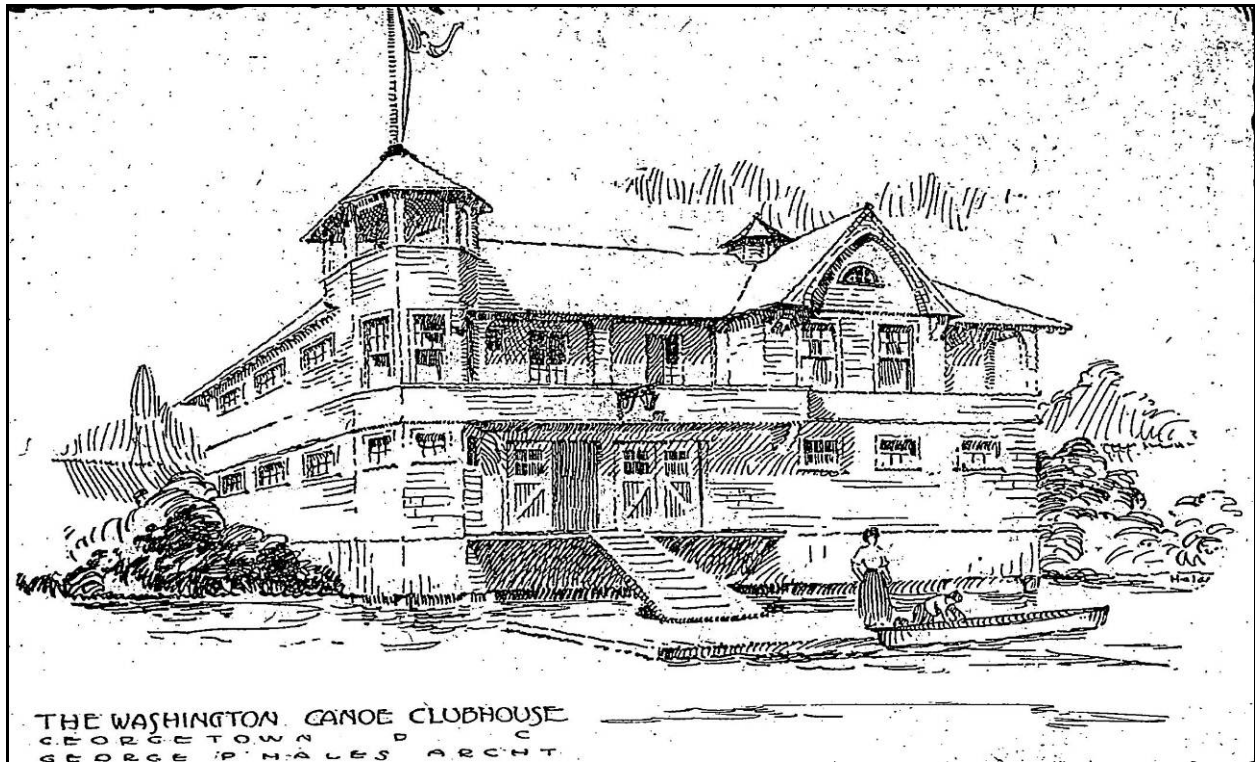
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<sup>1</sup> *Uniformat II Work Breakdown Structure (WBS) (Rev 02.13.08)*.

NPS system to identify and document character-defining features are included in the appendices.

Definitions of the previously listed terminology are derived from the NPS asset management process and adopted for use for this project. Definitions are provided in Chapter 3 and detailed more thoroughly in Appendix A.

Development of recommended treatments is based on the maintenance deficiencies and condition ratings of the features and their significance as character-defining features. All recommended treatments meet *The Secretary of the Interior's Standards for the Treatment of Historic Properties* and the NPS-28 as it pertains to historic buildings. All treatments are intended for general execution by trained historic preservation professionals.



Architect George P. Hale's ca. 1904 rendering of the proposed Washington Canoe Clubhouse. When constructed there were several architectural differences from this proposal. [HABS]

The HSAR team has completed the following services:

- Provided non-destructive observation-based architectural fabric survey and assessment of the WCCB;
- Overall analysis of architectural fabric in conjunction with consultants;
- Building Feature Master List (BFML checklist) customized for Washington Canoe Club condition assessment survey;
- Fabric investigation services to assist structural engineer in field investigation and assessment of building fabric;
- Condition assessment of extant fabric based on BFML checklist;
- Identification of character-defining features;
- General treatment recommendations for preservation maintenance/rehabilitation of extant fabric based on *The Secretary of the Interiors Standards for the Treatment of Historic Properties (1995<sup>2</sup>)* used for the management of historic structures;
- An illustrated narrative that depicts building conditions and provides recommendations for treatment. (Images for this report are digitally based. All field photos are provided as part of the final submittal);
- Documentation of the structure is provided through retrieval of existing drawings and photographs. Materials were obtained primarily from the Historic American Building Survey, the Washington Canoe Club and limited historical research. A complete list of sources is provided in the Appendices.



*Example of historic fabric removal by HPTC to expose the historic wood frame of building for assessment by structural engineer consultant. [HPTC]*

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<sup>2</sup> This is the most current edition of The Standards.

## Methodology

The feature inventory and condition assessment for the WCCB includes these project tasks and steps:

- Field research and documentation;
- Inspection and condition assessment;
- Review historical building records (architectural documentation);
- Review all recent engineering survey reports;
- Development of the HSAR for the documentation and planned implementation of the recommended preservation maintenance and rehabilitation treatments.

The following is a more detailed description of the methodology involved in the development of the recommended treatments provided for consideration.

### Field Research

The HSAR team worked collaboratively to research, gather and review existing available background documents, drawings and photographs to be used for reference and the depiction of the recommended treatments. Information and reports were gathered from: the CHOH's administrative records, operational drawings, previous architectural and engineering reports and studies, historical materials, the National Register of Historic Places, the Historic American Building Survey (HABS) History Data Report, photographs and set of architectural building drawings, the NPS regional office, and materials made available by the WCC to HABS and the park (see references for list).

### Inspection and Condition Assessment

The HSAR team (including the structural, life-safety and electrical consultants) conducted multiple site visits to the WCCB to conduct the fabric investigation and assessment based on the building feature master list (BFML). These site visits occurred between October and December 2013. The BFML list is field adjusted to accommodate special or additional features of the building, it is included in Appendix B. Each building feature is inspected, assessed and photographed.

Maintenance deficiencies were determined using primarily non-destructive investigation and evaluation techniques and visual observation. Destructive investigation was required in certain locations to uncover structural elements of the building not visible elsewhere (this has been documented in Chapter 4 – see Fabric Investigation Outcome and Documentation).

## Historic Structure Assessment Report

Results of the feature inventory, character-defining feature description and condition assessment are compiled into this report. Preservation maintenance/ rehabilitation treatments are recommended to correct existing maintenance deficiencies. A three (3) to five (5) year treatment period is used for the purposes of this report after which time periodic routine and cyclic maintenance will be required. During the five year period preservation maintenance and monitoring should suffice under normal conditions. .

Recommended work tasks are prioritized according to condition rating and maintenance deficiencies. All recommended treatment decisions for preservation maintenance and rehabilitation are recorded in the HSAR.

The recommended treatment determinations are arranged in similar prioritized order with the most deficient features requiring the highest levels of intervention at the top of the list. Treatments address all the building features including simple housekeeping and maintenance tasks. Recommended treatments were developed based on the investigation of the structure and the understanding/ determination that Preservation Maintenance/ Rehabilitation is the preferred treatment to maintain and improve the overall condition of the structure from "Poor" or "Fair" to "Good."

The overall goal of the project is to provide prioritized recommended treatments, based on the specific condition of the building, that allow the CHOH/ NPS to maintain and preserve this National Register property.

The recommended treatments are designed to ensure, upon their implementation, a stabilized building in good repair where character-defining features are preserved and respected. Exterior treatments are designed to present a building that is resistant to vandalism and keeps the weather at bay, with an exterior building envelope that sheds water, allows for proper ventilation, and is structurally sound. Goals for the interior are to present a clean, safe and well-cared for environment; able to be visited and used by agency personnel during an interim period of mothballing or temporary stabilization treatment no to exceed five (5) years.

## Project Participants (HSAR Team)

The following individuals contributed to the report or field investigation:

### Historic Preservation Training Center (NPS)

Thomas A. Vitanza, Senior Historical Architect (RA)

Mark P. Slater, Project Historical Architect

Rebecca M. Cybularz, Staff Historical Architect

Masonry and Carpentry Team Exhibit Specialists

### National Capital Region (NPS)

Catherine Dewey, Architectural Conservator

Historic Architecture Program Manager

### Chesapeake and Ohio Canal NHP

Ahna Wilson, Cultural Resources Program Manager

Christopher J. Stubbs, Chief, Division of Resources Management

Dan Copenhaver, Park Engineer

## References

### General References

ASTM – Standard Guide for Property Condition Assessments: Baseline Property Condition Assessment Process (ASTM: Designation E2018-01). American Society for Testing and Materials (ASTM), Conshocken, PA, 2002.

*Building Construction and Superintendence - Part I, Masons' Work.* F.E. Kidder. William T. Comstock, New York. Sixth Edition, 1903. First Edition, 1896.

*Building Construction and Superintendence - Part II, Carpenters' Work.* F.E. Kidder. The William T. Comstock Company, New York. Ninth Edition, Revised, 1920. First Edition, 1898.

*Capital Engineers: The U.S. Army Corps of Engineers in the Development of Washington, D.C., 1790-2004.* Pamela Scott, Office of History, US Army Corps of Engineers, Alexandria, VA. 1<sup>st</sup> edition 2005. (December 14, 2012).

*Feasibility Assessment Manual for Reusing Historic Buildings.* Donovan D. Rypkema. A National Trust Publication, National Trust for Historic Preservation, Washington, D.C. 2007.

*A Field Guide to American Architecture*. Virginia McAlester. An imprint of Borzoi Books, Published by Alfred A. Knopf, Inc. New York. 1984.

*The Journal of Architectural Technology, Regular Inspections Are Key to Building Envelope Integrity*, Arthur L. Sanders, AIA, Volume 27 Number 1, 1/2010 published by Hoffman Architects, Inc., Hamden, CT.

*National Window Preservation Standards*, 1<sup>st</sup> Edition Ver. 1.0, Window Preservation Standards Collaborative, July, 2013.

*The Shingle Style and the Stick Style*. Vincent J. Scully, Jr. Yale University Press, 1955; revised edition 1971; sixth printing, 1978.

*The Shingle Style Today*. Vincent Scully. George Braziller, New York, 1974, fourth printing, 1981.

*The Visual Dictionary of American Domestic Architecture*. Rachel Carley. An imprint of Owl Books, Henry Holt and Company, LLC. New York. 1994.

#### Building Specific References

*"Washington Canoe Club" National Register Nomination* with supporting documentation, Accepted by the Keeper December 14, 1990; prepared by Betty Bird, September 30, 1989. NRIS # 90002151.

*Fire and Life Safety Assessment, Report of Findings and Recommendations, Washington Canoe Club*, The Protection Engineering Group, prepared by John G. O'Neill, PE under direction of Charles H. Hahl, PE; Final Submission, December 11, 2009

*Structural Assessment, Draft Report of Findings and Recommendations, Washington Canoe Club*, The Protection Engineering Group with McMullan & Associates Structural Engineering Consultants, May 11, 2010

HABS documentation: Washington Canoe Club Project 2013, Historic American Buildings Survey (HABS) DC-876.

- History Data Report, Virginia B. Price, Historian
- Architectural Measured Drawings (5 sheets) (see cover sheet for team)
- 38 Large Format Photographs, Renee Bieretz, Photographer, September 2012.

*Fire and Life Safety Assessment, Washington Canoe Club, Report of Findings and Recommendations*. The Protection Engineering Group, Chantilly, VA. March, 2014.

*Structural Investigation of the Washington Canoe Club Condition Assessment Report, 100 % Submission.* The Protection Engineering Group, Chantilly, VA. April, 2014. The structural assessment report and recommendations were conducted by McMullan & Associates Structural Engineering Consultants.

Other Drawings:

*Washington Canoe Club – Existing Conditions*, Greg Malone (former WCCB member, architect). Several generations of the drawing sheets are available and since the drawings are not numbered they may become mixed into sets.

The HSAR has referenced the following sheets, which appear to be the most recent revision of any given sheet:

- Cover Sheet, undated
- Lower Level, Existing Floor Plan, A1, May 2003
- Upper Level, Existing Floor Plan, A2, August 2002, May 2003
- Existing Roof Plan, A3, May 2003
- West and East Elevations, A4, August 2002
- North and South Elevation, A5, July 2002
- Building & Wall Sections, Existing Building Sections, A6, August 2002
- Wall Sections, Existing Building Sections, A7, August 2002

NOTE: Email exchanges between Mr. Malone and HPTC reveal the building sections, especially the foundation details are not based on actual site conditions. Mr. Malone based these particular drawings on modern construction details that would be assumed in new construction. They in no way reflect the actual site conditions at the Washington canoe Club.

Under contract to The Protection Engineering Group (TPEG), structural engineer McMullan and Associates (MCMSE) has produced several sets of drawings for the stabilization of the building. This HSAR has referenced the following sets of drawings:

*Temporary Shoring Plans, Job Number 3384-1*, McMullan & Associates Structural Engineers, July 29, 2011; sheets SH-1 through SH-7.



National Park Service Preservation Briefs:

- Preservation Brief No. 4, "Roofing for Historic Buildings." Lee H. Nelson, FAIA. February 1978.
- Preservation Brief No. 6, "Dangers of Abrasive Cleaning to Historic Buildings." Anne E. Grimmer. June 1979.
- Preservation Brief No. 9, "The Repair of Historic Wooden Windows." John H. Myers. 1981.
- Preservation Brief No. 10, "Exterior Paint Problems on Historic Woodwork." Kay D. Weeks and David W. Look, AIA. September 1982.
- Preservation Brief No. 14, "New Exterior Additions to Historic Buildings: Preservation Concerns." Kay D. Weeks. Date unknown.
- Preservation Brief No. 15, "Preservation of Historic Concrete." Paul Gaudette and Deborah Slaton. 2007.
- Preservation Brief No. 16, "The Use of Substitute Materials on Historic Building Exteriors." Sharon C. Park, AIA. September 1988.
- Preservation Brief No. 17, "Architectural Character: Identifying the Visual Aspects of Historic Character as an Aid to Preserving Their Character." Sarah M. Sweetser and Lee H. Nelson, FAIA. 1982.
- Preservation Brief No. 18, "Rehabilitating Interiors in Historic Buildings." H. Ward Jandl. October 1988.
- Preservation Brief No. 19, "The Repair and Replacement of Historic Wooden Shingle Roofs." Sharon C. Park, AIA. September 1989.
- Preservation Brief No. 21, "Repairing Historic Flat Plaster – Walls and Ceilings." Marylee MacDonald. October 1989.
- Preservation Brief No. 24, "Heating, Ventilating, and Cooling Historic Buildings: Problems and Recommended Approaches." Sharon C. Park, AIA. October 1991.
- Preservation Brief No. 28, "Painting Historic Interiors." Sara B. Chase. June 1992.
- Preservation Brief No. 31, "Mothballing Historic Structures." Sharon C. Park, FAIA. September 1993.
- Preservation Brief No. 32, "Making Historic Properties Accessible." Thomas C. Jester and Sharon C. Park, AIA. September 1993.

- Preservation Brief No. 35, "Understanding Old Buildings: The Process of Architectural Investigation." Travis. C. McDonald, Jr. September 1994.
- Preservation Brief No. 37, "Appropriate Methods for Reducing Lead-Paint Hazards in Historic Housing." Sharon C. Park, FAIA, and Douglas C. Hicks. April 1995. This preservation brief was rewritten in 2006 – see <http://www.nps.gov/history/hps/tps/briefs/brief37.htm>.
- Preservation Brief No. 39, "Holding the Line: Controlling Unwanted Moisture in Historic Buildings." Sharon C. Park, AIA. October 1996.
- Preservation Brief No. 41, "The Seismic Retrofit of Historic Buildings: Keeping Preservation in the Forefront." David W. Look, AIA, Terry Wong, PE, and Sylvia Rose Augustus. October 1997.
- Preservation Brief No. 43, "The Preparation and Use of Historic Structure Reports." Deborah Slaton, NPS Heritage Preservation Services, April 2005.
- Preservation Brief No. 45, "Preserving Historic Wood Porches." Aleca Sullivan and John Leeke, NPS Heritage Preservation Services, October 2006.
- Preservation Brief No. 47, "Maintaining the Exterior of Small and Medium Size Historic Buildings." Sharon C. Park, FAIA, NPS Heritage Preservation Services, June 2007.

See Appendix C for pdf files of all listed Preservation Briefs plus a list of the Technical Preservation Service's Tech Note with web address provided.

National Park Service Publications:

*The Secretary of the Interior Standards for the Treatment of Historic Properties with Standards and Guidelines for Preserving, Rehabilitating, Restoring & Reconstructing Historic Buildings*, by Kay D. Weeks and Anne E. Grimmer, U.S. Department of the Interior, National Park Service, Cultural Resource Stewardships and Partnerships, Heritage Preservation Services, Washington, D.C., 1995 – NPS, Heritage Preservation Services .

Uniformat II Work Breakdown Structure (WBS) (Rev 04.19.07) developed by the National Institute of Standards and Technology (NIST), the American Society of Testing Materials (ASTM) the American Institute of Architects (AIA), the General Services Administration (GSA), and the Construction Specification Institute (CSI). See NIST report *UNIFORMAT II Elemental Classification for Building Specifications, Cost Estimating, and Cost Analysis*.

End of Chapter 1.

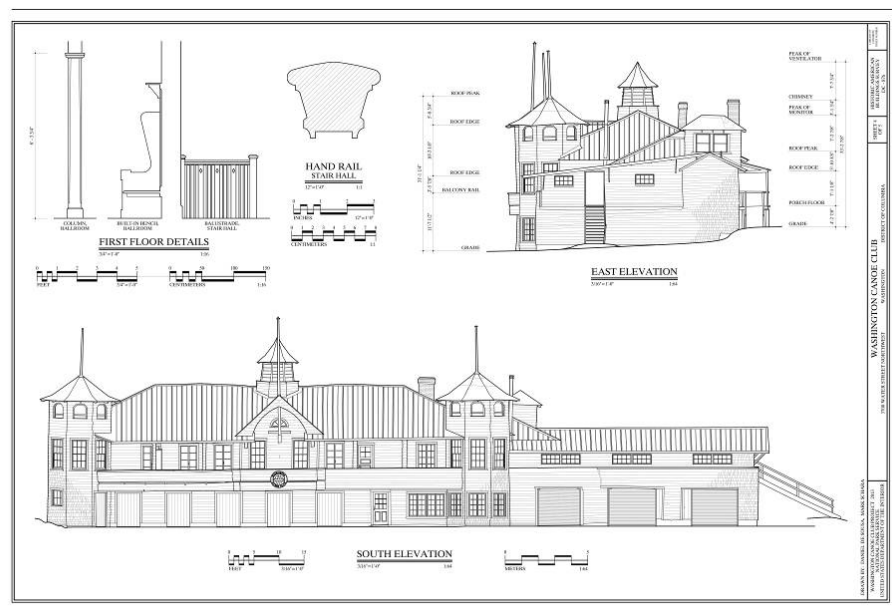
## CHAPTER 2

### Resource Information

The following information is used to identify the historic canoe clubhouse building. The date of construction, National Register status and period of significance, and the building number were gathered through various primary and secondary sources (see footnotes throughout following context and chronology sections for citations). The current and intended uses and the intended treatment were determined by the NPS Chesapeake & Ohio Canal National Historical Park (CHOH) and the National Capital Region (NCR) offices with consultation from the building occupants.

### Administrative Data

|                                 |                                  |
|---------------------------------|----------------------------------|
| <i>Preferred Structure Name</i> | Washington Canoe Club            |
| <i>Address</i>                  | 3700 Water Street, N.W.          |
| <i>Park</i>                     | CHOH                             |
| <i>NPS Region</i>               | National Capital                 |
| <i>Administrative Unit</i>      | CHOH                             |
| <i>Structure State</i>          | Washington, D.C.                 |
| <i>NPS Structure Number</i>     | Pending                          |
| <i>IDLCS Number</i>             | Pending                          |
| <i>Park Asset Number</i>        | Pending                          |
| <i>Date of Construction</i>     | 1905 – 1910 with later additions |



HABS Drawing [DC-876], South and East Elevations, 2013.

### Cultural Resource Data

|                                      |  |
|--------------------------------------|--|
| National Register of Historic Places |  |
| Status                               | Listed   |
| Date                                 | 19 March 1991  |
| Address                              | 3700 K Street, N.W.; Washington, D.C.                      |
| National Historic Landmark           | No   |
| Significance                         | Statewide (regional)                                       |
| NR Period of Significance            | 1904 - 1939  |
| NR Criteria                          | A & C: architecture & entertainment/<br>recreation history |
| NR Information System No.            | 90002151   |

### Management Data Summary (Executive Summary)

**Current Use:** The building was structurally stabilized and mothballed by the NPS between 2009 and 2011. Due to unsafe conditions within the building access has been restricted. Limited access has been provided to the interior ground level area (East Boat Storage Area). Access to the immediate grounds, the floating docks, and the river is on-going.

**Intended Use:** Continued use as canoe storage, repair and launching facility is anticipated. Continued use of interior spaces as per recent and historic usage, allowing for upgrades to meet required codes, is anticipated. Change in use of interior space will take into consideration preservation of character-defining features.

**Intended Treatment:** The following definitions are used in the Intended Treatment section. Emergency Stabilization (1 year or less) identifies condition and maintenance deficiencies that meet the definition of Critical; the feature poses an imminent threat or is likely to fail within one year. Short Term constitutes repairs that need to be executed within 1 to 3 years due to condition deficiencies of features. The definition of Long Term indicates repairs that need to be executed within at least 3 to 5 years due to condition deficiencies of building features. See *Chapter 3 for Standards, Guidelines and Definitions*.

**Emergency Stabilization:** Document and dismantle brick masonry chimneys above the roof line and provide temporary patching of roof surfaces. Disconnect extant electrical service, remove service meters, provide new construction type electrical service with exterior disconnect mounted on

pedestal away from building to provide temporary electrical power – *to be coordinated with electrical survey report*; maintain internal stabilization structure for duration; conduct hazardous material survey).

#### Short Term:

*Exterior* – Continued stabilization and mothballing with preservation maintenance of character-defining features. Additional mothballing tasks may be required to prevent additional deterioration to the building. These tasks include but are not limited to: remove flag masts from exterior to prevent failure of feature, repair exterior siding where there are voids in the exterior envelope of the building, repair roof coverings, flashings and window and door coverings to enhance protection of feature [especially west dormer].

*Interior* – Continued stabilization and mothballing with preservation maintenance of character-defining features. Additional mothballing tasks may be required to prevent additional deterioration to the building. These tasks include but are not limited to: disconnection of extant electrical and water service; separation of water service from main building to East Boat Storage Area and exterior hose bibs; installation of temporary electrical power on exterior pedestal until building service is rehabilitated to meet code.

#### Long Term:

*Exterior* - Preservation of character-defining features, development and execution of overall rehabilitation plan with continued preservation maintenance. More intensive building repairs may be required to achieve rehabilitation and achieve a building status of Good Condition. These tasks include but are not limited to: replace extant roof system including installation of permanent lightning protection and roof water drainage systems, foundation waterproofing and stabilization at north elevation, repairs to building frame and exterior surface covering (wood shingles), repair/ replace wood windows and doors, and associated carpentry repairs tasks to all exterior wood features.

*Interior* - Preservation of character-defining features, development and execution of overall rehabilitation plan with continued preservation maintenance. More intensive building repairs may be required to achieve rehabilitation and removal of all temporary support members from the interior and achieve a building status of Good Condition. These tasks include but are not limited to: repair/ replace extant building frame and building support systems, correct life-safety and building egress code deficiencies, upgrade all building systems or remove archaic systems (electrical,

plumbing), conduct hazardous material survey and abatement/ remediation process, install appropriate vapor barrier/ insulation systems, repair historic interior character-defining features.)

### **Summary of the Findings (Executive Summary)**

The **exterior** of the **Washington Canoe Club Building** achieves an Overall Quality Condition Rating of "**POOR**" and an overall Maintenance Deficiency Priority Rating categorized as "**Critical**".

**The Overall Quality Condition Rating of POOR** given to the **exterior** indicates that the feature(s) are in need of immediate attention. This rating also indicates that routine maintenance is needed at a much higher level of effort to meet significant safety and legal requirements; cyclic maintenance should be scheduled for the current year and/ or a special repair or rehabilitation project should be requested consistent with the building owner's requirements, priorities, and long term management objectives.

**The Maintenance Deficiency Priority Rating of Critical** given to the **exterior** indicates that the building is in an advanced state of deterioration that, if not corrected within 1 year will result in the failure of the building, a threat to the health and/or safety of users if the ongoing deterioration is not corrected, and ongoing deterioration of adjacent or related materials and/or features as a result of the features deficiency.

The **interior of the Washington Canoe Club Building** achieves an Overall Quality Condition Rating of "**FAIR**" and an overall Maintenance Deficiency Priority Rating categorized as "**Serious**".

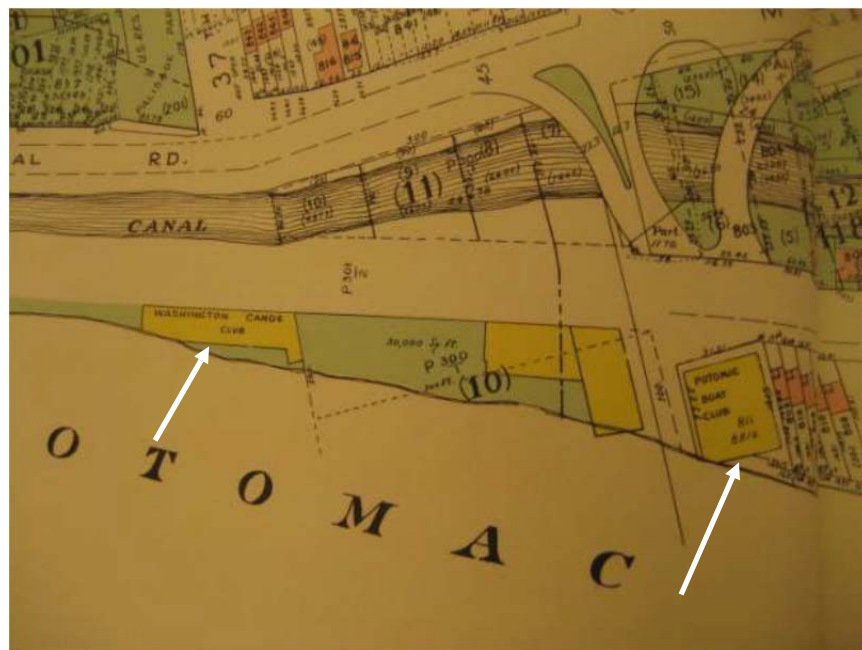
**The Overall Quality Condition Rating of FAIR** given to the **interior** indicates that the building/ feature generally provides an adequate level of service to operations, but the building/ feature requires more than routine maintenance attention. This rating also indicates that cyclic maintenance or repair/rehabilitation work may be required in the near future.

**The Maintenance Deficiency Priority Rating of Serious** given to the **interior** indicates that some building components are in a deteriorated condition that if not corrected within 1 to 3 years will result in the failure of the feature and possibly adjacent or related materials. The building exterior envelope is in poor condition and is past its useful service life.

See *Chapter 4, Condition Assessment Survey* for complete building feature component assessment.



The Washington Canoe Club on the Potomac River, 3700 Water Street, NW, Washington, D.C. Arrow marks location of the Canoe Clubhouse. (<https://maps.google.com>, retrieved 02/19/14)



Undated historic plat map showing location of Washington Canoe Club (left) and Potomac Boat House (right). (Figure 1 from HABS DC-876)



## Physical Description

The following architectural description is taken from the National Register description prepared by Betty Bird, September 30, 1989<sup>1</sup>.

The Washington Canoe Club is a two-story frame building with shingle style architecture. It is a five bay structure with octagonal towers on the east and west elevations. A louvered cupola is centered on the ridge-line of the hipped roof above a projecting cross gable marking the central axis of the building. The verge boards on the gable shape an arch containing a centered fanlight. A flagpole extends from the base of the gable, between the gable and the verge boards, and extends above the roof-line. Facing the Potomac River on the south elevation, a second floor balcony with a closed, shingle balustrade extends between the two octagonal towers. The second floor fenestration primarily consists of six-over-six windows. There is a two-story shingled boat shed addition that extends from the building on the east elevation. This shed began as a one-story addition made before 1930. A second story was made after 1971. Three small six-light casement windows are located on each floor of the west facade, as well as a small dormer located at the center of the roof. Due to the grade change, the Washington Canoe Club appears as a single-story structure from the north elevation. An interior chimney projects from the center of the north elevation. A second chimney is located at the center of the building near the boat shed addition. A small tower is located on the northeast corner of the building. The exterior of the building is covered in green shingles and all of the openings have white trim.



View of river (south) elevation. (12/31/13, HPTC)

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<sup>1</sup> Further description is available in the HABS History Data Report.

The building has been continuously occupied by the Washington Canoe Club and retains a great deal of integrity. However, the building has faced damage from successive flooding, ice jams, and engineering changes in the river. In the 1950s the building was pushed five feet downstream by ice floes and had to be jacked up and returned to its original location.



Rendering of Canoe Club Building being prepared by the Architect, George P. Hale, as seen in the Grill Room mural (undated) by Felix Mahoney, an early Canoe Club member. In this image, as well as the above panoramic photo, the character-defining features of the Shingle Style architectural components of the building are easily discernible and have not been significantly altered. (HABS)

## Context

The Washington Canoe Club, built in the Shingle style, sits along the Potomac River, between it and the towpath of the Chesapeake and Ohio Canal, in the Georgetown neighborhood of Washington, D.C. It is one of only two remaining historic boathouses in Washington and an important component of the waterfront landscape<sup>2</sup>.

The Washington Canoe Club building is individually listed on the National Register of Historic Places for its architectural style and its associative value with the Canoe Club (Entertainment/ Recreation). Applicable NR Criteria listed are A and C<sup>3</sup>.



This 1<sup>st</sup> quarter of the 20<sup>th</sup> century image illustrates the fully built-out nature of the Potomac River shoreline, crowded with boat houses. The Washington Canoe Club building (last one on left) and the Potomac Boat House (last one on right) are the two remaining structures from this time period.

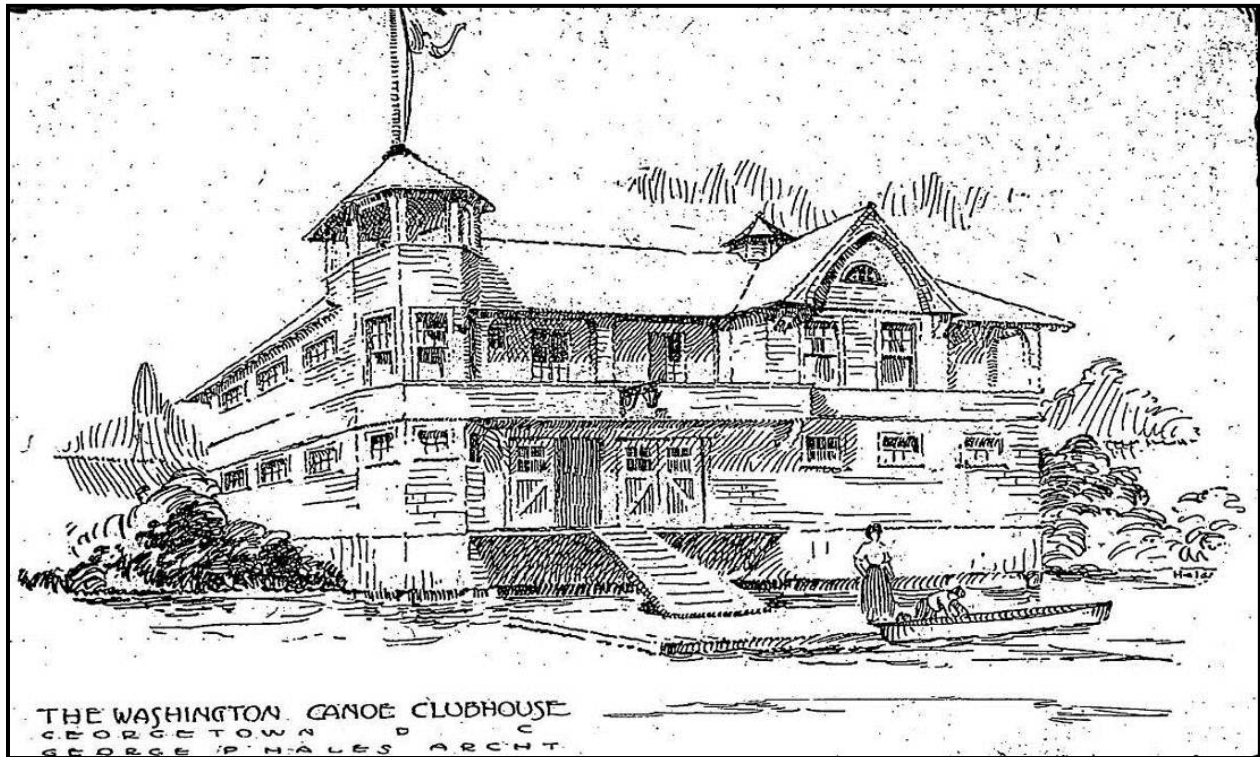
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<sup>2</sup> Taken from HABS History Data Report, DC-876, pgs. 2–3, Washington, D.C. Nov. 2013.

<sup>3</sup> *National Register Criteria for Evaluation: Criteria for evaluation. The quality of significance in American history, architecture, archeology, engineering, and culture is present in districts, sites, buildings, structures, and objects that possess integrity of location, design, setting, materials, workmanship, feeling, and association and (a) that are associated with events that have made a significant contribution to the broad patterns of our history; and (c) that embody distinctive characteristics of a type, period, or method of construction, or that represent the work of a master, or that possess high artistic values, or that represent a significant and distinguishable entity whose components may lack individual distinction. Reference <http://www.achp.gov/nrcriteria.html>.*

## Pictorial Chronology

The following images placed in chronological order based on building pattern, ground features (rip-rap) and photo data illustrate the gradual evolution of the building and site.



Architect's Rendering, "Paddlers of Canoes", Washington Post, September 3, 1904, S4 (HABS DC-876, Figure 2). Conceptual drawings for clubhouse. Phase 1 construction completed in 1905-06 exhibits some changes in the architecture.



Completed Phase 1 Construction, ca. 1905-06 (HABS DC-876 Figure 3). Noted differences from architects' rendering include use of diamond windows in west tower instead of horizontal windows, reducing size of boat portals from double paired cross-braced doors with windows to solid hinged doors and increasing the quantity from two pairs to six single portals. The redesign of the ground floor fenestration changes the look of the building. It likely provided more room for boat storage and less room for other indoor functions therefore necessitating (or planning) the need for Phase 2 and additional functional interior space; such as the Grill Room.



Interior of the Ballroom as it appeared on opening night, December 28, 1905 (HABS DC-876, Figure 7; loaned by Washington Canoe Club), originally published in *The Evening Star* newspaper. The original east exterior wall of the building, with its two six-over-six double hung wood windows, seen at the right in the photo, will be removed and redesigned as the east gallery space when Phase 2 is constructed. Also seen in this photo is the original interior wall and ceiling surfaces of the Ballroom and the use of the built-in bench along the north wall on either side of the fireplace. Note the unpainted brick chimney and the centrally positioned ceiling grill just under the roof-top louvered ventilation cupola.



Remodeled Home of Washington Canoe Club. "Canoeist's Home Doubled in Size", Washington Times, March 12, 1910, page 4. (Courtesy of Washington Canoe Club). The construction of the eastern extension of the building, Phase 2, completes the symmetrical design of the building. Work is also ongoing at the west tower with its recladding and installation of rectangular windows instead of the original diamond unit. The eastern extension provided for the social space required at the interior including the Grill Room (Common Room) and Board Room on the first floor. Note white-painted building to immediate west (left) of the Canoe Club.



Post 1910, ca. 1920 (?). Clear view of east elevation after completion of Phase 2 construction project. (HPTC Citation). Note ground floor shingled arcade at east elevation and use of white trim on unpainted wood shingles. Distinctive pattern of roof material indicate sheet metal pans or some type of synthetic asbestos-cement shingle (widely available after 1920<sup>4</sup>). Note stone rip-rap has not yet been placed encircling the pier system; in this image it appears only along the riverbank.

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<sup>4</sup> TPS NPS email w/ author.





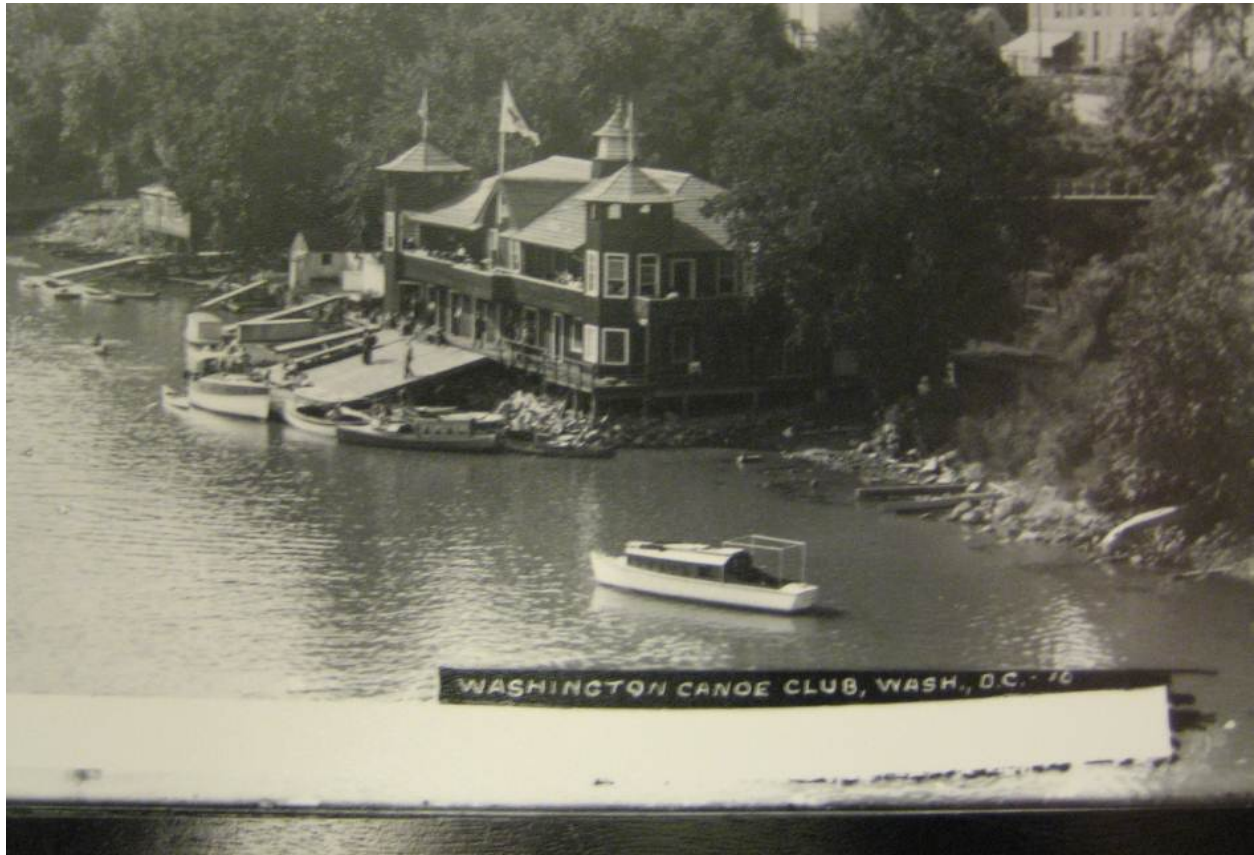
Bird's-eye View of Boathouses, along the Potomac River, Georgetown, damaged by flood (Feb 1918) LOC Call #: LOT 12354-2.



Image enlarged from Potomac Flood, Georgetown, D.C.; LOC Call Number: LC-F81-44573, undated. Thought to be the same flood event as depicted in ca. 1918 image. Clearly illustrated the east elevation of the building prior to any additions.



Ca. 1920 postcard image (WCC website). The red-painted clubhouse. Based on development of rip-rap under building this image seems almost contemporaneous with the above image. With the exception of the color (red has been found on original wood shingles at the Canoe Club) this image is slight oblique to the preceding image. Note white-painted building to the west (left) of the Canoe Club building still extant (first seen in 1910 image).



Ca. 1920-30 (HABS DC-876, Figure 4). Note balcony, door and windows at east tower, construction of building on wooden platform supported by pilings in the river; also bridge to Towpath. Filling in of under-building area with stone rip-rap (ACOE?) has been extended along the east elevation under the buildings riverfront elevation (compare to previous photo).



Early 20<sup>th</sup> Century Flood (ca. 1936?). (Washington Canoe Club website). Image clearly shows east elevation of Women's Locker Room structure – although it may not be fully extended. Also the triple sash Chicago-style window in the east elevation of the north entrance tower is seen, likely to provide daylight to the interior staircase descending to the ground level from the bridge. Dashed line indicates route of steel overpass bridge which provided access from the C&O Towpath to the first floor level of the clubhouse.



Iconic 1930s image of Washington Canoe Club (HABS DC-876, Figure 6). Distinctive roof patterns indicate sheet metal or early composite shingle on the tower and cupola roofs and sawn wood or early synthetic shingles on the main gable roof. Note finial (now missing) on cupola and gathering of folks to the east of the boat ramp, perhaps indicating enough ground had been established over the rip-rap to allow for placement of picnic tables.



Identified by HABS as ca. 1920s (it may also be ca. 1930s) (HABS DC-876, Figure 5) this image is the first known to capture the three-bay east boat storage area extension; adjoined to the east by another roofed structure. Also seen is a roof form (red arrow) thought to be the gable roof of the Women's Locker Room although it appears to be smaller than the current locker room structure. It may also be associated with a structure that provided the connection to the overpass bridge entrance at the north entrance tower. NOTE: inclusion of Second Aqueduct Bridge indicates photo dates from between 1922 - 1933.



Potomac Flood & Ice, Old Aqueduct Bridge, Georgetown, DC. Between 1909 and 1940 (ca. 1922-33). Library of Congress, pre-1933, LOC Call Number: LC-F81-44571 [P&P]. Image of ice floe and destruction of floating docks seen rolled up in front of the clubhouse (arrow). Washington Canoe Club building appears to be undamaged. NOTE: inclusion of Second Aqueduct Bridge indicates photo between 1922-1933.



Flood Crest of January 21, 1996, by Charles Adams, found on the wall at the DC Boat House Restaurant. Clearly indicates flood waters inundating the ground floor of the Canoe Club building. Building appears much as it does today (2014).



### **Evolution of the East Addition (Women's Locker Room and East Boat Shed Addition)**

Apparently the Woman's Locker Room (WLR) and East Boat Shed Addition (EBHA) evolved in tandem with one another, both going through at least two phases of construction. This is indicated by photographic and physical evidence.



This image captures the Women's Locker Room in its first phase of construction and the East Boat Storage Shed addition built out to its 1<sup>st</sup> phase. Note the east elevation end walls do not align. (Office of History, US Army Corps of Engineers, Alexandria, VA; Capital Engineers, page 122)



Overview of the arches of the Key Bridge under construction (n.d.). The old Aqueduct Bridge is just north of the arches with Georgetown University visible in the upper right and the Washington Canoe Club building just north of the Aqueduct Bridge on the shoreline (circled). (Office of History, US Army Corps of Engineers, Alexandria, VA; Capital Engineers, page 203)

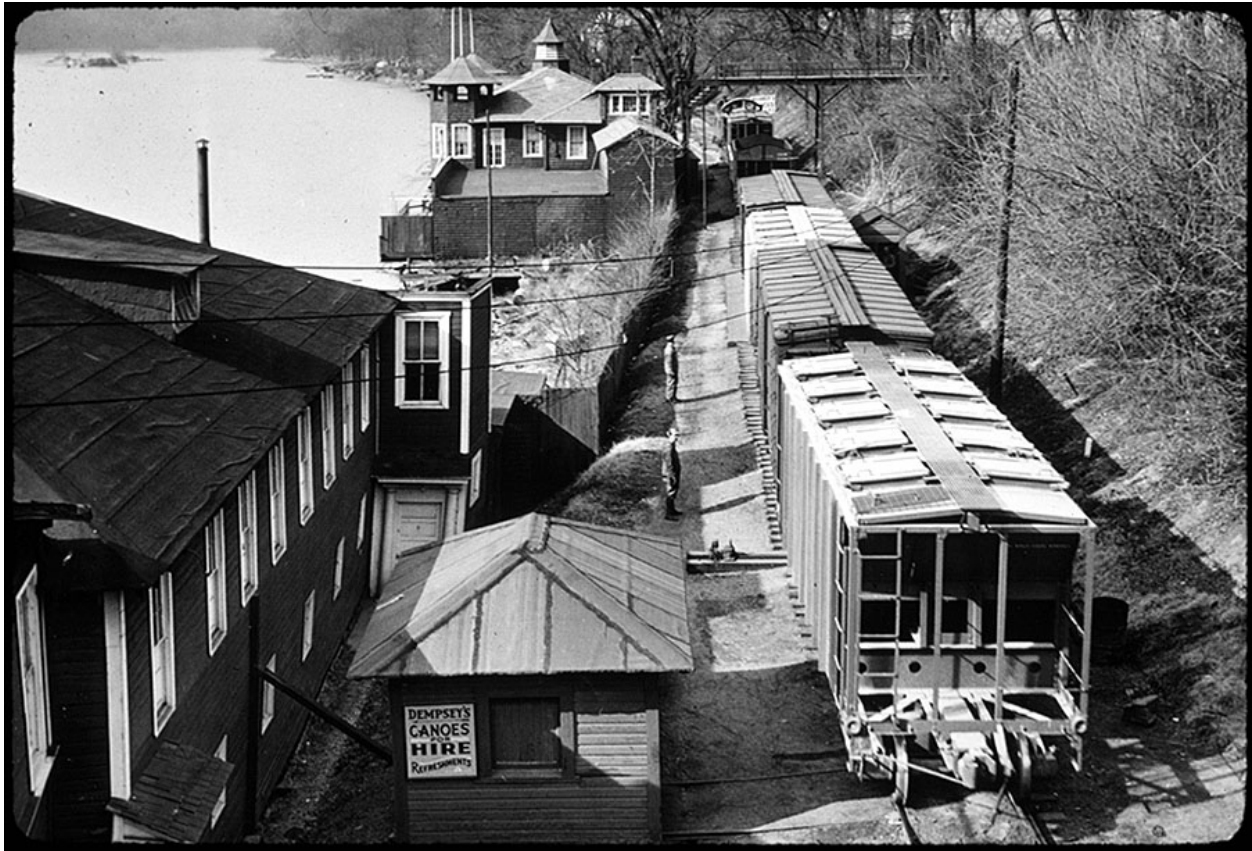


This enlargement of the previous image shows the Women's Locker Room after its 1<sup>st</sup> phase of construction and the East Boat Storage Shed addition after its 2<sup>nd</sup> phase of construction. Note they do not align as in later years. This represents a phase when the Locker Room has not been fully extended.



The above photo clearly shows two distinct roof patterns on the Women's Locker Room (WLR). While the east elevation is not clearly visible it appears to be vertically aligned. This would indicate the 2<sup>nd</sup> phase on expansion at the WLR was coordinated with the footprint of the EBSA.

This image was posted on Old Time DC through Facebook: [www.facebook.com/OldTimeDC](http://www.facebook.com/OldTimeDC), accessed March 2014.



This image clearly shows the east gable end of the Women's Locker Room with the first story of the East Boat Shed having been constructed but not fully built out to its current configuration (second floor shed addition not yet constructed). Note the east elevations are vertically aligned.

"Switching the West End of Georgetown," February 23, 1947, Georgetown Branch, William Duvall Collection [[http://sluggyjunx.com/rr/georgetown\\_branch/gallery/2004\\_11\\_29-wm\\_duvall\\_collection/index.html](http://sluggyjunx.com/rr/georgetown_branch/gallery/2004_11_29-wm_duvall_collection/index.html)], accessed March 2014].

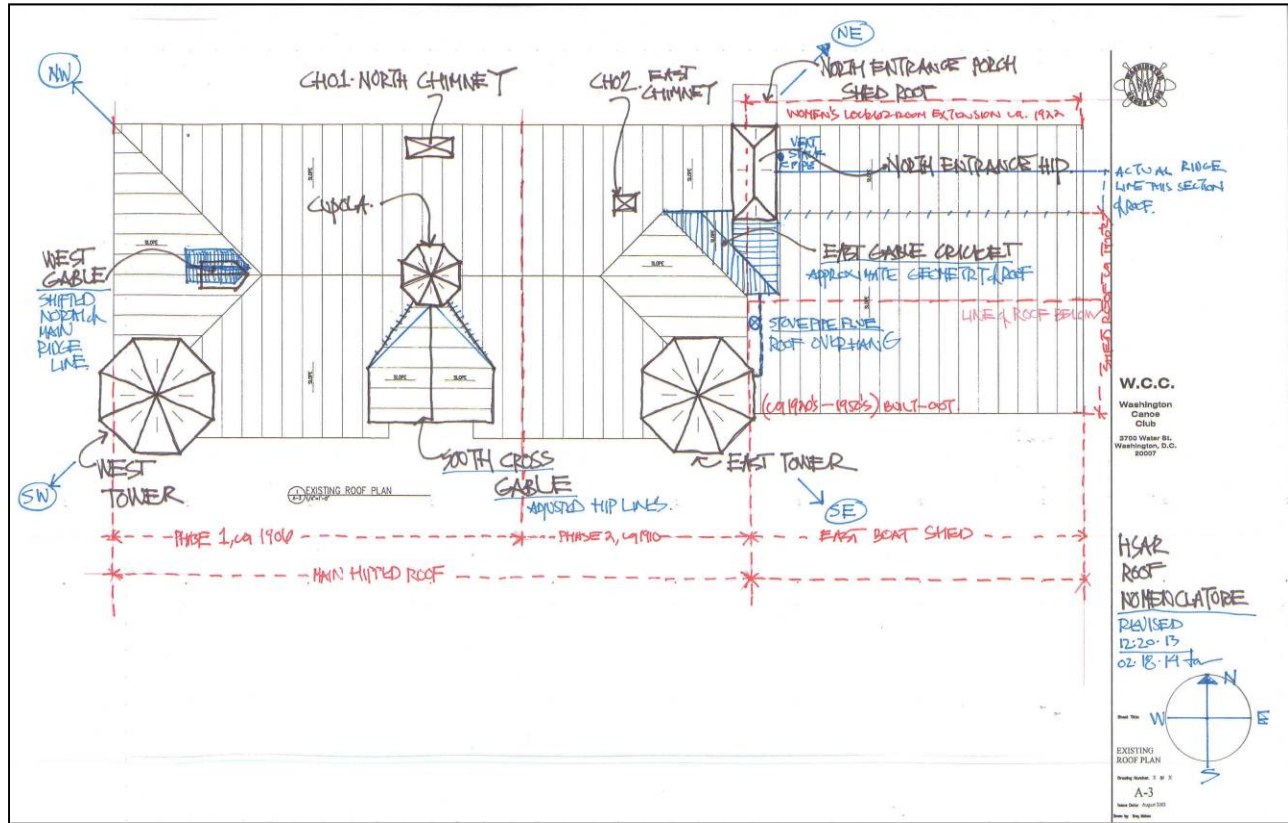
## Building Nomenclature

The Washington Canoe Club Building has been documented several times over the course of its history. There are also numerous reports, correspondences, records, historical documents, etc., all which use differing terminology regarding the various parts of the building. This HSAR has created a unified nomenclature based on the most prominent of these documents. The following chart indicates the preferred terminology for use in this report.

| WCC 2003 <sup>5</sup> Name | HABS 2013 Name                  | HSAR Name                      |
|----------------------------|---------------------------------|--------------------------------|
| West Elevation             | South Elevation (River Side)    | South Elevation                |
| East Elevation             | North Elevation (CCT Rear Side) | North Elevation                |
| South Elevation            | East Elevation (Down River)     | East Elevation                 |
| North Elevation            | West Elevation (Up River)       | West Elevation                 |
| Lower Level                | Ground Floor                    | Ground Floor                   |
| Upper Level                | First Floor                     | First Floor                    |
| RM101 Boat Storage         | Boat Storage                    | RM101 West Boat Storage Area   |
| RM102 Storage              | Storage                         | RM102 Storage                  |
| RM103 Kitchen              | Kitchen                         | RM103 Kitchen                  |
| RM104 Hall                 | NA                              | RM104 Main Hall                |
| RM105 Common Room          | Grill Room                      | RM105 Grill Room               |
| RM106 Boat Storage         | Boat Storage                    | RM106 East Boat Storage Area   |
| NA                         | Weight Room                     | Rm107 Exercise Area            |
| RM201 Ballroom             | Ballroom                        | RM201 Ballroom                 |
| RM202 Tower Apt Lower Rm   | Chamber                         | RM202 West Tower Lower Chamber |
| RM203 Men's Locker Room    | Men's Locker Room               | RM203 Men's Locker Room        |
| RM204 Men's Toilet Room    | NA                              | RM204 Men's Locker Room Toilet |
| RM205 Men's Toilet Room    | Men's Room                      | RM205 Men's Room               |

<sup>5</sup> Existing Condition drawings by Greg Malone, 2002 – 2003. Note that room numbers were first established by Malone's drawings and adapted by NPS in this report.

|   |                     |   |
|---|---------------------|---|
| RM206 Women's Toilet Room               | Women's Lounge      | RM206 Women's Lounge                    |
|   |                     | Rm206A Inboard Toilet 1                 |
|   |                     | Rm206B Outboard Toilet 2                |
| RM207 Hall                              | NA                  | RM207 Main Hall                         |
| RM208 Club Room                         | Board Room          | RM208 Board Room                        |
| RM209 Hall                              | NA                  | RM209 North Entrance Hall               |
| RM210 Women's Locker Room               | Women's Locker Room | RM210 Women's Locker Room               |
| RM211 Workshop                          | Workshop/ Roof Deck | RM211 Workshop                          |
|   |                     | RM212 Balcony                           |
|   |                     |   |
| RM301 Men's Locker Room Mezzanine Level | NA                  | RM301 Men's Locker Room Mezzanine Level |
| RM302 West Tower                        | NA                  | RM302 West Tower Observation            |
| RM303 East Tower                        | NA                  | RM303 East Tower Observation            |
| RM304 Pill Box Apt                      | NA                  | RM304 North Tower Room                  |



Note: Roof Nomenclature drawing overlay is included with report appendices (see Appendix B).



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## Character-Defining Features (CDFs)

Each historic building is unique with its own identity and its own distinctive character. Character refers to all of the visual aspects and physical features that comprise the appearance of every historic building. Character-defining features (CDF) include the overall shape of a building, its materials, craftsmanship, decorative details, interior spaces and features, as well as the various aspects of its site and environment. Identifying and preserving a building's character-defining features is essential.

Character-defining features are defined in the National Park Service *Cultural Resources Management Guidelines* (NPS-28) as follows:

A prominent or distinctive aspect, quality, or characteristic of a historic property that contributes significantly to its physical character. Structures, objects, vegetation, spatial relationships, views, furnishings, decorative details, and materials may be such features.

The first step in the process of an overall condition assessment project is to develop the list of character-defining features. In order to ascertain the important aspects of a building for future reference, an analysis of character-defining features must be recorded. These are prominent or distinctive aspects, qualities, and characteristics of a historic property that contribute significantly to its physical character as represented at the time of intervention or treatment.

The observations that follow are intended as an aid in preserving the character and other distinguishing qualities of the subject structure. It is not intended as a means of understanding the significance of the property, nor the events or people associated with the property. It is an outline of the prominent physical materials, features, and spaces important to the structure.

The process used in this assessment for determining the character-defining features was adapted from the US National Park Service *Preservation Brief No. 17 – Architectural Character: Identifying the Visual Aspects of Historic Buildings as an Aid to Preserving Their Character*, by Lee H. Nelson. This process is in accordance with *The Secretary of the Interior's Standards for the Treatment of Historic Properties* and *NPS-28 Cultural Resources Management Guidelines*.

The process of identifying CDFs has been arranged into a three-step process:

1. Identify the Overall Visual Aspects
2. Identify the Visual Character at Close Range
3. Identify the Visual Character of Interior Spaces, Features and Finishes.

This system of steps outlines a process to fully define the distinct character of the building. This basic visual characterization provides a useful tool in analyzing the building and its features, including shape, materials, craftsmanship, decorative details, interior spaces, features, site and environment. The following report segment outlines the structure and feature characteristics.

***The Secretary of the Interior's Standards for the Treatment of Historic Properties*** embody two important goals: **1)** the preservation of historic materials and, **2)** the preservation of a building's distinguishing character. Every old building is unique, with its own identity and its own distinctive character. **Character** refers to all those visual aspects and physical features that comprise the appearance of every historic building. Character-defining elements include the overall shape of the building, its materials, craftsmanship, decorative details, interior spaces and features, as well as the various aspects of its site and environment.

The purpose of identifying the CDFs of a building is to help the owner, architect, or manager to identify those features or elements that give the building its **visual character**. These are the items (features) that should be taken into account when the structure undergoes a "treatment" in order to preserve them to the maximum extent possible.

There are different ways of understanding old buildings. They can be seen as examples of specific building types, which are usually related to a building's function, such as schools, courthouses or churches.

There are many other facets of an historic building besides its functional type, materials, construction, or style that contribute to its historic qualities or significance. Some of these qualities are feelings conveyed by the sense of time and place in buildings associated with events or people. A complete understanding of any property may require documentary research about its style, construction, function, furnishings or contents, and to obtain

knowledge about the original builder, owners, later occupants, and the evolutionary history of the building. Even though buildings may be of historic, rather than architectural significance, it is their tangible elements that embody its significance for association with specific events or persons and it is those **tangible elements** both on the exterior and interior that should be preserved.

Therefore, the approach taken in identifying character-defining features is limited **to identifying those visual and tangible aspects of the historic building**. While this may aid in the planning process for carrying out any ongoing or new use, rehabilitation or restoration of the building, this approach is not a substitute for developing an understanding about the significance of an historic building and the district in which it is located. If the various materials, features, and spaces that give a building its visual character are not recognized and preserved, then essential aspects of its character may be damaged in the process of change.

A building's character can be irreversibly damaged or changed in many ways. Examples include: inappropriate additions or alterations, removal of a distinctive porch, replacement of the window sash, alterations to masonry openings, changes to the setting around the building, changes to the major room arrangements, replacement of original materials with synthetic materials, inappropriate repointing of the brickwork, introduction of an elevator, painting previously unpainted woodwork or masonry, etc.

**Summary of Character-Defining Features****Washington Canoe Club****EXTERIOR****Shape and Mass**

- Rectangular massing with characteristics of shingle-style architecture including horizontal emphasis in the design and use of linear features and details
- Five-bay original structure featuring prominent central bay with cross gable roof and hooded canopy with pointed arch soffit motif
- Flanking three-story octagonal towers with third story observation decks and conical tower roofs with integral flag masts
- Full-length second-story overhanging porch with projecting central bay
- Modest three-bay east boat storage addition to main block with ground floor shed roof and two-story women's locker room with gable roof

**Roof and Roof Features**

- Hipped roof on main block of building
- Conical roofs over east and west octagonal towers
- Arched projecting cross gable over the south elevation central bay
- Symmetrical flanking towers of the main block
- Octagonal louvered cupola with conical roof at main ridgeline
- Flag masts on the tower roofs and on the gable roof
- Masonry chimneys
- Roof scape including other minor roof features including the hipped roof over the north entry tower

**Openings**

- Placement of window and door openings on the main block
- Recessed balcony openings on the second floor of the main block
- Boat doors at river elevation
- Full-length double casement windows to access balcony

**Projections**

- Wide roof overhangs and rafter tails on towers and main block
- Balcony overhangs on the second floor
- Hooded arched cross gable roof at center bay

**Trim and Secondary Features**

- Traditional shingle style detailing w/ use of textured materials (wood shingles)
- Shingle-encased posts at second floor balconies

- Linear detailing of trim features at the balcony, roof eaves, and ridge.

**Setting**

- Location and orientation of the building on the banks of the Potomac River
- Immediate access to the river
- Unobstructed views of the Potomac River, Key Bridge, and Rosslyn VA

**Materials**

- Use of traditional wood detailing, wood doors, and wood windows
- Dark green-painted shingle exterior siding
- Exposed brick chimneys above roof line

**Craft Details**

- Horizontal coursed patterning of original random-width wood shingles
- Day-mark green with white trim exterior color of original building
- Louvered octagonal cupola on main block
- Exposed roof sheathing and rafter tails on roof overhangs
- Flagpole piercing the central gable roof on the south elevation
- Washington Canoe Club logo sign

**INTERIOR****Prominent Individual Spaces**

- Grill Room with a historic painted mural depicting club members
- Entry Hall with prominent staircase, newel posts, and balustrade
- Boat storage area on the first floor
- Ballroom and Board Room on the second floor
- Locker Rooms and lockers

**Related Spaces and Sequences of Spaces**

- Direct access to river from boat storage areas on the ground floor
- Architectural entrance into Ballroom and Boardroom at first floor hall
- Direct access to balcony from Men's Locker Room, Ballroom, and Board Room at first floor
- Relative isolation of the Men's Locker Room from other spaces (sequence on construction)
- Mezzanine level above the Men's Locker Room
- Original viewing platforms with openings in the upper levels in the towers (now converted to non-CDF interior spaces)

**Interior Features**

- Detachable mural hung in Grill Room
- Five-panel and six-panel wood doors (with hardware)
- Stair, balustrade, and newel posts
- Architectural entrance to Ballroom (columns w/ dropped beam)
- Side galleries and interior hipped ceiling of Ballroom
- Built-in benches and shelves in Ballroom and Board Room
- Brick fireplace and mantle in Ballroom
- 6-over-6 double-hung wood windows
- Full-length double casement windows opening to balcony
- Historic door and window hardware
- Selected wooden locker units

**Surface Finishes and Materials**

- Painted tongue-and-groove wood paneling on walls and ceiling at ground floor hallway & stair (vertical and horizontal orientation)
- Stained vertical tongue-and-groove paneling in the Board Room
- Beaded tongue-and-groove paneling in the Ballroom
- Stained hardwood floors
- Fabric covered wall panels and decorative trim in Ballroom (likely Phase 2 construction era ca. 1910)

**Exposed Structure**

- Exposed second-floor framing in west boat storage areas
- Exposed roof framing and sheathing in the locker rooms

End of List.

## 1. Overall Visual Aspects (Exterior)



South elevation of the Washington Canoe Club. (HABS photo)

### **Shape and Mass**

The prominent overall visual aspect of the Canoe Club is its two-and-a-half story main block with symmetrical octagonal towers flanking a cross gabled projecting central bay with hooded canopy and pointed arch eaves. The complex massing of the shingle-clad 5-bay rectangular main block includes a hipped roof and a center octagonal cupola located on the ridge. Balconies flank the central bay on the upper level and create recessed openings with porches on the south elevation. A two-story, three-bay addition with a shed roof extends to the east of the main block. The building is built into the bank of the river with only one story above grade on the north elevation.

Characteristics of the American Shingle Style include the low horizontality of the building design with its projecting roof eaves. The distinctive roof features accentuate the low slung hipped roof.

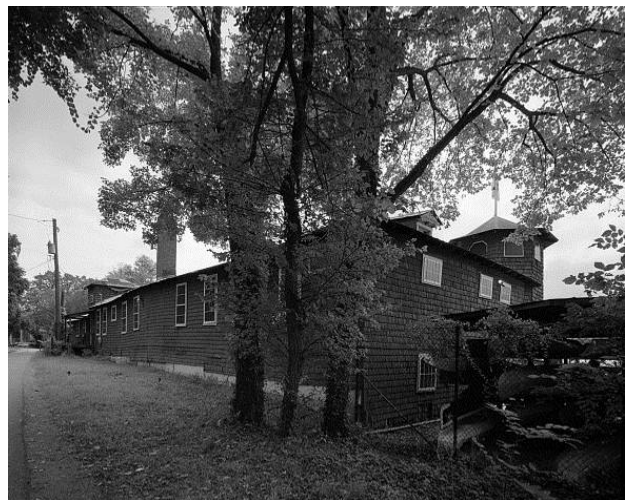




West elevation and west tower. (HABS photo)



Northeast elevation. (HABS photo)



Northwest elevation. (HABS photo)



Southeast elevation. (HABS photo)

### **Roof and Related Features**

The prominent roof features of the Canoe Club include the octagonal roofs over east and west towers, the south-facing gable roof on the central bay of the main block, the octagonal louvered cupola on the ridge of the main block, masonry chimneys on the north slope of the main roof, and the flagpoles and masts on the towers and central gable. A small hip roof covers the north entrance tower. The roof on the main block of the building is currently covered with standing-seam metal panels. Historically the roof appears to have been wood shakes or shingles or possibly metal shingles (see Figure 4 in HABS History Data Report DC-876) as there is a distinctive horizontal pattern as would be indicative of the shingle style architecture.

The shed roof over the east addition also consists of standing seam metal. Further investigation and research is needed to determine the original roof finish on the eastern addition.

There is no trace of the historic roof surface coverings. The cupola, towers, and north porch tower roofs are covered with various types mineral surfaced roll roofing. Bits of sheet metal detailing – such as pinnacle caps and ridge caps – may be survivors from the original roof system; in which case they would be CDF's, this remains to be determined.



Gable roof over the central bay and octagonal roofs over the flanking towers. Note the flagpoles on each of the towers and the central gable roof. Sheet metal roofing provides a vertically oriented pattern that is not in keeping with the American Shingle Style of the building. (HABS photo)



The louvered octagonal cupola with conical roof (covered with mineral surfaced roll roofing and original pinnacle cap painted white) serves as a ventilator for the Ballroom below. (HPTC photo)



Two red brick chimneys are located on the north slope of the main roof. (HPTC photo)



The flagpole on the central gable pierces the roof of the hooded canopy of the central bay and is attached to the face of the gable. (HPTC photo)



Hipped roof over the North Entry Tower on the north elevation. (HPTC photo)

### **Openings**

Character-defining openings include the windows and doors and the recessed balcony openings on the second story (First Floor) of the main block. "In keeping with the architectural style of the building, decorative elements and openings are secondary to the unified expression of the exterior surface". The building has been modified several times; however most of the openings from the original construction still exist. Opening locations are directly related to the functional use of the building design. Door and window openings are treated equally as far as architectural hierarchy is concerned.

The first level (Ground Floor) has six rectangular boat ports with sliding wood doors as part of the original 1905 construction. Later construction included a six-light panel door, and three additional rectangular boat ports with overhead doors in the eastern extension. A regular door is located on the east elevation of the east addition and on the north elevation. Window openings vary in size and are placed asymmetrically within the wood frame walls. The openings on the upper level on the south elevation consist of full-height casement windows that provide access to the balconies. Other window openings contain double-hung sash, hopper, and casement windows.

Originally the window openings in the upper level of the towers were not glazed, but now contain modern sash units. All exterior window sashes are covered with planking that has been painted to represent the sash's glazing pattern as a temporary stabilization (mothball) treatment.

The recessed balconies on the second story (First Floor) of the main block create two recessed openings on the south elevation that flank the projecting central bay. Shingled support columns with angled brackets create three bays in each of the recessed balcony openings.



Six boat portals on the first level on the south elevation with cantilevered central balcony above. (HPTC photo)



Interior view of typical boat portal door on the south elevation of the main block. (HPTC photo)



Exterior view of typical overhead rollup door on the south elevation of the east addition. (HPTC photo)



Typical window openings on the north elevation are covered with spaced wood panels painted to mimic window sashes but indicate relative position of window openings in the Men's and Women's Locker Rooms. (HPTC photo)



The balconies on the first floor (arrows) create recessed openings on the south elevation. A semi-circular fan light is located below the arched gable in the central bay. (HABS photo)



Typical window openings in the towers. The upper tower openings originally did not have window sashes but were open for viewing. (HPTC photo)

### ***Projections***

Projecting features of the Canoe Club Building include wide roof overhangs with exposed rafter tails on the two towers and on the north and west elevations of the main block. The balconies on the second floor project over the first floor level on the south elevation, and the central bay has an arched projecting cross gable.





The towers have wide overhangs with exposed rafter tails (arrow). These overhangs are categorized as soffits in this report format. (HABS photo)



The balconies on the second floor project over the first floor on the south elevation. The central balcony has been previously supported by columns (represented by arrows) which are not original but added at some later date. (HPTC photo)



The central bay of the main block has an arched projecting cross gable containing a fan light into the attic above the ballroom. (HPTC photo)

### **Trim and Secondary Features**

The identifying trim and related secondary features of the Canoe Club building include the traditional American Shingle Style detailing and use of wood shingles. The painted shingles are used as siding material on all elevations of the building and also encase the columns on the second floor porches on the south elevation. The use of simple trim around window and door openings and the linear detailing of trim elements along the balconies and eaves also contribute to the building's character. Horizontal lines are emphasized.



The use of simple trim elements is used on the exterior of the building including linear trim detailing along the eaves and balconies and simple casings around door and window openings. (HABS photo)

## Setting

The Washington Canoe Club building is sited between the Chesapeake and Ohio Canal and the Potomac River in the Georgetown neighborhood of Washington, D.C. The campus of Georgetown University sits atop the hill above the canoe club. The building is one of only two remaining historic boathouses in the Washington area and represents an important component of the waterfront landscape. The location and orientation of the boathouse on the northern bank of the Potomac River offers immediate access to the river as well as views of the Key Bridge and Rosslyn, VA.



This historic postcard shows the Washington Canoe Club in its ca. 1909 configuration and the buildings of the Georgetown University built on the palisade to the north. Seen here with its original color scheme of reddish brown with white trim the building had not yet received its current green and white day-mark colors. (WCC files)



A contemporary view looking across the Potomac River to the Washington Canoe Club with its distinctive green and white day-mark exterior colors and Georgetown University in the background. (HPTC photo)



View of the Potomac River from the canoe club facing south. The Key Bridge is on the left and Rosslyn VA is in the background on the other side of the river. (HPTC photo)

## 2. Visual Character at Close Range (Exterior)

### Materials

The original exterior materials of the Canoe Club building included primarily wood shingles and wood trim but also included brick chimneys. The building design incorporates traditional wood detailing common to the Shingle Style including wood doors, windows, and trim. A wood louvered cupola is positioned on the ridge of the main block and two chimneys constructed of red brick are located on the north slope of the main roof. The shingle siding was originally stained or painted red, but is currently painted dark green with white trim which functions as a day-mark from the river.



The primary character-defining exterior materials of the Canoe Club building include painted wood shingles, wood doors, windows, and trim. The extant sheet metal roof is not considered a CDF. The green and white exterior colors (although not original) are now considered a day-mark for the building and a character-defining feature. (HPTC photo)



Typical painted wood shingle siding with approximately 5 inch exposure and random widths from 6 to 8 inches. Shingles are installed with random vertical staggered joints. (HPTC photo)



Detail of wood shingle siding and a window with simple flat stock wood trim. (HPTC photo)



Red brick laid in common bond is an exterior material used to construct the two extant chimneys on the north roof slope. (HPTC photo)



Double-beaded wood strip T&G ceiling boards abut random width wood shingle wall at exterior porch on south elevation. (HPTC photo)

### **Craft Details**

The Canoe Club incorporates a number of craft details that contribute to the American Shingle Style defining visual character of the building including some of the original random-width red-stained wood shingles (now green) installed in a horizontal course pattern. At close range, the individual shingles are easily discernable while at a distance, the shingles appear as horizontal, linear siding (refer to the two above photographs).

Other details include a louvered octagonal cupola on the main roof, exposed roof sheathing and rafter tails on roof overhangs, a flagpole piercing the central gable roof on the south elevation, flag masts at the east and west towers and two brick chimneys.



Louvered cupola with conical roof on the ridge of the main roof. (HPTC photo)





Roof sheathing and rafter tails are exposed on the roof overhangs. (HPTC photo)



Detail of random-width painted wood shingle siding with approximately 5 inch weather exposure. Green shingles were originally stained red. (HPTC photo)



The flag mast pierces the recessed arch of the central gable. Note fan light in pediment area of gable. (HPTC photo)



Angled bolsters (arrows) at shingled porch columns are part of the character-defining features of the shingle style building. (HPTC photo)



Continuation of horizontal trim between window sills contributes to linear shingle style characteristics of the building. (HPTC photo)



Detail of escutcheon plate at north entrance door. Likely dates to the period of construction after the completion of phase 2 of the main block (ca. 1910). (HPTC photo)



5-panel "cross" style door at north entrance, likely dates from period of construction for the north entrance after the completion of phase 2 of the main block (ca. 1910). (HPTC photo)



East brick chimney with corbelled top courses. (HPTC photo)



West brick chimney (CH01) with corbelled top courses.  
Brick is laid in common running bond. (HPTC photo)

### 3. Interior Visual Character

#### **Prominent Individual Spaces**

The plan of the Washington Canoe Club building is comprised of several spaces that are important to the function of the building albeit utilitarian in nature. Some of these areas are considered to be individually important spaces that define the interior character of the building due to their configuration, function, or architectural features. These prominent spaces include the Grill Room, or common room, on the ground level and the entry hall, ballroom, and board room on the second floor.



The Grill Room, or Common Room, on the first floor. The bay window, dropped beams, and window openings are character-defining features of this important space. A decorative painted mural (arrows), depicting highlights in the club's history is installed on the upper portion of the walls. (HABS photo)



The Ballroom on the second floor as it appears currently. The temporary shoring installed for structural stabilization distracts from the large open space with high hipped ceiling and front bay window that comprise the central portion of the space. (HABS photo)



View of projecting bay window in the Ballroom and the elevated platform that is used as a stage. (HPTC photo)



The entry hall and main staircase on the second floor which leads into Ballroom with its paneled interior, double posted entranceway and flanking built-in benches. (HABS photo)



The Board Room, or Club Room, on the second floor adjacent to the entry hall. The false dropped beams, simple interior trim, tall vertical wainscot, bay window, door and window openings, and wood floor are all character-defining features of the space. (HABS photo)

**Related Spaces and Sequence of Spaces**

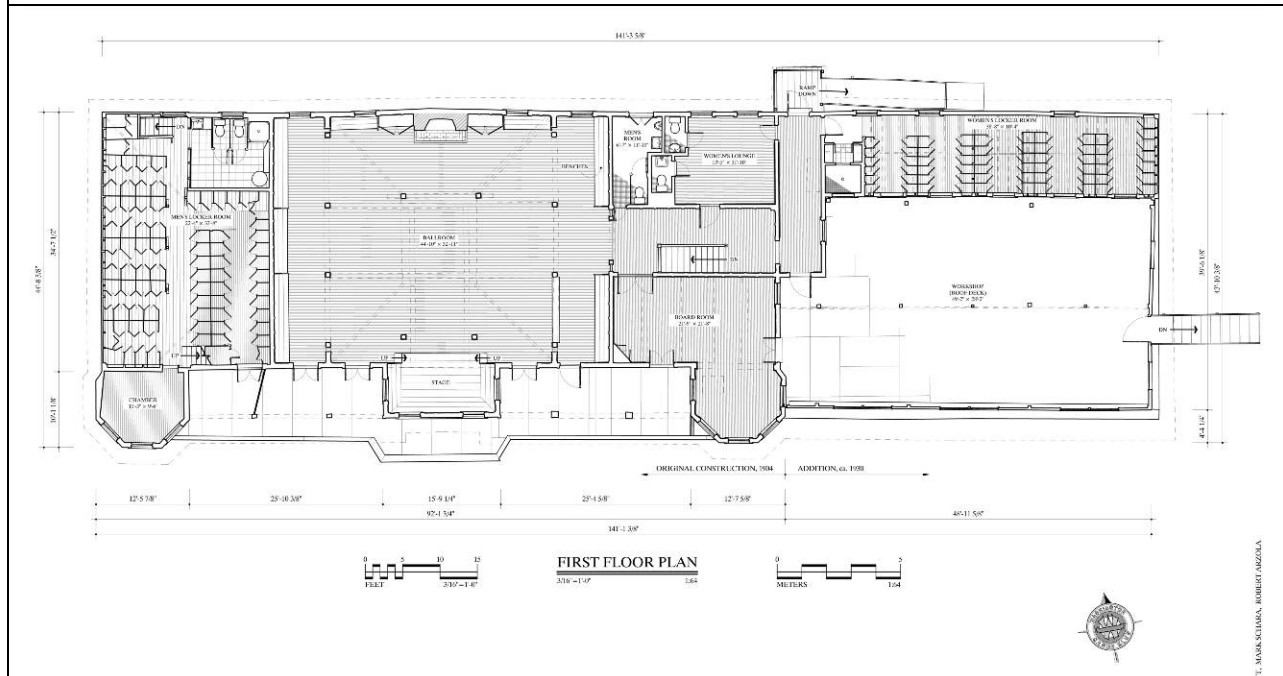
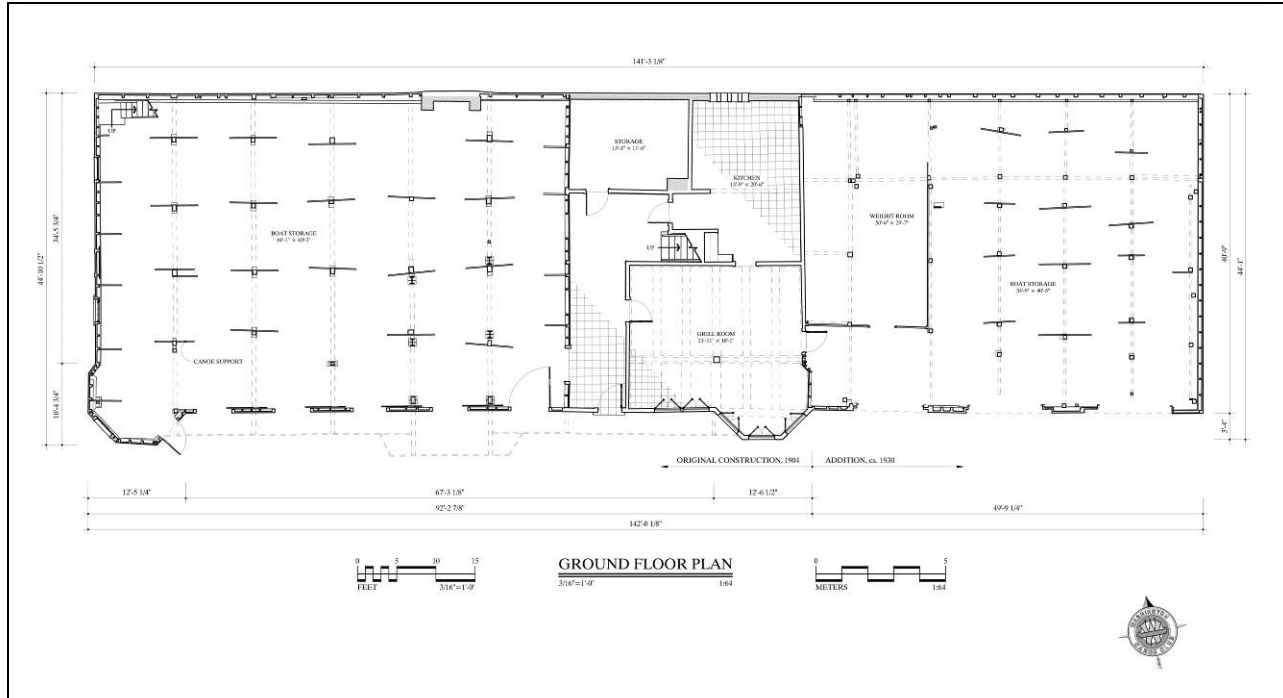
The original plan for the boat house had a simple distinct series of related spaces designed for the function of the building. The proximity to the river allowed for direct access between the boat storage area and the river. Initially the Washington Canoe Club had only male membership; therefore access to the men's locker room and shower was connected directly to the ground floor boat storage area by a staircase. Members could shower, change clothes, and then enter the ballroom from the exterior balcony to attend club activities. In addition, a sleeping chamber was located at the upper level of the west tower and was accessed directly from the men's locker room.

The completion of the main block, a few years after the first phase was constructed, created an additional sequence of spaces oriented around a central staircase and entry hall as the building expanded to the east. A kitchen and common room (Grill Room) were added adjacent to each other on the ground floor as well as additional boat storage. The central staircase led to an entry hall on the first floor from which members could easily access the expanded ballroom and the newly added boardroom, restrooms and women's lounge (extant uses – not certain if historic uses were similar). Another addition to the east created the two-story women's locker room; it is unknown what the ground floor was used for historically (now incorporated as part of the east boat storage area).

Current access to the upper chamber in the east tower and to the "pillbox apartment" in the north entrance tower is through a hatch in the ceiling. It is known this is not the original configuration of the space as it contained the stairs from the north entrance tower.

Likewise, access to the men's locker room remains unchanged and appears relatively isolated from the rest of the building.





Measured drawings by Historic American Buildings Survey (HABS), 2013. Part of DC-876 survey documentation package.

### **Interior Features**

The Canoe Club building has several notable interior decorative features that help to define the interior visual character. These features are outlined in the following interior room schedule:

| <b>Room Schedule of Interior Character-Defining Features</b>  |
|---|
| <b>Washington Canoe Club</b>  |
| <b>FIRST FLOOR</b>  |
| <p><b>101 West Boat Storage</b></p> <ul style="list-style-type: none"> <li>• Exposed structural framing</li> <li>• Base of brick fireplace</li> </ul> <p><i>Not CDF: Concrete flooring, modern lumber canoe racks, steel beams and columns, light fixtures</i></p>  |
| <p><b>102 Storage</b></p> <ul style="list-style-type: none"> <li>• Five panel cross pattern wood doors and hardware, horizontal five panel door (salvaged?)</li> </ul> <p><i>Not CDF: Concrete slab floor, any interior finishes, interior cabinets other than doors</i></p>  |
| <p><b>103 Kitchen</b></p> <ul style="list-style-type: none"> <li>• Beaded T&amp;G wood strip stair enclosure, interior partition wall and selected portion of ceiling, interior doors</li> <li>•</li> </ul> <p><i>Not CDF: Ceramic tile flooring, supplemental exposed structural framing, interior casework, kitchen fittings</i></p>  |
| <p><b>104 Main Hall</b></p> <ul style="list-style-type: none"> <li>• Painted tongue-and-groove wood strip beaded paneling on walls and ceiling, other associated interior trim (door casings)</li> <li>• Wood panel doors, door hardware, and trim</li> <li>• Staircase (risers and treads)</li> </ul> <p><i>Not CDF: Ceramic tile flooring, light fixtures, electrical conduit and devices, cementitious wall plaster, stair handrails</i></p> |

**105 Grill Room**

- Wood panel doors, hardware, and trim
- Beaded ceiling paneling and false beam cases

*Not CDF: Tile flooring, cementitious wall plaster, modern casement windows, light fixtures, electrical conduit and devices, encased supplemental structural members.*

NOTE: The painted cartoon mural is detachable from the building as it is painted on hardboard panels. It is considered an important feature of the WCCB interior and should be retained and conserved. Since it is not actual building fabric it is not categorized as a character-defining feature.

**106 East Boat Storage**

- Not a character-defining space

*Not CDF: Concrete flooring, modern lumber canoe racks, light fixtures*

**ST02 Central Stair**

- Balusters, handrail(only at second story), newel posts
- Wood treads and risers,
- Painted tongue-and-groove paneling

*Not CDF: Light fixtures, electrical devices*

**SECOND FLOOR****201 Ballroom**

- Interior hipped ceiling
- Entranceway with balustrade and encased columns
- Built-in benches and bracketed shelves
- Brick fireplace and mantle
- 6-over-6 double-hung wood windows and hardware
- Full-length double casement windows hardware
- Wood panel door and hardware
- Painted and stained tongue-and-groove beaded paneling
- Stained hardwood floor
- Fabric-covered wall panels and decorative trim
- Wood stage
- Built-in glass door cabinets

*Not CDF: Light fixtures, electrical devices, encased columns, exposed encased beam, supplemental interior structure including four dark stained central columns*

**202 Lower West Tower Chamber**

- Window openings

*Not CDF: Light fixtures, electrical devices, modern windows, wall and ceiling finish, carpet, wood door*

**203 Men's Locker Room**

- Exposed structural framing
- Wood locker units and hardware
- Hardwood flooring

*Not CDF: Light fixtures, electrical devices, modern locker hardware, modern supplemental structural shoring*

**204 Men's Toilet Room (Locker Room)**

- Exposed structural framing

*Not CDF: Light fixtures, electrical devices, plumbing fixtures, ceramic tile wall and floor covering, toilet and shower stall enclosures*

**205 Men's Toilet Room (Hallway)**

- Exposed structural framing
- Vertical T&G Wall covering (ceiling covering?)

*Not CDF: Light fixtures, electrical devices, plumbing fixtures, ceramic tile flooring, toilet and shower stall enclosures*

**206 Women's Lounge and Toilet Rooms**

- 6-over-6 double-hung wood windows, hardware and interior trim
- Vertical beaded tongue-and-groove wall paneling
- Beaded T&G wood strip ceiling
- Wood strip T&G flooring and baseboards
- Wood panel doors and hardware
- Door and window casing
- Varnished finish of all interior original woodwork

*Not CDF: Light fixtures, electrical devices, plumbing fixtures, subdivided interior space with interior toilet compartment walls and hollow core doors*

**207 Entry Hall**

- Wood strip flooring
- Fabric-covered wall panels and trim
- Wood baseboards and wall trim
- Painted tongue-and-groove ceiling paneling

*Not CDF: Light fixtures, electrical devices*

**208 Board Room**

- Wood strip flooring, wood baseboards
- Vertical stained tongue-and-groove wall paneling and trim
- Fabric-covered wall panels
- Bracketed wood shelves
- Painted tongue-and-groove wood strip ceiling
- Stained wood-encased false ceiling beams
- 6-over-6 double-hung wood windows and hardware
- Full-height wood casement windows and hardware
- Door and window casings

*Not CDF: Light fixtures, electrical devices, smoke detectors*

**209 Hall**

- Wood strip flooring, wood baseboards
- Painted tongue-and-groove ceiling paneling
- Panelized fabric wall covering (similar to ballroom)
- Burlap covered wall panels (frieze)

*Not CDF: Light fixtures, electrical devices, exterior door*

**210 Women's Locker Room**

- Exposed structural framing on interior walls and ceiling
- Wood strip T&G floor
- 6-over-6 double-hung wood windows, trim and hardware
- Hopper windows and hardware
- Selected wood locker units and hardware

*Not CDF: Floor materials, light fixtures, electrical devices, modern locker hardware, plywood floors covering, modern lumber structural shoring, plumbing fixtures, toilet and shower enclosures and finishes (ceramic tile floors and walls, ceilings)*

**211 Workshop**

- This space is not considered a character-defining feature.
- Exposed structural framing

*Not CDF: Plywood flooring, exterior door, windows, light fixtures, electrical devices, work benches*

**THIRD FLOOR****301 Men's Mezzanine Locker Room**

- Exposed structural framing
- Selected wood locker units
- Hardwood flooring
- 6-over-6 double-hung wood window and hardware
- Window casings

*Not CDF: Light fixtures, electrical devices, modern locker hardware, modern lumber structural shoring*

**302 Upper West Tower Chamber**

- Window openings

*Not CDF: Light fixtures, electrical devices, modern window units, wall and ceiling finish, carpet, furnishings*

**303 Upper East Tower Chamber**

- Window openings

*Not CDF: Light fixtures, electrical devices, modern window units, wall and ceiling finish, carpet, furnishings*

**304 North Tower Room**

- Window openings

*Not CDF: Light fixtures, electrical devices, modern windows, wall and ceiling finish, carpet, furnishings*

**Additional Interior Character-Defining Features**

*Image and text deleted*



Original 5-panel wood thru-tenon doors with original hardware featuring double turn bolts (one on each side), original hinges, mortise lock sets, knobs with rosettes, and key escutcheons. These doors are currently located in the storage room on the first floor and were likely relocated from other locations within the building. (HPTC photos)



Decorative stair balustrade and newel posts around the central staircase. (HPTC photo)



Interior hipped ceiling with bead-board wood strip finish at Ballroom. The large unobstructed open space of this room is a character-defining feature (although currently obscured by the temporary supports). HABS 876-020.





Corbelled brick fireplace and wood mantle in the Ballroom. (HABS photo)



Built-in benches with curved ends and bracketed shelves along the perimeter walls of the Ballroom. (HABS photo)



Full-height casement windows with access to the Balcony from the Ballroom and Board Room. (HPTC photo)



Original 6-over-6 double-hung window with original hardware. (HPTC photo)



Selected painted wooden locker units in the Men's Locker Room. (HABS photo)



Vertical T&G lockers in the Women's Locker Room. (HPTC photo)

### **Surface Materials and Finishes**

Although the building has experienced considerable modifications in the intervening years, some of the character-defining interior fabric has been retained, including the varnished and/or painted tongue-and-groove paneling on the walls and ceiling on the first floor, the stained beaded tongue-and-groove paneling in the Ballroom and Board Room on the second floor, and the stained hardwood floors.

Fabric covered wall panels are not historic to Phase 1 period of construction, likely having been installed after Phase 2 construction was completed in 1911. They are to be considered character-defining features of those interior spaces in which they appear.



Painted tongue-and-groove wall and ceiling paneling in the Main Hall (Room 104) on the first floor. (HPTC photo)



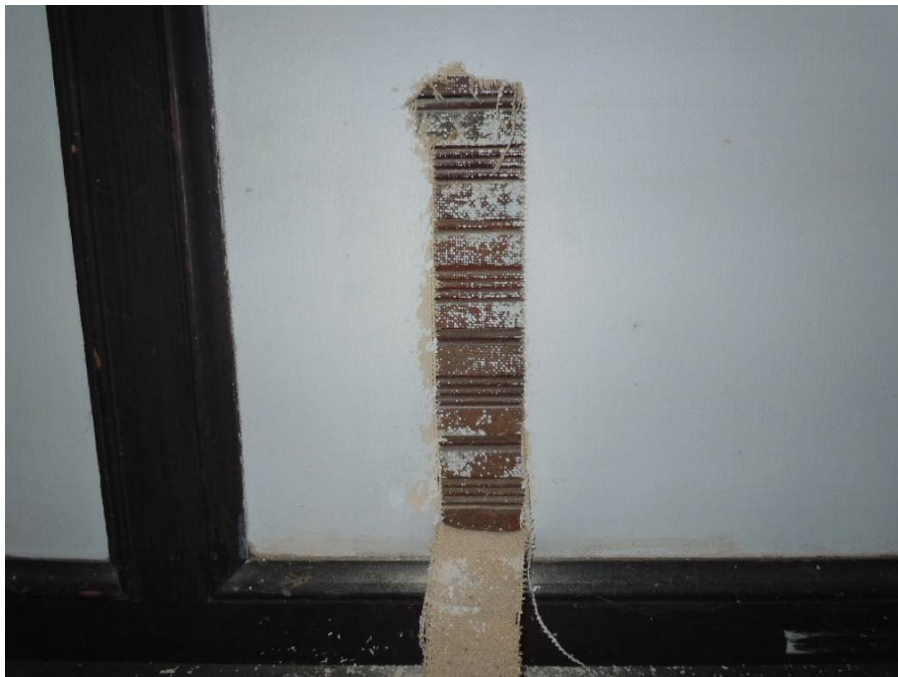
Stained vertical wall paneling, wood flooring and baseboard, door and window surrounds and false dropped ceiling beam enclosures are character-defining features of the Board Room. (HABS photo)



Painted beaded ceiling boards and stained wood-encased false dropped ceiling beams in the Grill Room (Room 105) on the first floor. (HPTC photo)



Vertical wall panels with white-painted fabric over dark stained beaded board paneling, wood strip beaded ceiling, wood plank floor, stair balustrade and newel posts are all character-defining features in the Entry Hall (Room 207) on the second floor. (HPTC photo)



A section of torn painted fabric reveals the original beaded board paneling on the walls in the Ballroom on the second floor. (HPTC photo)



Interior columns which create west gallery space in Ballroom are original to Phase 1 construction. (HPTC photo)



Simple bullnose trim on original interior columns in Ballroom. (HPTC photo)



Brass plaques on the interior wall paneling of the Board Room on the second floor indicate the high water mark of the Potomac River flood of 1936. (HPTC photo)



Five-panel doors to Board Room are from second phase of construction (ca. 1910). (HPTC photo)

**Exposed Structure**

Some areas of the boat house contain exposed structure which contributes to the character and utilitarian function of these spaces. Structural elements are visible in the boat storage areas, the workshop, and the locker rooms.



Exposed structural elements in the boat storage area on the first floor.  
(HABS photo)

End of Character-Defining Features section.



### **Other Interior Features & Finishes**

Some features are important interior decorative features but are not categorized as character-defining features. The wall frieze mural panels are not actual building fabric as they are hung on the interior wall surfaces; therefore they are not categorized as character-defining features. Character-defining features must be actual building fabric or built into the building as part of the original design.




Detachable decorative painted cartoon mural (wall frieze) in the Grill Room is an important interior decorative finish (HPTC photo) but not categorized as a character-defining feature.

## Fabric Investigation: Outcome & Documentation

This section of the Historic Structure Assessment Report (HSAR) provides insight into the fabric investigation undertaken as part of the structural investigation portion of the project. In the Project Agreement between the Chesapeake and Ohio Canal National Historical Park (CHOH) and the Historic Preservation Training Center (HPTC) it was agreed that HPTC would provide the field crew necessary to undertake fabric removal<sup>1</sup>.



This service was provided to coordinate with the requests of the contract hired structural engineer whose task was to update a previous structural analysis of the building. The structural engineer provided a list of tasks; specific fabric removal requests with a certain projected outcome. HPTC undertook those tasks and documented the outcome – structural conditions revealed as a result of the fabric removal.





The following section is organized by specific task and is recorded on a set of drawings included in the Appendices. These outcomes are also referred to in the *Structural Investigation of the Washington Canoe Club* report.



|   |  |
|---|--|
|  | <p>Precautionary measures were taken by HPTC historic preservation field crew to protect WCC membership property while conducting slab coring operations in the East Boat Storage Area (11/05/13, HPTC).</p> |
|---|--|



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<sup>1</sup> Task 10, Section 6 Project Coordination (HPTC) Coordinate work activities with consulting structural engineer and provide construction services for structural investigation of the building.





| Item                              | Task                            | Question/ Concern/ Outcome  | Response/ Clarification  |
|-----------------------------------|---------------------------------|---|--|
| <b>Ground Floor (Lower Level)</b> |                                 |   |  |
| 1a                                | Test Pit @ Exterior West Wall   | This will be coordinated with structural engineer to determine actual dimensions of opening. The goal of the test pit is to discover the foundation condition and determine if pilings are still extant.  | Correct. Objective: need access to the underside of the footing/pile cap so that it may be probed for piles without undermining. |
|                                   |                                 |  <p>Task 1 Outcome: unable to penetrate concrete placed in this area with backhoe. Determined depth to exceed sixteen (16) inches.</p>  |  |
| 1b                                | Test Pit at Exterior North Wall |   |  |
|                                   |                                 |  <p>Task 1b Outcome: building underpinning exposed to a depth of approximately eighteen (18) inches. There is no indication of metal reinforcing in these concrete placements around the base of the building to-date.</p> |  |

| Item | Task                       | Question/ Concern/ Outcome  | Response/ Clarification  |
|------|----------------------------|---|--|
| 2a   | Wood species ID            | For the joists, studs, beams and columns – just in this area or throughout the boat storage bays?   | Objective: I expect the wood to be of the same species in this area, so I was planning on one joist, one beam, and one column.     |
|      |                            | Outcome: See Results of Wood Identification Record in Appendix to HSAR (as delivered to structural engineer).   |  |
| 2c   | (2) Beam                   | Sample taken, no photo.   | Southern Yellow Pine.  |
| 2d   | Column                     |    | Southern Yellow Pine.  |
| 2e   | Joist                      |   | Southern Yellow Pine.  |
| 2f   | Stud                       | <br>Bad stud sample (extensive previous termite damage)                                | <br>Good stud sample.<br>Southern Yellow Pine. |
| 2b   | Core in Slab 10" max depth | No questions – see also # 6. HPTC has added # 12 and 13 for additional core locations to get wider distribution over slab surface area and possible differing conditions. | Ok   |



| Item | Task   | Question/ Concern/ Outcome  | Response/ Clarification  |
|------|--|---|--|
|      |  |  <p>Core #2 was later relabeled slab core # 2b. At this location a layer of sand and gravel was encountered under the 3 inch concrete slab core sample to a depth of sixteen (16) inches. No under-slab or concrete placement was encountered. See Task Location Maps for exact locations of core samples.</p> |  |
| 3    | Wall Sheathing removal @ hallway south of D109 | More detail needed. What specifically is the objective? And approximately what are the dimensions of wall sheathing to be removed?  | Objective: Would like to measure the stud size and spacing, and visually review the condition at bearing and at the base. Approx. dimensions would be 3' wide, and full height, or two 3' wide x 3' tall openings – one at the top and one at the bottom.  |
|      |  |  <p>Task 3.</p>  | <p>Outcome: wall frame revealed. Use of cut nails noted in wood frame construction Early balloon frame typology with fire-blocking wall base and top plates. Extensive deposition of silt revealed in wall cavity from previous river flooding episodes. Silt seen in this image on floor in front lo lower opening. The horizontal tongue &amp; groove siding removed in this area has been bundles for future reinstallation at this location. Painted finish tested positive for lead paint usage.</p> |

| Item   | Task                      | Question/ Concern/ Outcome   | Response/ Clarification   |
|--|---------------------------|--|---|
| 4  | Wood Species ID           | Exposed ceiling beam in Grill Room. Double beam boxed in with wood trim at center of room supported by steel post. | Objective: See item #5  |
|    |                           |  |   |
| <p>Task 4 Outcome: steel post and beam revealed beneath concrete plaster over wire lath. Used to support second floor frame in this area. NOTE: wood ID samples cut out of each of the double beams near the crossing of the steel beam (original task) Results of wood Identification – Southern Yellow Pine.</p> |                           |  |   |
| 5  | Ceiling Sheathing Removal | Grill Room – identify approximate area to be removed.  | Objective: Expose the beam to be measured and visually reviewed for condition. Identify wood species. |
|    |                           |  |   |
| <p>Task 5 Outcome: Boxed beams revealed to be non-structural decorative architectural elements. Skirt boards are fastened to paired nominally sized floor joists separated by wood blocking.</p>   |                           |  |   |

| Item   | Task      | Question/ Concern/ Outcome                            | Response/ Clarification |
|--|-----------|---|-------------------------|
| 6  | Slab Core | East Boat Storage Room                                | Ok                      |
|    |           |   |                         |
| <p>Task 6 Outcome: Upper and lower slab revealed by core at this location. Separated by layer of sand and gravel approximately 3 to 4 inches thick. Neither slab has evidence of reinforcing at this location. Note: all core locations filled with water after coring operation completed. Repeated pumping of core locations resulted in repeated refilling with under-slab water.</p> |           |   |                         |
| 6a   | Slab Core | East Boat Storage Room – Additional core sample taken |                         |
|    |           |   |                         |
| <p>Task 6a Outcome: Original Core #6 (2-1/4 inch diameter) was enlarged to approx. 6 inch diameter and relabeled as 6a. Coring operation stopped after penetrating upper slab due to equipment failure (core split off).</p>   |           |   |                         |

| Item | Task            | Question/ Concern/ Outcome  | Response/ Clarification  |
|------|-----------------|---|--|
| 7    | Wood Species ID | Joist, Column & Studs – exposed structure in East Boat Storage area                 | Ok   |
| 7a   | Stud            |    | Southern Yellow Pine.  |
| 7b   | Joist           |    | Southern Yellow Pine.  |
| 7c   | Column          |  | <p>Northern Red Oak.</p> <p>Original post likely part of original first story structure supporting remaining north east building block (Women’s Locker Room). Posts form linear alignment consistent with possible non-extant original exterior wall location.</p> |
| 7d   | Modern joist    |  | <p>White fir.</p> <p>Consistent with grading marks throughout this area of mid to late 20<sup>th</sup> century framing.</p>  |



| Item | Task        | Question/ Concern/ Outcome   | Response/ Clarification   |
|------|-------------|--|---|
| 7e   | Grade Stamp | Two (2) grade stamps were examined to determine species indicated of joist used to support 2ndfloor area above East Boat Storage Area.   | Requested by structural engineer.<br>Objective: determine wood species and interpretation of extant grade stamps. |
|      |             |    |   |
|      |             |   |   |
|      |             | <p>Task 7(e) Outcome: HEM-FIR Grade Stamps – structural lumber of western hemlock and western firs is sometimes marketed together under the commercial designation of HEM-FIR. Both these species strength properties are similar and may be used interchangeably in structural applications. See Wood Identification Report Specimen Task 7 – Modern Framing in East Boat Storage Area (used to support 2<sup>nd</sup> floor work area floor system).</p> |   |

| Item | Task  | Question/ Concern/ Outcome | Response/ Clarification |
|------|---|----------------------------|-------------------------|
| 8    | Wall Sheathing Removal at Kitchen & Storage Area:<br>specify approximate dimensions of reveal.  |                            | Objective: See #3       |
| 8a   | Kitchen Exterior Wall Interior: Outcome - Interior cement plaster wall surface removed to reveal structural concrete lintel above window and brick and wood infill wall plaster. The boxed out bulkhead seen in this image is non-structural. |                            |                         |



Task 8a.

|    |   |  |  |
|----|---|--|--|
| 8b | Storage Room Exterior Wall Interior: Outcome - Interior wall previously exposed (no extant sheathing), ply-board ceiling panels removed to further expose joist/ wall plate connection. |  |  |
|----|---|--|--|



Outcome: extensive termite damage revealed in older structural members (joists and studs). Supplemental framing previously installed to support north exterior frame wall of building. Previous floor system repairs uncovered (note plywood floor sheathing).

| Item | Task                   | Question/ Concern/ Outcome                              | Response/ Clarification  |
|------|------------------------|---|--|
| 9    | Wall Sheathing Removal | Kitchen East Wall – to uncover possible concealed post. | Objective: #9 is ceiling removal to expose the covered beam and bearing point. Approx. size 3’x4’. |



Task 9 Outcome: steel beam connection with wood wall frame revealed.

|    |                        |   |   |
|----|------------------------|---|---|
| 10 | Wall Sheathing Removal | Hallway/ Grill Room outside interior corner – to uncover possible corner post at this location. | Objective: Ceiling removal: Looking for typical floor framing size/condition in this area. The corner is preferred to see if there’s a beam here or just a change in joist span. Perhaps 4’x4’. |
|----|------------------------|---|---|



Task 10 Outcome: Floor frame structure revealed. Diagonally installed sub floor visible fastened to floor joists. Spacing, configuration, condition and perforation of frame revealed.

| Item | Task                      | Question/ Concern/ Outcome   | Response/ Clarification  |
|------|---------------------------|--|--|
| 11   | Ceiling Sheathing Removal | Grill Room wall/ ceiling – more detail required – what is objective? | Objective: Ceiling removal: Looking for typical floor framing size/condition in this area. Expose two beams and framing in between for review. |



Task 11 Outcome: determined ceiling in Grill Room comprised of series of paired joists boxed in with skirt boards to create false beams. White painted tongue & groove beaded ceiling boards (seen between joists) are part of subfloor system of second floor.

| Item | Task      | Question/ Concern/ Outcome                   | Response/ Clarification |
|------|-----------|--|-------------------------|
| 12   | Slab Core | West Boat Storage area – additional for HPTC | Approved.               |



Note: Two rectangular adjacent but off-set areas of floor slab were selected to remove segment larger than the cores. This was done to assist in the determination of the sub-slab building support system. It was determined to saw cut through the slab in close proximity to a structural post to investigate possibility of previous wood piles still being extant and functioning as part of building support system (See chronology of building evolution).



Task 12: Overview or saw cutting of slab area 1.





Task 12: Overview of Slab Saw Cut areas 1 (at post) and 2 (at exterior wall).

| Item   | Task      | Question/ Concern/ Outcome  | Response/ Clarification  |
|--|-----------|---|--|
|  |           |  |  |
| <p>Task 12a Slab Core and 12c Slab Removal Area 1. Outcome: Upper slab, fill layer and top of under-slab revealed. Core 12a taken at lower slab near post. Direct support system under post not fully revealed. Solid concrete block [outlined in dashed black line (photo right)] seen supporting post slightly above slab level also revealed under slab to a depth of eight (8) inches (approx.). Support system under post not revealed.</p> |           |   |  |
|  <p>Task 12b Slab Core and 12d Slab Removal Area 2. Outcome: Core 12b successfully enlarged. Due to equipment failure HPTC crew was unable to complete saw-cut through slab or complete core operation at location 12b.</p>  |           |   |  |
| 13   | Slab Core | East Boat Storage area –  | Additional for HPTC Ok   |
|  |           | NOTE: This slab core was not taken due to proximity of WCC work out equipment.    |  |



| Item                                       | Task                     | Question/ Concern/ Outcome                 | Response/ Clarification   |
|--|--------------------------|--|---|
| <b>1<sup>st</sup> Floor (Second Level)</b> |                          |  |   |
| 14   | Exterior Shingle Removal | West Porch area. Exterior Shingle Removal. | Objective: Ceiling removal to expose roof framing beam and rafters for size/ condition. Approx. size = 3' x 5'. |



Task 14 Outcome: structural post, bolster (or half diamond capital) and porch breast beam structure revealed under original shingle cladding. Note solid beam used to support roof frame in this area of Phase 1 construction. See task 18 for comparison where a double beam was used in lieu of a solid hewn beam, as above.

| Item | Task             | Question/ Concern/ Outcome   | Response/ Clarification                                     |
|------|------------------|--|---|
| 15   | Wood Species ID  | Ballroom - Beams & Rafters (exposed members only)  | May be visually reviewed (or sample taken) from attic space |
| 15a  | South Attic Beam |  <p>Task 15a Outcome: South Attic Beam Wood ID report – Douglas Fir. Sample 15c taken at base of column seen in foreground of this image.</p> |   |
| 15c  | South Column     |  <p>Task 15c. Wood ID at base of supplemental support column. Outcome: determined to be Douglas Fir – same as beam.</p>                   |   |



| Item | Task             | Question/ Concern/ Outcome  | Response/ Clarification                                     |
|------|------------------|---|---|
| 15   | Wood Species ID  | Ballroom - Beams & Rafters (exposed members only)   | May be visually reviewed (or sample taken) from attic space |
| 15b  | North Attic Beam |  <p>Task 15b Outcome: North Attic Beam Wood Id report – Douglas Fir. Sample 15d taken at base of column seen in foreground of this image.</p> |   |
| 15d  | North Column     |  <p>Task 15d. Wood ID at base of supplemental support column. Outcome: determined to be Douglas Fir – same as beam.</p>                      |   |

| Item | Task                   | Question/ Concern/ Outcome                                    | Response/ Clarification   |
|------|------------------------|---|---|
| 16   | Wall Sheathing Removal | Ballroom – Exterior stage wall and ceiling structure exposed. | Objective: Ceiling removal – expose three joists in roof/ attic framing above for review. Approx. size = 3'x4'. |



Task 16. Outcome – ceiling structure and roof frame structure exposed.

|    |                        |  |   |
|----|------------------------|--|---|
| 17 | Wall Sheathing Removal | Ballroom – Header Beam which Crosses above front edge of stage, supports ceiling and roof joists across the stage opening (bay window area). | Objective: Ceiling removal – expose roof/attic framing above and beam over the stage area for review. |
|----|------------------------|--|---|



Task 17. Outcome: sample successfully removed, ceiling structure exposed.

| Item | Task | Question/ Concern/ Outcome                  | Response/ Clarification   |
|------|------|---|---|
| 18   |      | East Porch area - Exterior Shingle Removal. | Objective: Remove shingle siding to expose structural member (porch breast beam). |



Task 18 Outcome: structural post, bolster (or half diamond capital) and porch breast beam structure revealed under original Phase 2 shingle cladding. Note double beam used to support roof frame in this area of Phase 2 (ca. 1910) construction. See Task 14 for comparison where a solid hewn beam is used to support the porch roof structure.

|    |                        |   |   |
|----|------------------------|---|---|
| 19 | Wall Sheathing Removal | Board Room Bay Window - More detail needed. | Objective: Ceiling removal – expose framing above for review + bearing point on wall. |
|----|------------------------|---|---|



Task 19. Sample successfully removed and fabric retained.  
Ceiling frame exposed.

| Item | Task                   | Question/ Concern/ Outcome           | Response/ Clarification  |
|------|------------------------|--------------------------------------|--|
| 20   | Wall Sheathing Removal | Board Room - Wall Sheathing Removal. | Objective: Ceiling removal – expose roof/attic framing above + bearing point on wall for review. |



Task 20. Outcome: ceiling removal above W240 to expose concealed structure – no hidden structure in Board Room Ceiling, boxed beams are decorative (no concealed structure).

|    |  |  |
|----|--|--|
| 21 | Wall Sheathing Removal: Board Room - More detail needed. | Objective: Ceiling removal – expose roof/attic framing above + bearing point on wall for review. |
|----|--|--|



Task 21. Outcome: Interior north wall – ceiling finish removal to expose concealed structure. No hidden structure found, boxed beams are decorative (no hidden structure).

| Item | Task                      | Question/ Concern/ Outcome                                      | Response/ Clarification  |
|------|---------------------------|---|--|
| 22   | Ceiling Sheathing Removal | Ballroom – Ceiling Sheathing Removal to expose structural beam. | Objective: Ceiling removal – expose beam and attic framing for review. Approx. size – 3’x5’. |



Task 22. Outcome: Skirt boards removed from beam to reveal triple 2X14 beam spanning between posts. NOTE: marks end wall of Phase 1 construction – see historic ballroom image.

|    |                           |  |  |
|----|---------------------------|--|--|
| 23 | Ceiling Sheathing Removal | Ballroom/ Hall Opening – to expose concealed structure at Phase 2 interior wall. | Objective: Ceiling removal – expose beam and attic framing for review. Approx. size – 3’x5’. |
|----|---------------------------|--|--|



Task 23 Outcome: revealed architectural treatment at opening is decorative – no concealed structure in ceiling or at boxed columns

| Item | Task                      | Question/ Concern/ Outcome                  | Response/ Clarification  |
|------|---------------------------|---|--|
| 24   | Ceiling Sheathing Removal | Women’s Lounge - Ceiling Sheathing Removal. | Objective: Ceiling removal – expose roof/attic framing above + bearing point on wall for review. |





Task 24. Outcome - Ceiling fabric preserved. Ceiling removal above D204; not completed as structure is visible on opposite wall of room.

|    |                        |   |  |
|----|------------------------|---|--|
| 25 | Wall Sheathing Removal | Women’s Lounge -. Wall Sheathing Removal. | Objective: Ceiling removal – expose roof/attic framing above + bearing point on wall for review. |
|----|------------------------|---|--|



Task 25. Outcome: Interior wall sheathing removed to expose wall structure including base and top plate of wall and connection with ceiling joists and roof rafters.

| Item  | Task  | Question/ Concern/ Outcome   | Response/ Clarification  |
|---|---|--|--|
| 26  | Wall Sheathing Removal to expose structure. |  | Objective: to measure the stud size and spacing, and visually review the condition at bearing and at the base. Approx. dimensions would be 3' wide, and full height, or two 3' wide x 3' tall openings – one at the top and one at the bottom. |
| 26a   |   | Men's Toilet – see 26  |  |
| 26b   |   | Women's Lounge – see 26  |  |
|   |   |  |   |
| <p>Tasks 26a and 26b: similar transitional balloon frame construction revealed at these interior partition walls. Outcome: Wall and ceiling interior finish removed to expose wall structure including top and bottom wall plates and connection with ceiling joists and roof rafters (where applicable).</p> |   |  |  |

| Item | Task | Question/ Concern/ Outcome | Response/ Clarification |
|------|------|----------------------------|-------------------------|
| 26c  |      | Women's Lounge – see 26    |                         |



Task 26c. Exterior wall (north) in Women's Lounge. Interior vertical tongue and groove siding removed; use of cut nails noted throughout interior transitional balloon frame type construction. Diagonal sheathing is used as exterior covering of frame and wood shingles are applied over. Note darkened stain at bottom of T&G siding indicates height of historic baseboard - no longer extant.



| Item | Task            | Question/ Concern/ Outcome                    | Response/ Clarification            |
|------|-----------------|---|------------------------------------|
| 27   | Wood Species ID | Women’s Locker Room – roof truss & wall studs | Objective: determine wood species. |
| 27a  | Wall Stud       | Women’s Locker Room                           |                                    |



Task 27a. Location of requested wood ID sample, open structure in-situ. Outcome: Southern Yellow Pine (SYP).

|     |         |                   |  |
|-----|---------|-------------------|--|
| 27b | Wood ID | Roof Rafter       |  |
| 27c | Wood ID | Rafter Collar Tie |  |



Tasks 27b and 27c. Location of requested wood ID sample. Roof rafter and collar tie wood ID sample locations – open structure in-situ. Outcome: Southern Yellow Pine (both samples).

| Item | Task                   | Question/ Concern/ Outcome   | Response/ Clarification   |
|------|------------------------|--|---|
| 28   | Wall Sheathing Removal | Men’s Locker Bathroom – Wall and roof frame structure investigation. | Objective: Ceiling removal - – expose framing above for review + bearing point on wall. Approx. size 3’x4’. |




Task 28. Outcome: No fabric was removed as structural members are exposed above wall line in locker room and above the ceiling level of the Men’s Toilet room (photo right).


|     |   |  |  |
|-----|---|--|--|
| 29  | Wood Species ID: Ballroom Entrance Structure (Architectural)        |  |  |
| 29a | Triple Beam: Ballroom – original extension to phase 1 construction. |  |  |



Task 29a. Requested wood ID sample taken at exposed triple built-up beam in ballroom near task 22 marker (see arrow). This beam is part of the Phase 2 expansion of the WCCB ca. 1910.

| Item   | Task  | Question/ Concern/ Outcome | Response/ Clarification |
|--|---|----------------------------|-------------------------|
| 29b  | South Column: Ballroom – sample taken at base behind skirt board. |                            |                         |
|  <p>Task 29b. Requested wood ID sample location. Outcome: Southern Yellow Pine.</p> |   |                            |                         |

|     |   |  |  |
|-----|---|--|--|
| 29c | North Column: Ballroom - sample taken at base behind skirt board. |  |  |
| 30  | Slab Core   | West Boat Storage Area – task added by HPTC. | Additional slab core taken to verify slab thickness and construction assembly. |

|  |  |  |  |
|--|--|--|--|
|  <p>Task 30. Two core samples recovered at this central location in the East Boat Storage area. The upper and lower slab cores were separated by approximately 4 inches of sand and gravel. Note concrete block supporting wood post. Similar detail at west end of this large open space (see Core #2) shows the concrete block nearly flush with the top of the concrete slab; that is a differential in the post bottoms of approximately five (5) inches.</p> |  |  |  |
|--|--|--|--|

| Item | Task | Question/ Concern/ Outcome | Response/ Clarification |
|------|------|----------------------------|-------------------------|
|------|------|----------------------------|-------------------------|

End of Chapter 2.

| Item | Task | Question/ Concern/ Outcome | Response/ Clarification |
|------|------|----------------------------|-------------------------|
|------|------|----------------------------|-------------------------|

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## CHAPTER 3

### Introduction

The Washington Canoe Club Building is listed on the National Register of Historic Places. As such, treatment philosophies should be based on the most appropriate treatment standards, **Preservation** and **Rehabilitation**, as defined by *The Secretary of the Interior's Standards for the Treatment of Historic Properties*.

Following are synopsized definitions of these two standards:

**Preservation is appropriate** *"when the property's distinctive materials, features, and spaces are essentially intact and thus convey the historic significance without extensive repair or replacement; when depiction at a particular period of time is not appropriate; and when a continuing or new use does not require additions or extensive alterations. Prior to undertaking work, a documentation plan for Preservation should be developed."*<sup>1</sup>

**Rehabilitation is appropriate** *"when repair and replacement of deteriorated features are necessary; when alterations or additions to the property are planned for a new or continued use; and when its depiction at a particular period of time is not appropriate. Prior to undertaking work, a documentation plan for Rehabilitation should be developed."*<sup>2</sup>

Additional language concerning these two treatments and derived from the Secretary of the Interior and the National Park Service will be found in Appendix A, *Preservation Standards and Guidelines*.

### Stabilization

Another form of Preservation is **Stabilization**. While not one of the formally defined treatment standards, it is a common management technique used to prevent the ultimate and untimely loss of a historic structure when treatment is not immediately possible. The following definition is presented as part of the **Guidelines for Preservation** in the *Secretary's Standards*.

"Deteriorated portions of a historic building may need to be protected thorough preliminary stabilization measures until additional work can be

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<sup>1</sup> *The Secretary of the Interior Standards for the Treatment of Historic Properties with Standards and Guidelines for Preserving, Rehabilitating, Restoring & Reconstructing Historic Buildings.*

<sup>2</sup> Ibid

undertaken. **Stabilizing** may include structural reinforcement, weatherization, or correcting unsafe conditions. Temporary stabilization should always be carried out in such a manner that it detracts as little as possible from the historic building's appearance. Although it may not be necessary in every preservation project, stabilization is nonetheless an integral part of the treatment Preservation; it is equally applicable, if circumstances warrant, for the other treatments."<sup>3</sup>

Further definition of the concept of stabilization is found in the National Park Service Cultural Resources Management Guidelines. As part of the overall definition of the preservation philosophy known as **preservation maintenance**, stabilization is defined along with housekeeping, routine maintenance and cyclical maintenance (other types of maintenance).

**Preservation maintenance:** action to mitigate wear and deterioration of a historic property without altering its historic character by protecting its condition, repairing when its condition warrants with the least degree of intervention including limited replacement in-kind, replacing an entire feature in-kind when the level of deterioration or damage of materials precludes repair, and stabilization to protect damaged materials or features from additional damage. Types of preservation maintenance are: <sup>4</sup>

- **Housekeeping:** the removal of undesirable deposits of soil in ways that minimize harm to the surfaces treated, repeated at short intervals so that the gentlest and least radical methods can be used.
- **Routine maintenance:** usually consists of service activities such as tightening, adjusting, oiling, pruning, etc.
- **Cyclic maintenance:** maintenance performed less frequently than annually; usually involves replacement or at least mending of material.
- **Stabilization:** action to render an unsafe, damaged, or deteriorated property stable while retaining its present form.

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<sup>3</sup> Ibid.

<sup>4</sup> National Park Service Office of Policy: NPS-28, Cultural Resource Management Guideline (Appendix A), available at [http://www.nps.gov/history/history/online\\_books/nps28/28appena.htm](http://www.nps.gov/history/history/online_books/nps28/28appena.htm), accessed on August 31, 2013.

A closely related concept is another form of Stabilization (or Preservation) known as **Mothballing**. The National Park Service's **Preservation Brief No. 31, Mothballing Historic Structures**, offers the following introduction:

*"When all means of finding a productive use for a historic building have been exhausted or when funds are not currently available to put a deteriorating structure into a useable condition, it may be necessary to close up the building temporarily to protect it from the weather as well as to secure it from vandalism..."*

*This process, known as **mothballing**, can be a necessary and effective means of protecting the building while planning the property's future, or raising money for a preservation, rehabilitation or restoration project".*

Stabilization and mothballing are not mutually exclusive and may be used in conjunction with one another for a structure (building) with extreme maintenance deficiencies and no intended use. One may take precedence over the other based on the condition of the structure or used alone. They can both contribute to the long-term preservation of the structure.

The essential difference between Stabilization and Mothballing is that Stabilization is used to stop deterioration and often includes structural repair; Mothballing is the preparation of a building for long-term inactivity. The two are used in tandem to prepare a building for long-term inactivity especially if it has structural deficiencies. When the long-term forecast for a building is to remain unused and there aren't any imminent structural failures pending then mothballing is the preferred treatment option.



## Condition Assessment Standard Definitions

### Introduction

The following standard condition assessment definitions are based on those outlined by the National Park Service (NPS). NPS uses an industry-based condition assessment tool known as the Asset Management Process which has been adopted for use by HPTC for this project.

### Qualitative Condition Ratings

#### Good

This rating indicates that:

- Routine maintenance should be sufficient to maintain the current condition; and/or
- A cyclic maintenance or repair/rehabilitation project is not specifically required to maintain the current condition or correct deficiencies.

#### Fair

This rating indicates that:

- The feature generally provides an adequate level of service to operations, but
- The feature requires more than routine maintenance attention.

This rating also indicates that cyclic maintenance or repair/rehabilitation work may be required in the future.

#### Poor

This indicates that the feature is in need of immediate attention. This rating also indicates that:

- Routine maintenance is needed at a much higher level of effort to meet significant safety and legal requirements;
- Cyclic maintenance should be scheduled for the current year and/or
- A special repair/rehabilitation project should be requested consistent with the building owner's requirements, priorities, and long term management objectives.

### **Maintenance Deficiency Priority Ratings (5 Year Rating Period)**

Listed as "Priority Ratings" on the *Feature Inventory Condition Assessment Tables*, these ratings are based on the condition rating of each feature and a priority rating was established. These priority ratings indicate either a critical, serious, or minor deficiency priority rating.

#### **a) Critical – (Emergency/Immediate)**

- This rating defines an advanced state of deterioration which has resulted in the failure of a feature or will result in the failure of a feature if not corrected within 1 year; or
- There is accelerated deterioration of adjacent or related materials or systems as a result of the feature's deficiencies if not corrected within 1 year; or
- There is an immediate threat to the health and/or safety of the user; or
- There is a failure to meet a legislated requirement.

#### **b) Serious – (Immediate/Short Term)**

- This rating defines a deteriorated condition that if not corrected within 1 to 3 years will result in the failure of the feature; or
- A threat to the health and/or safety of the user may occur within 1 to 3 years if the ongoing deterioration is not corrected; or
- There is ongoing deterioration of adjacent or related materials and/or features as a result of the feature's deficiency.

#### **c) Minor – (Short Term/Long Term)**

- This rating indicates standard preventative maintenance practices and preservation methods have not been followed; or
- There is reduced life expectancy of affected adjacent or related materials and/or systems within 3 to 5 years and beyond; or
- There is a condition with a long term impact within 3 to 5 years and beyond.

For the purposes of this report, these definitions were rigidly adhered to as a way to qualitatively assess the current condition of the Washington Canoe Club Building.

End of Chapter 3.

## CHAPTER 4

### Introduction

This chapter of the report describes the current condition (November 2013 – February 2014) of the architectural fabric of the Washington Canoe Club Building (WCCB). It identifies maintenance deficiencies of the building's features as described in the building feature master list (Appendix B) and this chapter. Along with a written description of the observed conditions, a condition rating and deficiency rating are provided for each substantially separate building feature.

The ASTM reference standard for *Baseline Property Condition Assessment Process* (ASTM E2018) has been adopted for use by HPTC for this project. Inspection of the WCCB was completed utilizing the current guidelines in conjunction with the National Park Service *Facility Condition Assessment Survey* as described in Chapter 1 of this report.

#### Overview of NPS Treatment

The building received emergency stabilization treatment by NPS in recent years; between 2010 and 2012. Major components of this work included:

##### Superstructure:

- Temporary structural stabilization was completed by park maintenance staff between 2010 and 2012 in two phases based on the design provided by the structural engineer; Temporary Shoring Plans dated 07/29/2011 by McMullan & Associates Structural Engineers. The first phase of the structural stabilization occurred between September and December of 2010; this was an overall stabilization of the building. The second phase was completed between November 2011 and January 2012; this phase focused on the East Canoe Storage Area which was to be available to the Washington Canoe Club for its limited use. This phase also included selected roof repairs.

##### Windows:

- External slatted plywood window and door coverings were installed; these were fashioned to allow for passive ventilation and were installed with interior hardware cloth (most sash were not removed and are in-situ in the window frames). These coverings were painted with representations of the windows or doors they protect.



Temporary pipe columns (red) and wood cross-bracing was added by the NPS CHOH Maintenance Team according to stabilization plans by a structural engineer to correct deficiencies in the buildings superstructure. (10/23/13, HPTC)



Cross-bracing was added in the Ballroom on the second level to assist in the support of the deflecting light-weight wood roof frame. (10/23/13, HPTC)



Shear bracing added on the second level along the south wall of the Women's Locker Room adds to the stability of the under-structured addition. (10/23/13, HPTC)



Detailed supplemental framing and additional supports stabilized the East Boat Storage Area allowing access by the WCC membership. (11/12/13, HPTC)



View of Washington Canoe Club exterior in April 2013. Vented window and door covers are seen covering many of the window and door openings.

This condition assessment is conducted after the completion of the emergency stabilization (mothball) project. Many building features and components have been temporarily stabilized for a 1 to 5 year period and are currently in poor or fair condition as will be reported in this chapter. Maintenance of the temporary shoring, window covers and building exterior will be required throughout any prolonged mothball period.

## Site Visits

Ongoing field inspections and condition assessments were conducted at the Washington Canoe Club Building after the Phase 1 Emergency Stabilization of the building performed by the NPS. Specific visit dates by the HPTC architecture team were initiated in April 2013 for an orientation to the building. This was followed by a series of site visits in October, November and December 2013 to conduct fabric investigation, documentation and condition assessment inspections. During this time period seasonal weather was observed with occasion rain storms which assisted in the evaluation of the roof system.

Logistical assistance was provided by CHOH and WCC members.



Exterior excavations conducted by the HPTC crew as part of the project of the north elevation attempted to determine the extant foundation conditions. (11/04/13, HPTC)



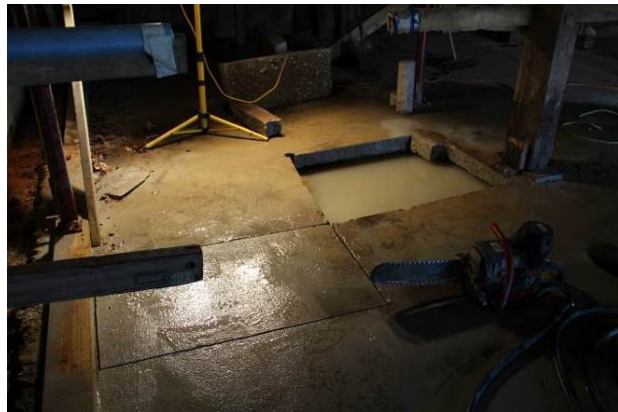
When machine excavation became problematic, hand excavation was attempted in order to uncover extent of concrete placements around base of building. (11/04/13, HPTC)



HPTC crew conducted numerous concrete core drilling to answer questions put forth by the structural engineer. (11/05/13, HPTC)



Preparations were made in the East Boat Storage Area to protect canoe club members' property prior to initiating a concrete slab core drill in this area as directed by the structural engineer. (11/05/13, HPTC)



Core drilling gave way to saw cutting of slab to open up larger areas to view slab thicknesses, fill material between slabs, and lower slab conditions. This work was carried out by HPTC Masonry Team as part of the HSAR team. (11/22/13, HPTC)



Roof observation and assessment was conducted in late December on an above average temperature day. (12/20/13, HPTC)



## Summary of the Findings

The **exterior** of the **Washington Canoe Club Building** achieves an Overall Quality Condition Rating of **"POOR"** and an overall Maintenance Deficiency Priority Rating categorized as **"Critical"**.

**The Overall Quality Condition Rating of POOR** given to the **exterior** indicates that the feature(s) are in need of immediate attention. This rating also indicates that routine maintenance is needed at a much higher level of effort to meet significant safety and legal requirements; cyclic maintenance should be scheduled for the current year and/ or a special repair or rehabilitation project should be requested consistent with the building owner's requirements, priorities, and long term management objectives.

**The Maintenance Deficiency Priority Rating of Critical** given to the **exterior** indicates that the building is in an advanced state of deterioration that, if not corrected within 1 year will result in the failure of the building, a threat to the health and/or safety of users if the ongoing deterioration is not corrected, and ongoing deterioration of adjacent or related materials and/or features as a result of the features deficiency.

The **interior of the Washington Canoe Club Building** achieves an Overall Quality Condition Rating of **"FAIR"** and an overall Maintenance Deficiency Priority Rating categorized as **"Serious"**.

**The Overall Quality Condition Rating of FAIR** given to the **interior** indicates that the building/ feature generally provides an adequate level of service to operations, but the building/ feature requires more than routine maintenance attention. This rating also indicates that cyclic maintenance or repair/rehabilitation work may be required in the near future.

**The Maintenance Deficiency Priority Rating of Serious** given to the **interior** indicates that some building components are in a deteriorated condition that if not corrected within 1 to 3 years will result in the failure of the feature and possibly adjacent or related materials. The building exterior envelope is in poor condition and is past its useful service life.

The following table provides an overview of the major building feature categories and their associated condition assessment ratings.

| <b>Summary of Condition Assessment Ratings (Major Headings)</b> |                       |         |                                       |                  |                      |  |  |
|---|-----------------------|---------|---------------------------------------|------------------|----------------------|--|--|
| UNIFORMAT II Outline Data                                       |                       |         |                                       |                  | Condition Assessment |  |  |
| Category  | Topic                 | Code    | Subtopic                              | Condition Rating | Deficiency Rating    |  |  |
| <b>A</b>  | <b>Substructure</b>   |         |                                       |                  |                      |  |  |
| A10   | Foundations           |         |                                       |                  |                      |  |  |
|   | A1010                 |         | Standard Foundations                  |                  |                      |  |  |
|   |                       | A1010-1 | Main Block                            | NR (Fair)        | (Serious)            |  |  |
|   |                       | A1010-2 | East Addition                         | NR (Fair)        | (Serious)            |  |  |
|   | A1030                 |         | Standard Slab On Grade                | FAIR             | Minor                |  |  |
|   |                       | A103006 | Foundation Drainage                   | POOR             | Serious              |  |  |
| <b>B</b>  | <b>Shell</b>          |         |                                       |                  |                      |  |  |
| B10   | Superstructure        |         |                                       |                  |                      |  |  |
|   | B1010                 |         | Floor Construction                    | FAIR             | Serious              |  |  |
|   |                       | B101002 | Structural Interior Walls             | FAIR             | Serious              |  |  |
|   |                       | B101004 | Balcony Construction                  | NR (Poor)        | (Serious)            |  |  |
|   | B1020                 |         | Roof Construction                     | POOR             | Critical             |  |  |
|   |                       | B102099 | Chimney Construction                  | POOR             | Critical             |  |  |
| B20   | Exterior Envelope     |         |                                       |                  |                      |  |  |
|   | B2010                 |         | Exterior Walls                        |                  |                      |  |  |
|   |                       | B201001 | Exterior Skin                         | POOR             | Serious              |  |  |
|   |                       | B201005 | Exterior Louvers & Screens            | FAIR             | Serious              |  |  |
|   |                       | B201007 | Balcony Walls & Handrails             | POOR             | Critical             |  |  |
|   |                       | B201008 | Exterior Soffits                      | FAIR             | Serious              |  |  |
|   | B2020                 |         | Exterior Windows                      | FAIR             | Serious              |  |  |
|   | B2030                 |         | Exterior Doors                        | FAIR             | Serious              |  |  |
| B30   | Roofing               |         |                                       |                  |                      |  |  |
|   | B3010                 |         | Roof Coverings                        |                  |                      |  |  |
|   |                       | B301001 | Roof Finishes - Metal                 | POOR             | Serious              |  |  |
|   |                       | B301001 | Roof Finishes – Roll Roof             | POOR             | Serious              |  |  |
|   |                       | B301004 | Flashing & Trim                       | POOR             | Serious              |  |  |
|   |                       | B301005 | Gutters & Downspouts                  | POOR             | Critical             |  |  |
| <b>C</b>  | <b>Interiors</b>      |         |                                       |                  |                      |  |  |
| C10   | Interior Construction |         |                                       |                  |                      |  |  |
|   | C1020                 |         | Interior Doors                        | FAIR             | Serious              |  |  |
|   | C1030                 |         | Fittings (architectural cabinet work) | FAIR             | Minor                |  |  |
| C20   | Stairs                |         |                                       |                  |                      |  |  |
|   | C2010                 |         | Stair Construction                    | POOR             | Critical             |  |  |
| C30   | Interior Finishes     |         |                                       |                  |                      |  |  |
|   | C3010                 |         | Wall Finishes                         | FAIR             | Minor                |  |  |
|   | C3020                 |         | Floor Finishes                        | FAIR             | Serious              |  |  |
|   | C3030                 |         | Ceiling Finishes                      | FAIR             | Serious              |  |  |
| <b>D</b>  | <b>Services</b>       |         |                                       |                  |                      |  |  |
| D20   | Plumbing              |         |                                       | NR               | NR                   |  |  |

|          |                         |         |                                   |      |          |
|----------|-------------------------|---------|-----------------------------------|------|----------|
| D30      | HVAC                    |         |                                   | NA   | NA       |
| D40      | Fire Protection Systems |         |                                   |      |          |
|          | D4010                   |         | Sprinklers                        | POOR | Critical |
|          | D4030                   |         | Fire Protection Specialties       |      |          |
|          |                         | D403001 | Fire Extinguishing Devices        | POOR | Critical |
|          | D4090                   |         | Other Fire Protection Specialties |      |          |
|          |                         | D4090-1 | Battery-Operated Smoke Detectors  | POOR | Critical |
| D50      | Electrical              |         |                                   | POOR | Serious  |
|          | D5010                   |         | Electrical Service & Distribution | NIR  | NIR      |
|          | D5020                   |         | Lighting and Branch Wiring        | NIR  | NIR      |
|          | D5030                   |         | Communications and Security       | NIR  | NIR      |
|          | D5090                   |         | Other Electrical Systems          |      |          |
|          |                         | D509002 | Emergency Lighting and Power      | POOR | Serious  |
|          |                         | D509004 | Lightning Protection              | POOR | Critical |
| <b>G</b> | <b>Building Site</b>    |         |                                   |      |          |
| G90      | Other Site Work         |         |                                   |      |          |
|          | G9087                   |         | Site Drainage                     | POOR | Serious  |

**NOTE:** In addition to the previously defined ratings (Chapter 3) HPTC has employed three (3) additional rating markers for this HSAR:

NR: Not Rated - the feature was not rated by the HPTC HSAR team as it was included in the scope of work for one of the contractor consultants.

NIR: Not Individually Rated – The feature(s) was rated as a total system; i.e., D50 Electrical. The individual features as derived from Uniformat Work Breakdown Structure: D5010 – Electrical Service & Distribution, D5020 – Lighting and Branch Wiring, and D5030 – Communications and Security were not rated because they were non-extant to the Washington Canoe Club building or the contractors did not single out those features in their assessment reports provided to the National Park Service. These items were not rated by the HPTC HSAR team.

NA: Not Applicable – building or system element is not extant as a component feature.

The canoe club building has remained largely unoccupied since 2009. The exterior envelope of the building has fallen into general disrepair due to the lack of routine maintenance and cyclical repairs during that time period. The light-weight frame of the primary structural system of the building is supported by a rather robust system of temporary supports added since 2009. These are mixed with many other temporary supplemental supports, which pre-exist the current emergency stabilization structure, as the building occupants had made in-house repairs during their many years of use.

The building's superstructure (B10) systems are now structurally stable, but all other building systems are in need of repair, additional structural support, and/ or possible total replacement. Most of the deficiencies can be addressed as part of an overall comprehensive rehabilitation or preservation project, followed afterwards with a cyclical maintenance program.

All new building services will eventually be required to return the building to good condition including: plumbing, domestic water supply, waste (sewer), roof water run-off (storm), electrical, gas, heating and cooling, lightning protection, life-safety-health (fire detection, security), and egress. These should be completed in a holistic design project approach with an architect and engineer. An overall code review should be planned as part of the recommended long-term rehabilitation planning process to upgrade all building systems in a holistic manner rather than a piecemeal approach. All systems should be integrated with the historic building fabric and sustainable design criteria should be developed.

Historic buildings often do not have the protection, detection or suppression systems needed to help them survive fire or up-to-date life/ safety or universal accessibility features expected in modern Class-A building stock. The most critical deficiencies for any building (even historic if used in a modern sense) are the ones related to those systems, and they will be included in the list of prioritized maintenance deficiencies. The canoe club is lacking in all of these basic protection and detection systems especially during the current stabilization phase as the utilities are all deficient and no protection system are extant.

See Chapter 3, Standards, Guidelines and Definitions for further clarification of the National park Service terminology used in this report.

The most critical maintenance deficiencies as documented in the Chapter 4 condition assessments include<sup>1</sup>:

- Deteriorated roof finishes and flashings;
- Missing roof drainage components;
- Lack of lightning protection system on the building;
- Unstable brick chimneys with failing mortar joints;
- Deteriorated and non-compliant exterior and interior stairs;
- Deterioration and paint failure on the exterior siding and woodwork;
- Lack of a centrally-wired fire detection and intrusion alarm system;
- Outdated and non-compliant electrical system;
- Lack of adequate foundation and site drainage.



Deteriorating existing metal roof finishes and flashings.

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<sup>1</sup> These will be presented in prioritized order at the beginning of Chapter 5, Recommended Treatments.



The brick chimneys are failing and lack adequate flashing.



Flashings at roof intersections are failing or non-existent.



The stairs at the east entrance to the building are unstable and non-compliant with building codes.



The stairs (ST01) in the northwest corner of the West Boat Storage Area (Room 101) are failing and unsafe.



Many of the exterior wood shingles are broken, cracked, or missing, and the paint finish is failing.



## Building Feature Master List

The Building Feature Master List Outline (Appendix B) is the overall guide used in the condition assessment of the structure. The category, topic, code and subcode nomenclature is derived from current industry standard condition assessment systems adopted by the NPS, which, in turn, utilize the format and structure of the *Uniformat* system used by many facility management industry leaders. HPTC has applied this system to the Washington Canoe Club Building.

Successful use of this system for this type, size, and age of historic structure has been demonstrated in the NPS. The American Society for Testing and Materials (ASTM) Standard E 2018-01, *The Standard Guide for Property Condition Assessments: Baseline Property Condition Assessment Process*<sup>2</sup> was also utilized to organize and implement this assessment.

Refer to Chapter 1 for a description of this methodology. The outline used for this project has been tailored to fit the building component features of the WCCB.



## Condition Assessment Reports

Immediately following this section are the individual building feature condition assessment reports in Chapter 4. They are organized according to the Building Feature Master List Outline as per Appendix B and not in prioritized order.

Prioritized recommended treatments that support *The Secretary of the Interior's Standards for the Treatment of Historic Properties* are found in Chapter 5.

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<sup>2</sup> ASTM E-2018-01, ASTM International, West Conshohocken, PA.

|  |                |  |  |
|--|----------------|--|--|
|  | <b>A10</b>     | <b>Foundations</b> – This system includes all work below the lowest finished floor level construction (usually slab-on-grade). |  |
|  |                | <b>A1010</b>   | <b>Standard Foundations</b> – Continuous footings, spread footings, grade beams, foundation walls, pile caps and column piers. |
| <p>The building sits on a series of concrete slabs and foundation stem walls, some cast-in-place (CIP) concrete (along the north wall with a short return at the west wall), and some in concrete masonry units (cement blocks) (CMU). Concrete masonry units were added at the north and west walls as the wood frame deteriorated, or as the exterior grade was raised, in order to keep the wood frame portion mostly above the exterior grade line adjacent to the building.</p> <p>HPTC assisted the structural engineer with fabric investigation for the structural assessment. The outcome of the fabric investigation is included in <i>Chapter 2, Fabric Investigation Outcome and Documentation</i>. Please refer to that section of the report for the following building information.</p> <p>HPTC has also reviewed the most current version of the <i>Structural Investigation of the Washington Canoe Club, Condition Assessment Report</i> (April 2014 – 100% Submission) and has included highlights of that report (with citations) in the following Condition Assessment table.</p> |                |  |  |
|  | <b>A1010-1</b> | <b>Main Block Foundations</b> – includes Phase 1 and 2 construction, north elevation retaining wall, etc.                      |  |
| <p>The exact nature of the building foundation is not certain. Refer to <i>Chapter 2, Fabric Investigation Outcome and Documentation</i> for descriptive text and images. The <i>Structural Investigation of the Washington Canoe Club, Condition Assessment Report</i> indicates, “we did not observe signs of foundation distress during our survey, therefore further destructive investigation should not be necessary.” (Pg.31)</p>   |                |  |  |
|   |                |    |  |
| <p>View of NW corner of ground floor interior with combination CIP and CMU foundation wall supporting wood frame exterior walls.</p>   |                | <p>View of interior NE corner with CIP concrete wall surmounted by later cement block wall supporting north wall frame.</p>    |  |

|                               |                               |
|-------------------------------|-------------------------------|
| <b>A1010-1</b>                | <b>Main Block Foundations</b> |
| Qualitative Condition Rating  | Not Rated (FAIR)              |
| Maintenance Deficiency Rating | Not Rated (Serious)           |

|  |                |   |
|--|----------------|---|
|  | <b>A1010-2</b> | <b>East Addition Foundation</b> – includes foundations which support the Women’s Locker Room and east Boat Storage Area spaces. |
|--|----------------|---|

Similar to 1010-1.



View of north west corner of east addition area showing CIP at base of wall.



View of north wall in east addition area showing CIP surmounted by CM and north exterior wood frame wall.

|                               |                                 |
|-------------------------------|---------------------------------|
| <b>A1010-2</b>                | <b>East Addition Foundation</b> |
| Qualitative Condition Rating  | Not Rated (FAIR)                |
| Maintenance Deficiency Rating | Not Rated (Serious)             |

|   |                |                            |
|---|----------------|----------------------------|
|   | <b>A1010-3</b> | <b>Chimney Foundations</b> |
| Chimney foundations were not uncovered; likely they are brick load bearing wall structures. See building features numbers B102099-1 and -2 for additional information re: the masonry chimney structures. |                |                            |



|                               |                            |
|-------------------------------|----------------------------|
| <b>A1010-3</b>                | <b>Chimney Foundations</b> |
| Qualitative Condition Rating  | Not Rated                  |
| Maintenance Deficiency Rating | Not Rated                  |

|  |                             |                             |
|--|-----------------------------|-----------------------------|
|  | <b>A1010-4</b>              | <b>Historic Foundations</b> |
| <p>The exact nature of the original (historic) building foundations was not discovered. An evolution of the support structure is reviewed in Chapter 2 of this HSAR.</p> |                             |                             |
| <b>A1010-4</b>   | <b>Historic Foundations</b> |                             |
| Qualitative Condition Rating   | Not Rated                   |                             |
| Maintenance Deficiency Rating  | Not Rated                   |                             |

|  |              |  |
|--|--------------|--|
|  | <b>A1030</b> | <b>Standard Slab on Grade</b> – A slab poured on earth, whether on undisturbed or fill soil. |
| <p>See <i>Structural Investigation of the Washington Canoe Club, Condition Assessment Report</i>, pages 21 – 24, for descriptive text.</p> <p>Also, <i>Chapter 2, Fabric Investigation Outcome and Documentation</i>, Tasks numbered 2b, 6, 6a, 12, 12a, 12band 30 illustrate the nature and extent of fabric investigation and outcome.</p> |              |  |





|                               |                |                              |
|-------------------------------|----------------|------------------------------|
|                               | <b>A1030-1</b> | <b>Main Block Floor Slab</b> |
| Qualitative Condition Rating  | FAIR           |                              |
| Maintenance Deficiency Rating | Minor          |                              |

|                               |                |                                 |
|-------------------------------|----------------|---------------------------------|
|                               | <b>A1030-2</b> | <b>East Addition Floor Slab</b> |
| Qualitative Condition Rating  | FAIR           |                                 |
| Maintenance Deficiency Rating | Minor          |                                 |

|  |   |                                     |
|--|---|-------------------------------------|
|  | <b>A103006</b>  | <b>Foundation Drainage (System)</b> |
| <p>Non-extant system. A series of channels have been cut into the floor slab to allow water to drain from the north retaining wall, through the building, across the concrete apron to the south of the building, and into the Potomac River. See building feature G9087 – Site Drainage for additional information.</p> |   |                                     |
|   |   |                                     |
| <p>View of interior NW corner of building at ground level with drainage troughs cut into floor slab against north (rear) wall and west (left) wall of building. (11/05/13, HPTC)</p>   | <p>Excavation along north elevation reveals lack of waterproofing and drainage system at this foundation area. (11/07/13, HPTC)</p> |                                     |
| <p><b>A103006</b></p>  | <p><b>Foundation Drainage</b></p>   |                                     |
| <p>Qualitative Condition Rating</p>  | <p>POOR</p>   |                                     |
| <p>Maintenance Deficiency Rating</p>   | <p>Serious</p>  |                                     |

End of Chapter 4, Part A - Foundations.

|   |              |                        |   |
|---|--------------|------------------------|---|
| <b>B</b>  | <b>SHELL</b> |                        |   |
|   | <b>B10</b>   | <b>Superstructure</b>  |   |
| <p>The Washington Canoe Club building was the subject of a series of structural assessments culminating in the report, <i>Structural Investigation of the Washington Canoe Club Condition Assessment Report</i>. This report was prepared by The Protection Engineering Group and McMullen and Associates Consulting Engineers through a contract with the National Capital Region of the National Park Service. At the time of the writing of this draft of the HSAR the 90% Draft (dated March 2014) is the available document. The final Condition Assessment Report will be appended to the HSAR. Information in this section of the HSAR will reference both the Condition Assessment Report and other sections of the HSAR so as not to repeat information previously provided elsewhere.</p>         |              |                        |   |
|   |              | <b>B1010</b>           | <b>Floor Construction<br/>(Wooden Floor Frame System)</b>       |
| <p>The building sits on a series of concrete slabs and foundation stem walls, some cast-in-place concrete and some in masonry concrete units (cement blocks); see Section A of the condition assessment for foundation information. The wood -frame portion of the building starts with the frame of the first floor above grade. Some of the exterior walls span both building levels; others are contained within one level, which will be identified in the appropriate condition assessment section.</p> <p>Note: Nomenclature established for the WCC is based on the HABS documentation drawings [DC-876] and the Building Nomenclature table in Chapter 2 of this report. The lower level is called the Ground Floor and the upper level is called the First Floor. There is not an attic level.</p> |              |                        |   |
|   |              | <b>B101001-<br/>2a</b> | <b>Second-Floor Structural Frame<br/>(Main Block – Phase 1)</b> |
| <p>Description provided in <i>Structural Investigation of the Washington Canoe Club Condition Assessment Report, III. Summary of Framing Conditions, B., Floor Framing</i> (pgs. 8-11). In part VII. Summary of Analysis and Recommendations, Part B. Floor Framing, it is stated, "Floor framing is generally inadequate to support required loads." Given the building structure is has been stabilized at the time of this HSAR, this analysis equates to a Qualitative Condition Rating of FAIR and a Maintenance Deficiency Rating of Serious.</p> <p>Additionally, fabric investigation, as documented in Fabric Investigation Outcome and Documentation (Chapter 2 of the HSAR), included numerous tasks completed by HPTC.</p>  |              |                        |   |



|   |   |
|---|---|
|    |   |
| <p>Example of supplemental framing inserted to support floor frame of Ballroom area in West Boat Storage Area.</p>                    | <p>Example of supplemental framing inserted to support floor frame of Ballroom area in West Boat Storage Area.</p>                    |
| <p><b>B101001-2a</b></p>  | <p><b>Second-Floor Structural Frame (Main Block – Phase 1)</b></p>  |
| <p>Qualitative Condition Rating</p>   | <p>FAIR</p>   |
| <p>Maintenance Deficiency Rating</p>  | <p>Serious</p>  |
| <p><b>B101001-2b</b></p>  | <p><b>Second-Floor Structural Frame (Main Block – Phase 2)</b></p>  |
| <p>Qualitative Condition Rating</p>   | <p>FAIR</p>   |
| <p>Maintenance Deficiency Rating</p>  | <p>Serious</p>  |
| <p><b>B101001-2c</b></p>  | <p><b>Second-Floor Structural Frame (Women’s Locker Room Addition)</b></p>  |
|    |   |
| <p>Example of supplemental framing inserted to support floor frame of Women’s Locker Room Addition in the East Boat Storage Area.</p> | <p>Example of supplemental framing inserted to support floor frame of Women’s Locker Room Addition in the East Boat Storage Area.</p> |

|                               |   |
|-------------------------------|---|
| <b>B101001-2c</b>             | <b>Second-Floor Structural Frame<br/>(Women’s Locker Room Addition)</b> |
| Qualitative Condition Rating  | FAIR  |
| Maintenance Deficiency Rating | Serious   |

|                               |  |
|-------------------------------|--|
| <b>B101001-2d</b>             | <b>Second-Floor Structural Frame<br/>(Workshop Addition)</b> |
| Qualitative Condition Rating  | FAIR   |
| Maintenance Deficiency Rating | Serious  |



|  |                |                                  |
|--|----------------|----------------------------------|
|  | <b>B101002</b> | <b>Structural Interior Walls</b> |
| <p>Description provided in <i>Structural Investigation of the Washington Canoe Club Condition Assessment Report, III. Summary of Framing Conditions, C., Walls</i> (pgs. 10-14). In part VII. Summary of Analysis and Recommendations, Part C. Walls, it is stated, “Most of the exterior walls, as well as some interior walls, have substantial rot which should be repaired or replaced. In addition, the second (1<sup>st</sup>) floor (exterior) walls should be brought back to plumb and secured to the floor framing...” Given the building structure has been stabilized at the time of this HSAR, this analysis equates to a Qualitative Condition Rating of FAIR and a Maintenance Deficiency Rating of Serious.</p> <p>Additionally, fabric investigation, as documented in Fabric Investigation Outcome and Documentation (Chapter 2 of the HSAR), included numerous tasks completed by HPTC.</p> |                |                                  |



|   |   |  |
|---|---|--|
|   | <b>B101002-1a</b>   | <b>First-Floor Interior Walls<br/>(Main Block – Phase 1)</b> |
|  <p>View of center section of west interior side of original end wall of the Phase 1 construction sequence. This wall separates the West Boat Storage Area (Room 101) from the Hall (Room 104) on the first-floor level.</p> |  <p>View of dividing wall and doorway (Door 108) between the West Boat Storage Area (Room 101) and the Hall (Room 104). This wall was the original east exterior wall of Phase 1 construction.</p> |  |
| <b>B101002-1a</b>   | <b>First-Floor Interior Walls<br/>(Main Block – Phase 1)</b>  |  |
| Qualitative Condition Rating  | FAIR  |  |
| Maintenance Deficiency Rating   | Serious   |  |

|  |   |  |
|--|---|--|
|  | <b>B101002-1b</b>   | <b>First-Floor Interior Walls<br/>(Main Block – Phase 2)</b> |
|  <p>View of interior wall in Phase 2, separating Hallway (Room 104) from the Grill Room (Room 105). It is traditional early 20<sup>th</sup> C. wood construction. The wall cavity was filled with silt from periodic inundation during Potomac River floods.</p> |  <p>View of original end wall of Phase 2, separating original building from east addition. Wall is primarily wood frame and rests on concrete floor slab. No investigation was conducted on this wall.</p> |  |
| <b>B101002-1b</b>  | <b>First-Floor Interior Walls<br/>(Main Block – Phase 2)</b>  |  |
| Qualitative Condition Rating   | FAIR  |  |
| Maintenance Deficiency Rating  | Serious   |  |

|  |   |   |
|--|---|---|
|  | <b>B101002-2a</b>   | <b>Second-Floor Interior Walls<br/>(Main Block – Phase 1)</b> |
| <p>Wall frames were not uncovered in this area (Ballroom and Hallway) due to character-defining nature of interior finishes. Assessment is based on field observations. The wall between the Men’s Locker Room/Toilet and the Ballroom was not investigated for similar reasons.</p> |   |   |
| <b>B101002-2a</b>  | <b>Second-Floor Interior Walls<br/>(Main Block – Phase 1)</b> |   |
| Qualitative Condition Rating   | FAIR  |   |
| Maintenance Deficiency Rating  | Serious   |   |

|  |                   |   |
|--|-------------------|---|
|  | <b>B101002-2b</b> | <b>Second-Floor Interior Walls<br/>(Main Block – Phase 2)</b>   |
| <p>Wall frames were not uncovered in this area (Board Room, Hall, Toilets and Lounges) due to character-defining nature of interior finishes. Assessment is based on field observations. Fabric Investigation Task 26 focused on revealing the structure of the original Phase 2 exterior wall (east elevation) which now separates the Women’s Toilet Room from the hallway constructed sometime afterward.</p> |                   |   |
|    |                   |                    |
| <p>Simple early 20<sup>th</sup> C wood frame construction is revealed by removal of interior T&amp;G vertical wood strip wall covering. Top of wall plate seen in photo with studs and cross-bracing (fire-block). (11/12/13, HPTC)</p>  |                   | <p>Bottom of wall plate seen in photo with studs and cross-bracing (fire-block). (11/12/13, HPTC)</p> |
| <b>B101002-2b</b>  |                   | <b>Second-Floor Interior Walls<br/>(Main Block – Phase 2)</b>   |
| Qualitative Condition Rating   |                   | FAIR  |
| Maintenance Deficiency Rating  |                   | Serious   |

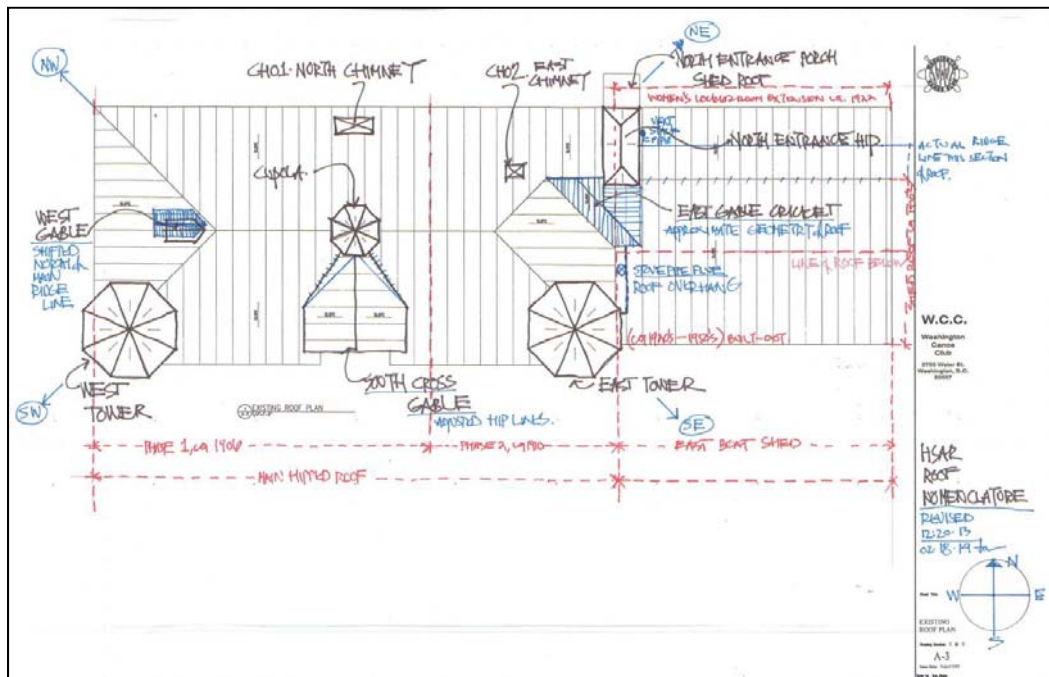
|  |  |  |
|--|--|--|
|  | <b>B101002-2c</b>  | <b>Second-Floor Interior Walls<br/>(Women’s Locker Room Addition)</b>  |
|   |    | <p>Bracing of former exterior (now interior) south wall of Women’s Locker Room (Room 210).</p> <p>Interior view of Women’s Locker Room wall bracing.</p>   |
| <b>B101002-2c</b>  | <b>Second-Floor Interior Walls<br/>(Women’s Locker Room Addition)</b>                |  |
| Qualitative Condition Rating   | FAIR   |  |
| Maintenance Deficiency Rating  | Serious  |  |
| <b>B101004</b>   | <b>Balcony Construction</b>  |  |
| <p>This part of the building structure does not seem to have been individually rated by the contractor structural engineer in the Structural Condition Assessment Report. There is, however, a noticeable sag in the cantilevered structure (even though it is partially supported by steel beams from below).</p> |  |  |
|   |  | <p>Cantilevered balcony floor frame is supported by steel beams projecting out from the interior West Boat Storage Area.</p> <p>Underside of balcony showing 2x framing and cantilevered steel I-beam in background.</p> |
| <b>B101004</b>   | <b>Balcony Construction</b>  |  |
| Qualitative Condition Rating   | Not Rated (Poor)   |  |
| Maintenance Deficiency Rating  | Not Rated (Serious)  |  |



|  |  |              |  |
|--|--|--------------|--|
|  |  | <b>B1020</b> | <b>Roof Construction – (Wood Roof Frame)</b> |
|--|--|--------------|--|

The roof frame consists of several discrete construction assemblies; the hipped roof over the Ballroom and most of the Phase 1 and 2 areas of the building, smaller hipped, gable and shed style roof frames are used for the other sections of the building. A full description is provided under building feature component B30 Roofing. Roof plans are available in the *Structural Investigation* report. A Roof Nomenclature drawing is included in Chapter 2 of this HSAR and appears below in reduced form.

A description of the roof frame condition is provided in the *Structural Investigation of the Washington Canoe Club Condition Assessment Report, III. Summary of Framing Conditions, A., Roof Framing* (pgs. 2-8). In *Part VII. Summary of Analysis and Recommendations, Part A. Roof Framing*, it is stated, "Roof framing is generally inadequate to support the required snow loads." Even though the building structure has been stabilized at the time of this HSAR, the roof structure is generally thought to be unstable in the event of an applied external load. This analysis equates to a Qualitative Condition Rating of POOR and a Maintenance Deficiency Rating of Critical.

Additionally, fabric investigation, as documented in Fabric Investigation Outcome and Documentation (Chapter 4 of the HSAR), included numerous tasks completed by HPTC.



|  |                   |  |
|--|-------------------|--|
|  | <b>B102001-1a</b> | <b>Main Block Hipped Roof Frame</b>  |
|   |                   |                                        |
| <p>View of Ballroom (Room 201) with interior supplemental structure for the hipped roof frame. 2x4 framing was added as part of the NPS stabilization in 2012.</p> |                   | <p>View of attic frame over the Ballroom, with supplemental beams and posts which were added by the WCC in the past.</p> |

|                               |                                     |
|-------------------------------|-------------------------------------|
| <b>B102001-1a</b>             | <b>Main Block Hipped Roof Frame</b> |
| Qualitative Condition Rating  | POOR                                |
| Maintenance Deficiency Rating | Critical                            |

|                               |                                     |
|-------------------------------|-------------------------------------|
| <b>B102001-1b</b>             | <b>South Cross Gable Roof Frame</b> |
| Qualitative Condition Rating  | Not Individually Rated (Poor)       |
| Maintenance Deficiency Rating | Not Individually Rated (Critical)   |

**NOTE: Sections of the roof frame not individually rated (NIR) in the Structural Investigation have been grouped together in this section of the HSAR according to proximity and the roof plan. Assignations made in (parenthesis) (Poor) (Critical) indicate the rating provided to the overall section of the roof of which they are structurally related.**

|                               |                                   |
|-------------------------------|-----------------------------------|
| <b>B102001-1c</b>             | <b>Cupola Roof Frame</b>          |
| Qualitative Condition Rating  | Not Individually Rated (Poor)     |
| Maintenance Deficiency Rating | Not Individually Rated (Critical) |

|                               |                                   |
|-------------------------------|-----------------------------------|
| <b>B1020-1d</b>               | <b>West Tower Roof Frame</b>      |
| Qualitative Condition Rating  | Not Individually Rated (Poor)     |
| Maintenance Deficiency Rating | Not Individually Rated (Critical) |

|                               |                                   |
|-------------------------------|-----------------------------------|
| <b>B1020-1e</b>               | <b>East Tower Roof Frame</b>      |
| Qualitative Condition Rating  | Not Individually Rated (Poor)     |
| Maintenance Deficiency Rating | Not Individually Rated (Critical) |

|  |                   |   |
|--|-------------------|---|
|  | <b>B102001-2a</b> | <b>Women’s Locker Room Gable Roof Frame</b> |
|--|-------------------|---|





View of underside of simple gable truss roof frame at the Women’s Locker Room. The locker room was constructed in two phases and minor variations occur between the two sections of roof frame.



East gable end of Women’s Locker Room roof frame projects beyond wall line of building. Original rafter tails, rake boards and roof sheathing can still be seen.

|                               |   |
|-------------------------------|---|
| <b>B102001-2a</b>             | <b>Women’s Locker Room Gable Roof Frame</b> |
| Qualitative Condition Rating  | FAIR  |
| Maintenance Deficiency Rating | Serious                                     |

|   |                   |   |
|---|-------------------|---|
|   | <b>B102001-2b</b> | <b>Workshop Shed Roof Frame</b>   |
|  <p>Interior view of work room, looking towards east, showing roof frame with central row of vertical supports. This area was originally an exterior open-roofed deck.</p> |                   |  <p>Interior view of work room, looking towards east, showing southern side of roof frame and exterior wall supports along the river elevation of the building.</p> |
| <b>B102001-2b</b>   |                   | <b>Workshop Shed Roof Frame</b>   |
| Qualitative Condition Rating  |                   | POOR  |
| Maintenance Deficiency Rating   |                   | Critical  |
| <b>B102001-3</b>  |                   | <b>North Entry Tower Hipped Roof Frame</b>  |
| Qualitative Condition Rating  |                   | Not Individually Rated (Fair)   |
| Maintenance Deficiency Rating   |                   | Not Individually Rated (Serious)  |
| <b>B102001-4</b>  |                   | <b>North Entrance Porch Roof Frame</b>  |
| Qualitative Condition Rating  |                   | Not Individually Rated (Fair)   |
| Maintenance Deficiency Rating   |                   | Not Individually Rated (Serious)  |
| <b>B102001-5</b>  |                   | <b>East Gable Cricket Frame</b>   |
| Qualitative Condition Rating  |                   | Not Individually Rated (Poor)   |
| Maintenance Deficiency Rating   |                   | Not Individually Rated (Serious)  |

End of Chapter 4, Part B10 – Building Shell.



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|  |  |  |                |   |
|--|--|--|----------------|---|
|  |  |  | <b>B102099</b> | <b>Other Roof Construction<br/>(Chimneys)</b> |
|--|--|--|----------------|---|










View of north slope of main house hipped roof showing relative positions of two chimneys. The north chimney (CH01) services the ballroom fireplace and exhibits a brick base in the lower boat storage room of the main house area. The east chimney (CH02) services the kitchen area and may have provided a flue for the former heating system.

Both chimneys are in poor condition with critical maintenance deficiencies above the roof line. Where visible, the interior condition of the brick work appears to be in fair condition. The condition of the flues is unknown but likely to be poor since both chimneys are open to the weather.

|                                |   |
|--------------------------------|---|
| <b>B102099</b>                 | <b>Other Roof Construction<br/>(Chimneys)</b> |
| Qualitative Condition Rating:  | POOR  |
| Maintenance Deficiency Rating: | Critical                                      |

|  |  |  |  |  |
|--|--|--|--|--|
|  |  |  | <p><b>B102099-1</b></p>  | <p><b>North Chimney (CH01)-<br/>Ballroom Fireplace</b></p> |
|  <p>South elevation, top of chimney. Note deterioration of brickwork, eroded chimney top and metal flue cover.</p>  |  |  |  <p>South and west elevations of chimney and flashing. Note open mortar joints and general erosion of mortar. Chimney brick is laid in common (running) bond with corbeled course near the top.</p> |  |
|  <p>South and east view of chimney in poor condition; loss of chimney brickwork corbel features, open flues with no cover. Area in circle shows large loss of mortar between joints.</p> |  |  |  |  |

|   |  |
|---|--|
|  <p>Base of chimney on first floor with storage cabinet built into the cavity of base. Note stove pipe hole at upper left (arrow).</p> |  <p>View of fireplace in Ballroom (white paint is not a CDF) with cracking visible at the base on either side of the firebox opening (obscured in this photo on left by wood brace).</p> |
|  <p>Unpainted side elevation of brick chimney in Ballroom (Room 201). Brick is laid in common (running) bond.</p>                     |  <p>Base of fireplace with displacement and settlement of brickwork near floor (arrow).</p>   |
| <p><b>B102099-1</b></p>   | <p><b>North Chimney (CH01)-<br/>Ballroom Fireplace</b></p>   |
| <p>Qualitative Condition Rating:</p>  | <p>POOR</p>  |
| <p>Maintenance Deficiency Rating:</p>   | <p>Critical</p>  |

| B102099-2   | East Chimney (CH02) - Kitchen   |
|---|---|
|  <p>View of south elevation (upslope) of east chimney. Note line of non-extant original base flashing and extreme parge-like application of mortar to cover brickwork.</p> |  <p>Note extreme displacement of bricks at top of double-flue chimney and erosion of mortar cap.</p>   |
|  <p>North elevation of chimney with brick laid in common (running) bond.</p>  |  <p>North and east elevations of chimney in poor condition without chimney cap. Adjacent cast iron pipe (arrow) is a vent stack likely servicing the kitchen and first floor men's and women's restrooms.</p> |

|  |   |
|--|---|
|  <p>Interior view of east chimney in first floor Storage Room (Room 102). The brick is laid in common (running) bond.</p> |  <p>The east chimney passes through the Women's Lounge (Room 206) on the second floor. The chimney is concealed by vertical T&amp;G siding in the corner behind the water heater.</p> |
| <p><b>B102099-2</b></p>  | <p><b>East Chimney (CH02) - Kitchen</b></p>   |
| <p>Qualitative Condition Rating:</p>   | <p>POOR</p>   |
| <p>Maintenance Deficiency Rating:</p>  | <p>Critical</p>   |

End of Chapter 4, Part B1020 – Chimneys.

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|  |              |  |  |
|--|--------------|--|--|
|  | <b>B20</b>   | <b>EXTERIOR ENCLOSURE</b> – Exterior facing including all vertical and horizontal exterior closures. |  |
|  | <b>B2010</b> | <b>Exterior Walls</b>  | All materials associated with exterior wall construction, including soffits. |
|  |              | <b>B201001</b>   | <b>Exterior Skin</b>   |

The exterior wall surface of the building consists of painted wood shingle siding that covers all elevations of the building. The shingles are random widths with approximately 8 inches of exposure. The siding was originally painted or stained dark red with white trim, but is currently painted green with white trim.

The shingle siding varies in condition and age around the perimeter of the building and surrounding various features. Generally, the siding is in poor condition with cracked, warped, and missing shingles and faded or failing paint finish. Some areas have newer, replacement shingles in good condition.



This image of a postcard shows the canoe club building prior to construction of the east addition which was built in ca. 1922. Note the red siding color.





Overall current view of the south elevation of the canoe club building with green siding and white trim.



South elevation of the main block.



Painted wood shingle siding on the west elevation.



Detail of shingle siding with cracked and broken shingles and failing paint finish.



Weathered shingles on the west elevation of the west tower.



Wood shingle siding on the north elevation.



Shingle siding on the northwest elevation of the north tower.



Shingle siding on the northeast elevation of the north tower.







The shingle siding on the base of the cupola matches the siding on the perimeter of the building.




The exterior siding on the south elevation of the Women’s Locker Room (Room 210) is still visible from inside the Workshop (Room 211).

|                                |                      |
|--------------------------------|----------------------|
| <b>B201001</b>                 | <b>Exterior Skin</b> |
| Qualitative Condition Rating:  | POOR                 |
| Maintenance Deficiency Rating: | Serious              |

| <b>B201005</b>  |                  | <b>Exterior Louvers &amp; Screens</b>   |  |
|---|------------------|---|--|
|   | <b>B201005-1</b> | <b>Cupola Louver Panels</b>   |  |
| <p>The roof cupola provides passive ventilation to the attic space and Ballroom areas of the building through the updraft or “chimney effect” method. The cupola is a prominent feature of the roof being eight-sided with a shingled base, white-painted louver panels and a conical roof topped with a pinnacle.</p> <p>The louver panels exhibit UV deterioration to the wooden members an, loose joints, failing paint and poor flashing.</p> |                  |   |  |
|    |                  |                   |  |
| <p>Overall view of tripartite roof cupola from the east elevation.</p>  |                  | <p>Detail of wood louver panels, note deteriorated louver slats towards bottom range of panels.</p> |  |
| <p>Qualitative Condition Rating:</p>  |                  | <p>FAIR</p>   |  |
| <p>Maintenance Deficiency Rating:</p>   |                  | <p>Serious</p>  |  |

|  |  |                                 |
|--|--|---------------------------------|
|  | <b>B201005-2</b>   | <b>Mothball Exterior Panels</b> |
| <p>As part of the NPS stabilization/ mothball treatment of the building the window and door openings were covered on the exterior by slatted plywood panels between 2010 and 2012. These were designed to protect the windows and doors (left in-situ) but provide passive ventilation to the interior of the structure during the stabilization period; they are screened on the interior and fastened to the building from the exterior.</p> |  |                                 |
|  <p>Interior view of Grill Room with panels and windows in open position.</p>   |  <p>Exterior view of Grill Room with painted mothball panels attached.</p> |                                 |
| <p>Qualitative Condition Rating:</p>   |  | <p>GOOD</p>                     |
| <p>Maintenance Deficiency Rating:</p>  |  | <p>Minor</p>                    |

|  |  |  | <b>B201007</b> | <b>Balcony Walls &amp; Handrails</b> |
|--|--|--|----------------|--------------------------------------|
| <p>The walls of the Balcony (Room 212) on the south elevation consist of painted wood shingle siding similar to the other elevations of the building. The siding on the west and center sections of the balcony is in particularly poor condition with many warped, cracked, and broken shingles; water penetrates the core of the structure and may be causing accelerated deterioration of the support structure. The siding on the eastern section of the balcony appears to be newer and is in fair to good condition.</p> |  |  |                |                                      |
|  <p>The siding on the west and center section of the Balcony (Room 212) is in poor condition.</p>   |  |  |                |                                      |





The shingle siding on the eastern section of the balcony (*arrows*) is newer and in good condition.



|                                |                                      |
|--------------------------------|--------------------------------------|
| <b>B201007</b>                 | <b>Balcony Walls &amp; Handrails</b> |
| Qualitative Condition Rating:  | POOR                                 |
| Maintenance Deficiency Rating: | Critical                             |



|  |  |                |                         |
|--|--|----------------|-------------------------|
|  |  | <b>B201008</b> | <b>Exterior Soffits</b> |
|--|--|----------------|-------------------------|





The south elevation (principal façade) of the Washington Canoe Club Building features a complex roof with many overhanging and recessed soffit areas including: the overhang of the balcony roofs (part of the main hipped roof), the east and west tower and cupola overhanging roofs and the overhanging eaves of the other roof systems. This is a feature of the American Shingle Style as it reinforces the horizontality of the building on the landscape. The overhang at the balcony was extended using supplemental rafters to protect the balcony deck from the weather. The recessed arch feature in the central gable is not considered a soffit. This feature is generally in fair condition requiring attention within one to three years. There are many localized areas with deteriorated base materials, leaking flashings, unpainted or paint in poor condition.

|                               |                                   |
|-------------------------------|-----------------------------------|
| <b>B201008</b>                | <b>Exterior Soffits (General)</b> |
| Qualitative Condition Rating  | Overall: FAIR                     |
| Maintenance Deficiency Rating | Overall: Serious                  |

|   |  |                  |   |
|---|--|------------------|---|
|   |  | <b>B201008-1</b> | <b>Main Hipped Roof Soffit</b>  |
|    |  |                  |   |
| <p>Typical main hipped roof overhanging soffit with white painted (or unpainted) fascia board and green painted underside of roof frame system. There are many undulations in the roof edge/soffit suggesting differential settlement of the building and shifting of the roof frame.</p> |  |                  | <p>Detail of soffit as seen from south balcony. Soffit consists of underside of roof construction with exposed original rafter tails, rafter tail extensions, and roof sheathing boards or later plywood replacements and fascia board.</p> |
| <b>B201008-1</b>  |  |                  | <b>Main Hipped Roof Soffit</b>  |
| Qualitative Condition Rating  |  |                  | FAIR  |
| Maintenance Deficiency Rating   |  |                  | Serious   |

|  |  |                  |  |
|--|--|------------------|--|
|  |  | <b>B201008-2</b> | <b>Cupola Roof Soffit</b>  |
|   |  |                  |    |
| <p>Underside of roof shows exposed rafter tails and unpainted replacement roof deck plywood sheathing (poor condition) with deteriorated roof edges.</p> |  |                  | <p>Typical deteriorated condition of cupola roof and soffit with shingle band surmounting louvered panels, exposed rafter tails and unpainted roof sheathing at leading edges.</p> |
| <b>B201008-2</b>   |  |                  | <b>Cupola Roof Soffit</b>  |
| Qualitative Condition Rating   |  |                  | POOR   |
| Maintenance Deficiency Rating  |  |                  | Serious  |

|   | <b>B201008-3</b>              | <b>West Tower Roof Soffit</b> |
|---|-------------------------------|-------------------------------|
|   |                               |                               |
| <p>Typical of other soffit details the roof sheathing is carried over the wall line of the building to create the overhanging soffit which is supported on projecting rafter tails (extensions of rafters in most cases, not supplemental or false rafter tails). Original roof sheathing is dimensional planking; replacement sheathing typically unpainted plywood. Applied roof edge/ drip edge has not been maintained; water may enter the roof system at this point and cause hidden damage to wall and roof structures..</p> |                               |                               |
| <b>B201008-3</b>  | <b>West Tower Roof Soffit</b> |                               |
| Qualitative Condition Rating  | POOR                          |                               |
| Maintenance Deficiency Rating   | Serious                       |                               |

|   |  |                  |                               |
|---|--|------------------|-------------------------------|
|   |  | <b>B201008-4</b> | <b>East Tower Roof Soffit</b> |
|  <p>The construction conditions and detailing of the east tower is similar to the west tower. Most materials are painted, not deteriorated and generally keeping water out of the building.</p> |  |                  |                               |
| <b>B201008-4</b>  |  |                  | <b>East Tower Roof Soffit</b> |
| Qualitative Condition Rating  |  |                  | FAIR                          |
| Maintenance Deficiency Rating   |  |                  | Serious                       |

|   |  |  |  |
|---|--|--|--|
|   |  | <b>B201008-5</b>   | <b>Women’s Locker Room<br/>Gable Roof Soffit</b> |
|  <p>Northeast corner of WCCB showing the gable roof of the Women’s Locker Room structure and the overlapping shed roof over Workshop in the east addition. In the distance is the North Tower and Men’s Locker Room beyond to the northwest corner. The overhanging roof edge is a prominent visual feature and is character-defining for the shingle style. General materials degradation along this line of the roof edge indicate overall poor condition.</p> |  |  <p>Undulating roof edge with exposed rafter tails and exposed roof sheathing. North elevation of Women’s Locker Room has several structural issues which creates a wavy roof edge.</p> |  |
| <b>B201008-5</b>  |  | <b>Women’s Locker Room<br/>Gable Roof Soffit</b>   |  |
| Qualitative Condition Rating  |  | POOR   |  |
| Maintenance Deficiency Rating   |  | Serious  |  |

|  |  |                  |  |
|--|--|------------------|--|
|  |  | <b>B201008-6</b> | <b>East Boat Storage Area<br/>Shed Roof Soffit</b> |
|--|--|------------------|--|



This roof overhangs the exterior walls on the south and east elevations. It is supported by the lightweight roof frame and plywood roof deck. There is a vertical fascia board on both elevations. Materials in generally fair condition.



View from bike trail of the northeast corner showing the overlapping roofs of the Women's Locker Room and the Workshop.



Detail of roof overhang on Workshop (1) and gable end of Women's Locker Room (2).



South elevation of EBSA with recessed south elevation and triple paired awning windows into boat work room area.



Southeast corner of EBSA with overhanging roof soffit.



Detail of underside of soffit with roof frame exposed.

**B201008-6**

**East Boat Storage Area  
Shed Roof Soffit**



Qualitative Condition Rating

FAIR

Maintenance Deficiency Rating

Serious



|  |  |  |                                       |
|--|--|--|---------------------------------------|
|  |  | <b>B201008-7</b>   | <b>North Tower Hipped Roof Soffit</b> |
|   |  |                                  |                                       |
| <p>Northwest corner of hipped roof soffit consisting of typical exposed roof frame in generally poor (deteriorated) condition.</p> |  | <p>North elevation with underside roof features exposed. Note unfinished plywood repair at the west elevation.</p> |                                       |
| <b>B201008-7</b>   |  | <b>North Tower Hipped Roof Soffit</b>  |                                       |
| Qualitative Condition Rating   |  | POOR   |                                       |
| Maintenance Deficiency Rating  |  | Critical   |                                       |

| <b>Window Schedule</b>       |  |              |                      |                 |                 |                  |
|------------------------------|--|--------------|----------------------|-----------------|-----------------|------------------|
| <b>Washington Canoe Club</b> |  |              |                      |                 |                 |                  |
| <b>Window No.</b>            | <b>Type</b>                              | <b>Phase</b> | <b>Room Location</b> | <b>Original</b> | <b>Hardware</b> | <b>Condition</b> |
| 101                          | 8-lite double casement (in)              | 2            | 105                  |                 | √               | Fair             |
| 102                          | 8-lite double casement (in)              | 2            | 105                  |                 | √               | Fair             |
| 103                          | 8-lite double casement (in)              | 2            | 105                  |                 | √               | Fair             |
| 104                          | 8-lite double casement (in)              | 2            | 105                  |                 | √               | Fair             |
| 105                          | 8-lite double casement (in)              | 2            | 105                  |                 | √               | Fair             |
| 106                          | 6-lite fixed                             | 1            | 101                  | √               |                 | Poor             |
| 107                          | 6-lite fixed                             | 1            | 101                  | √               |                 | Poor             |
| 108                          | 6-lite fixed                             | 1            | 101                  | √               |                 | Poor             |
| 109                          | 6-lite fixed                             | 1            | 101                  | √               |                 | Poor             |
| 110                          | Masonry opening w/ acrylic panel         | 2            | 103                  |                 |                 | Poor             |
| 201                          | 5-lite full-length double casement (out) | 1            | 201                  | √               | √               | Fair             |
| 202                          | 6/6 double-hung                          | 1            | 201                  |                 | √               | Fair             |
| 203                          | 6/6 double-hung                          | 1            | 201                  |                 | √               | Fair             |
| 204                          | 6/6 double-hung                          | 1            | 201                  |                 | √               | Fair             |
| 205                          | 6/6 double-hung                          | 1            | 201                  |                 | √               | Fair             |
| 206                          | 5-lite full-length double casement (out) | 1            | 201                  | √               | √               | Fair             |
| 207                          | 5-lite full-length double casement (out) | 1            | 201                  | √               | √               | Fair             |
| 208                          | 5-lite full-length double casement (out) | 1            | 203                  | √               | √               | Fair             |
| 209                          | 3-lite hopper?<br>[sash removed]         | 1            | ST05                 | √               |                 | Poor             |
| 210                          | 6/6 double-hung                          | 1            | 202                  |                 | √               | Fair             |
| 211                          | 6/6 double-hung                          | 1            | 202                  |                 | √               | Fair             |
| 212                          | 6/6 double-hung                          | 1            | 202                  |                 | √               | Fair             |
| 213                          | 3-lite hopper (in)                       | 1            | 203                  | √               | √               | Poor             |
| 214                          | 3-lite hopper (in)                       | 1            | 203                  | √               | √               | Poor             |
| 215                          | 3-lite hopper (in)                       | 1            | 203                  | √               | √               | Poor             |
| 216                          | 6/6 double-hung                          | 1            | 203                  | √               |                 | Poor             |
| 216A                         | 3-lite casement (in)                     | 1            | 203                  | √               | √               | Fair             |
| 217                          | 6/6 double-hung                          | 1            | 204                  | √               |                 | Poor             |
| 218                          | 6/6 double-hung                          | 1            | 201                  | √               | √               | Fair             |
| 219                          | 6/6 double-hung                          | 1            | 201                  |                 | √               | Fair             |
| 220                          | 6/6 double-hung                          | 1            | 201                  |                 | √               | Fair             |
| 221                          | 6/6 double-hung                          | 1            | 201                  | √               | √               | Fair             |
| 222                          | 4-lite double casement                   | 2            | 205                  | √               | √               | Fair             |
| 223                          | 6/6 double-hung                          | 2            | 206                  | √               | √               | Fair             |
| 224                          | 6/6 double-hung                          | 2            | 206                  | √               | √               | Fair             |
| 225                          | 6/6 double-hung                          | Addn.        | 210                  | √               | √               | Fair             |
| 226                          | 6/6 double-hung                          | Addn.        | 210                  | √               | √               | Fair             |
| 227                          | 6/1 double-hung                          | Addn.        | 210                  | √               | √               | Fair             |

|     |   |       |     |    |   |      |
|-----|---|-------|-----|----|---|------|
| 228 | 8-lite awning (in)                        | Addn. | 211 |    | √ | Fair |
| 229 | 8-lite awning (in)                        | Addn. | 211 |    | √ | Fair |
| 230 | 8-lite awning (in)                        | Addn. | 211 |    | √ | Fair |
| 231 | 8-lite awning (in)                        | Addn. | 211 |    | √ | Fair |
| 232 | 8-lite awning (in)                        | Addn. | 211 |    | √ | Fair |
| 233 | 8-lite awning (in)                        | Addn. | 211 |    | √ | Fair |
| 234 | 8-lite awning (in)                        | Addn. | 211 |    | √ | Fair |
| 235 | 8-lite awning (in)                        | Addn. | 211 |    | √ | Fair |
| 236 | 6/6 double-hung                           | 2     | 208 | √  | √ | Fair |
| 237 | 6/6 double-hung                           | 2     | 208 | √  |   | Fair |
| 238 | 6/6 double-hung                           | 2     | 208 | √  |   | Fair |
| 239 | 6/6 double-hung                           | 2     | 208 | √  | √ | Fair |
| 240 | 5-lite full-length double casement (out)  | 2     | 208 | √  | √ | Fair |
| 241 | 6/6 double-hung                           | 2     | 209 | √  | √ | Fair |
| 242 | Hopper (out)<br>[sash removed]            | Addn. | 210 |    | √ | Poor |
| 243 | 6-lite hopper (out)                       | Addn. | 210 |    | √ | Fair |
| 244 | Hopper (out)<br>[sash removed]            | Addn. | 210 |    | √ | Poor |
| 245 | 6-lite hopper (out)                       | Addn. | 210 |    | √ | Fair |
| 246 | 6-lite hopper (out)                       | Addn. | 210 |    | √ | Fair |
| 247 | 6-lite hopper (out)                       | Addn. | 210 |    | √ | Fair |
| 248 | 6/6 double-hung                           | 2     | 208 | √  |   | Poor |
| 249 | double-hung?<br>[sash removed]            | 2     | 208 | √  |   | Poor |
| 250 | 10-lite full-length double casement (out) | 2     | 208 | √  | √ | Fair |
| 301 | [no sash]                                 | 1     | 302 | √* |   | Poor |
| 302 | [no sash]                                 | 1     | 302 | √* |   | Poor |
| 303 | 1-lite sash                               | 1     | 302 | √* |   | Poor |
| 304 | 6-lite fixed sash                         | 1     | 302 | √* |   | Poor |
| 305 | 6-lite fixed sash                         | 1     | 302 | √* |   | Fair |
| 306 | [no sash, infilled with insulation]       | 1     | 302 | √* |   | Poor |
| 307 | 1-lite sash                               | 1     | 302 | √* |   | Poor |
| 308 | 1-lite awning                             | 1     | 302 | √* | √ | Poor |
| 309 | Removable screen unit                     | 2     | 303 | √* |   | Fair |
| 310 | Removable screen unit                     | 2     | 303 | √* |   | Fair |
| 311 | Removable screen unit                     | 2     | 303 | √* |   | Fair |
| 312 | Removable screen unit                     | 2     | 303 | √* |   | Fair |
| 313 | Removable screen unit                     | 2     | 303 | √* |   | Fair |
| 314 | Removable screen unit                     | 2     | 303 | √* |   | Fair |
| 315 | Removable screen unit                     | 2     | 303 | √* |   | Fair |
| 316 | Removable screen unit                     | 2     | 303 | √* |   | Fair |
| 317 | 1/1 vinyl double-hung                     | 2     | 304 |    | √ | Good |
| 318 | 1/1 vinyl double-hung                     | 2     | 304 |    | √ | Good |
| 319 | Vinyl slider                              | 2     | 304 |    | √ | Good |
| 320 | 3-lite fixed (dormer)                     | 1     | 203 | √  |   | Poor |

√\* Window opening only (no sash)

|  |  |   |   |  |
|--|--|---|---|--|
|  |  | <b>B2020</b>  | <b>Exterior Windows</b>                           | All windows located in exterior walls. |
|  |  | <b>B202001-1a</b>   | <b>First-Floor Windows (Main Block – Phase 1)</b> |  |
| <p>The first floor of the main block has four windows (W106-109) located in the west wall of the West Boat Storage Area (Room 101). The windows appear to be original and consist of a painted wood fixed sash with pegged sash joints and six lights. The exterior of the window openings are covered with wood planks and screening to provided protection and ventilation. The wood planks are painted to simulate the window sash. The windows are in poor to fair condition with areas of paint and glazing failure and wood deterioration.</p> |  |   |   |  |
|    |  |    |   |  |
| <p>Interior view of a typical 6-light window in the west boat storage area.</p>  |  | <p>Exterior view of a typical first-floor window on the west elevation of the main block. The windows are covered with painted wood planking and screening.</p> |   |  |
| <b>B202001-1a</b>  |  | <b>First-Floor Windows (Main Block – Phase 1)</b>   |   |  |
| Qualitative Condition Rating:  |  | POOR  |   |  |
| Maintenance Deficiency Rating:   |  | Serious   |   |  |

|  |                   |   |
|--|-------------------|---|
|  | <b>B202001-1b</b> | <b>First-Floor Windows<br/>(Main Block – Phase 2)</b> |
|--|-------------------|---|

The first floor of the phase 2 construction of the main block has five windows (W101 – W105) located in the south wall of the Grill Room (Room 105). The windows consist of newer painted wood double casements that open to the interior space. Each window set is similar and has two 8-light sashes with a brass casement latch, modern inset hinges, and surface bolts at the top and bottom of one sash. The exterior of the window openings are covered with wood planks and screening to provide protection and ventilation. The wood planks are painted to simulate the window sash. All windows are in good condition.

The Kitchen (Room 103) has a single window opening (W110) in the concrete foundation wall on the north elevation. The opening is divided into four openings by concrete blocks encased in painted wood. The exterior side of the opening has a single clear acrylic panel covering the opening. The acrylic panel is loose and in poor condition.



Interior view of windows W101-W103 on the south wall of the Grill Room (Room 105) on the first floor of the main block.



Interior view of Grill Room windows with one sash opened.



Exterior view of the first-floor windows on the south elevation of the main block. The windows are covered with painted wood planking and screening.



Detail of inset hinge on casement windows in the Grill Room (Room 105).



Interior view of the window opening (W110) in the north wall of the Kitchen (Room 103) on the first floor.



Exterior view of the window opening on the first floor on the north elevation. The exterior of the opening is covered with an acrylic panel.

|                                |   |
|--------------------------------|---|
| <b>B202001-1b</b>              | <b>First-Floor Windows<br/>(Main Block – Phase 2)</b> |
| Qualitative Condition Rating:  | GOOD  |
| Maintenance Deficiency Rating: | Minor   |

|  |                   |  |
|--|-------------------|--|
|  | <b>B202001-2a</b> | <b>Second-Floor Windows<br/>(Main Block – Phase 1)</b> |
| <p>The windows on the second floor of the main block consist of wood double-hung windows, wood double casement windows, wood hopper windows, wood awning windows, and some modern windows. Generally, most of the windows are in fair condition based in on interior visual inspection. The exterior sides of the windows could not be assessed due to the exterior wood coverings.</p> <p>The windows (W201, W206-207) in the south wall of the Ballroom (Room 201) are original full-length double casement windows with 5 lights per sash. The windows swing out and provide access from the Ballroom to the exterior Balcony (Room 212). The windows are currently removed from the openings and stored in the Ballroom. Each set of casement windows has a stained interior finish and a painted exterior finish. Original hardware includes a mortise latch set with a brass knob, rosette, and key escutcheon on the exterior face. The interior hardware includes a brass lever, rosette, key escutcheon, pull chain bolt at the top, surface bolt at the bottom, and brass curtain rods at top and bottom. The windows are in fair condition with some minor areas of wood damage, finish failure, and missing hardware components. The exterior of the window openings are covered with wood planks and screening to provided protection and ventilation. The wood planks are painted to simulate the window sash.</p> |                   |  |





Interior side of typical full-length double casement windows in the Ballroom.



Exterior side of typical full-length double casement windows in the Ballroom.



Detail of interior hardware on double casement windows. Note wood damage on stile (arrow).



Detail of exterior hardware on double casement windows. Note wood damage on stile (arrow).

Four 6-over-6 double-hung wood windows surround the stage located in the central bay on the south elevation. The windows have thinner muntins than other similar windows in the Ballroom and may be later replacements. The windows are in poor condition with cracked or missing panes, wood damage, and missing muntins. Four similar double-hung windows are located on the north wall of the Ballroom and are in fair condition. Two of the windows appear to be original sash. The exterior of the window openings are covered with painted wood planks and screening.



Typical double-hung wood window located in the Ballroom (Room 201).



Detail of a sash holder on double-hung windows in the Ballroom (Room 201).



Detail of typical sash lock on double-hung windows in the Ballroom (Room 201).



Typical painted wood cover on the exterior side of the double-hung windows on the north elevation.



The West Tower Lower Chamber (Room 202) has 6-over-6 double-hung wood windows.



The window opening (W208) leads from the Men's Locker Room (Room 203) to the Balcony (Room 212).



The window (W208) consists of full-length double casement sash, currently removed and stored in the Men's Locker Room.




Typical 3-lite hopper window located above the lockers in the west wall of the Men's Locker Room (Room 203).



Additional windows at Mens Locker Room mezzanine area.



|                                |  |
|--------------------------------|--|
| <b>B202001-2a</b>              | <b>Second-Floor Windows<br/>(Main Block – Phase 1)</b> |
| Qualitative Condition Rating:  | FAIR   |
| Maintenance Deficiency Rating: | Serious  |

|  | <b>B202001-2b</b> | <b>Second-Floor Windows<br/>(Main Block – Phase 2)</b> |
|--|-------------------|--|
| <p>The window (W222) located in the Men’s Toilet Room (Room 205) on the second floor is a four-light double casement window with obscure glass. The window appears to be original to the Phase 2 construction and is in fair condition. Hardware includes a casement latch, surface bolt, and butt hinges with ball finials.</p>   |                   |  |
| <div style="text-align: center;">  </div> <p>Double 4-light casement window (W222) with obscure glass located in the Men’s Toilet Room (Room 205).</p>   |                   |  |
| <p>Two 6-over-6 double-hung wood windows (W223-W224) are located in the north wall of the Women’s Lounge (Room 206). The windows are similar to the double-hung windows in the Ballroom (Room 201) but with obscure glass installed. The interior casings consist of stained flat stock with a wide recess on the face. This trim detail is found throughout the building. The windows appear to be original to the Phase 2 construction period and are in fair condition.</p> |                   |  |



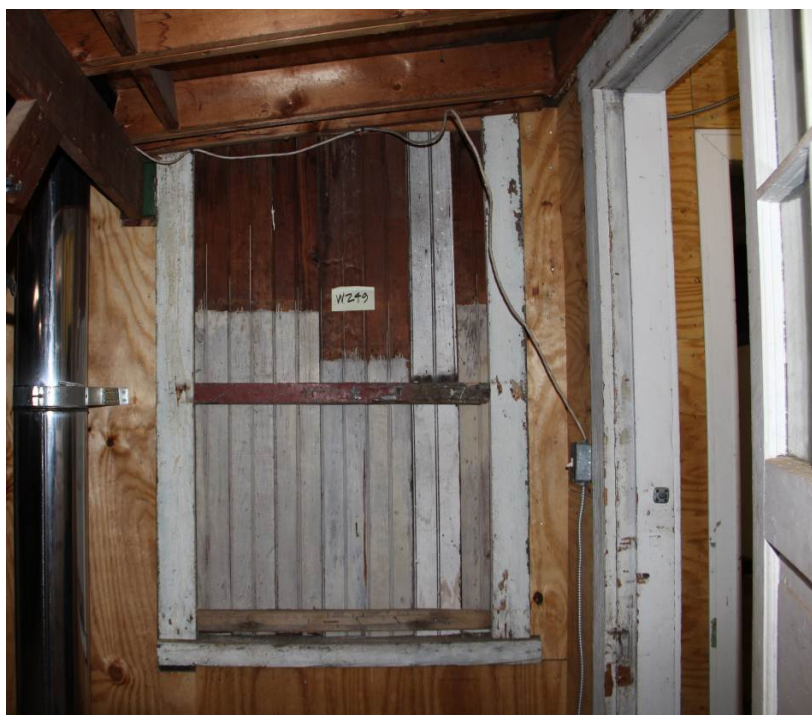
Double-hung wood windows (W223-W224) located on the north wall of the Women's Lounge (Room 206).

The Board Room (Room 208) has five 6-over-6 double-hung wood windows (W236-W239, W248) located around the perimeter of the tower. The room also has two full-length double casement windows (W240, W250) that provide access to the Balcony (Room 212) and to the Workshop (Room 211), respectively. These windows are similar to those in the Ballroom (Room 201) are in fair condition.





Double-hung windows (W236-W239, W248) located in the tower portion of the Board Room (Room 208).



An original window opening (W249) is located in the wall between the Board Room (Room 208) and the Workshop (Room 211). The sash has been removed and the opening is paneled over on the Board Room side.

The east wall of the North Entrance Hall (Room 209) contains a 6-over-6 double-hung wood window (W241) which was previously an exterior window prior to the roof being installed over the east addition.



View of window W241 from Workshop (Room 211).



View of window W241 from North Entrance Hall (Room 209).

**B202001-2b**

**Second-Floor Windows  
(Main Block – Phase 2)**

Qualitative Condition Rating:

FAIR

Maintenance Deficiency Rating:

Serious

|  |                   |  |
|--|-------------------|--|
|  | <b>B202001-2c</b> | <b>Second-Floor Windows<br/>(Addition-Women’s Locker Room)</b> |
|--|-------------------|--|

The windows on the north wall of the Women’s Locker Room (Room 210) consist of two 6-over-6 double-hung wood windows (W225, W226) and one 6-over-1 double-hung wood window (W227). The windows on the south wall of the locker room (W242 to W247) are 6-light hopper windows that open outward (into the Workshop). The windows have strap hinges and chain sash holders, and the glass has been painted. The sash for window W244 has been removed and the opening is blocked by a shower stall. The sash for window W244 is removed and stored in the Workshop. All windows are in generally fair condition; require preservation maintenance but not replacement.



Window W225 in the north wall of the Women’s Locker Room (Room 210).



Window W227 in the north wall of the Women’s Locker Room (Room 210). The sash and casing differ slightly from windows W225 and W226.



The opening for window W242 is blocked by a shower stall in the Women’s Locker Room (Room 210).



Typical hopper window in the south wall of the Women’s Locker Room (Room 210).

|                                |  |
|--------------------------------|--|
| <b>B202001-2c</b>              | <b>Second-Floor Windows<br/>(Women’s Locker Room Addition)</b> |
| Qualitative Condition Rating:  | FAIR   |
| Maintenance Deficiency Rating: | Serious  |

|  |                   |   |
|--|-------------------|---|
|  | <b>B202001-2d</b> | <b>Second-Floor Windows<br/>(Workshop Addition)</b> |
|--|-------------------|---|

The windows in Workshop (Room 211) consist of eight 8-light hopper windows (W228 to W235) that open in toward the interior. The windows were added when the rooftop of the east boat storage addition was enclosed to create a workshop. The sashes are painted and have simple strap hinges and surface bolts. All windows are in fair condition.



Typical 8-light hopper windows in the Workshop (Room 211).

|                                |   |
|--------------------------------|---|
| <b>B202001-2d</b>              | <b>Second-Floor Windows<br/>(Workshop Addition)</b> |
| Qualitative Condition Rating:  | FAIR  |
| Maintenance Deficiency Rating: | Serious   |

|  |                   |  |
|--|-------------------|--|
|  | <b>B202001-3a</b> | <b>Third-Floor Windows<br/>(West Dormer)</b> |
|--|-------------------|--|

The west elevation has a small dormer with a 3-light fixed currently non-operable sash (W320) that provides light into the Men’s Locker Room (Room 203). The window is in poor condition with deteriorated frame, broken glass, failing paint finish, and screening tacked on the exterior.




Dormer on the west slope of the main roof.



Window (W320) in the west dormer.

|                                |  |
|--------------------------------|--|
| <b>B202001-3a</b>              | <b>Third-Floor Windows<br/>(West Dormer)</b> |
| Qualitative Condition Rating:  | POOR   |
| Maintenance Deficiency Rating: | Serious                                      |



|   | <b>B202001-3b</b> | <b>Third-Floor Windows<br/>(West Tower)</b> |
|---|-------------------|---|
| <p>The east and west towers have eight window openings in the upper-most level (third floor) of the towers. These openings originally had no sash and simply provided ventilation and views of the river. These rooms were retro-fitted into sleeping chambers at some time in the past (no longer in use). The West Tower Chamber (Room 302) has awning-style sash installed in some of the openings and framing has been installed to decrease the size of the openings. The exteriors of all of the openings are covered with typical painted wood planks and screening for ventilation. These windows are considered to be in poor condition due to the modifications to the original windows openings.</p> |                   |   |
|  <p>Typical window openings in the West Tower Chamber (Room 302).</p>  |                   |   |



Exterior view the window openings in the West Tower Chamber (Room 302). Note the smaller size of the window openings facing the roof.

|                                |   |
|--------------------------------|---|
| <b>B202001-3b</b>              | <b>Third-Floor Windows<br/>(West Tower)</b> |
| Qualitative Condition Rating:  | POOR  |
| Maintenance Deficiency Rating: | Serious                                     |



|  |   |   |
|--|---|---|
|  | <b>B202001-3c</b>                           | <b>Third-Floor Windows<br/>(East Tower)</b>   |
| <p>The East Tower Chamber (Room 303) also has eight window openings covered with exterior painted wood planks and screening for ventilation. The interior has removable screen units that fit the openings. These original openings have not been modified and are considered to be in fair condition.</p> |   |   |
|    |   |  |
| <p>Window openings (W309-W316) in the East Tower Chamber (Room 303).</p>   |   |   |
| <b>B202001-3c</b>  | <b>Third-Floor Windows<br/>(East Tower)</b> |   |
| Qualitative Condition Rating:  | FAIR  |   |
| Maintenance Deficiency Rating:   | Minor                                       |   |

|  | <b>B202001-3d</b> | <b>Third-Floor Windows<br/>(North Tower)</b> |
|--|-------------------|--|
| <p>The North Tower (Room 304) originally may have served as an entrance into the building from the former catwalk as illustrated in the historic photo below. An original Palladian window has been replaced with two modern double-hung windows (W317, W318) on the east elevation and the assumed door opening on the north elevation has been enclosed and a modern slider window (W319) has been installed. Although these modern windows are in good working condition, the Qualitative Condition Rating for these windows is poor due to the modifications to the original openings.</p>   |                   |  |
| <div>A black and white historical photograph of a building, identified as the North Tower. The building has a complex roofline with several gables and a central tower. A white circle highlights a specific window on the east elevation, which is described as a Palladian window. The building is situated near a body of water, with trees and a hillside in the background. The photo is taken from an elevated perspective, looking down at the building.</div> <p>This historical photo (ca. 1936) shows the north tower (<i>circled</i>) originally with a Palladian window on the east elevation. This window has since been replaced with two modern double-hung windows (W317, W318).</p> |                   |  |



Exterior view of windows (W317, W318) on the east elevation of the North Tower (Room 304).



Exterior view of window (W319) on the north elevation of the North Tower (Room 304). This elevation may have originally had a door opening for access into the building from the former catwalk. Note the infilled area (*dashed line*) denoted by the contrasting shingles.



Interior view of a modern double-hung window (W317) in the North Tower (Room 304).

|                                |  |
|--------------------------------|--|
| <b>B202001-3d</b>              | <b>Third-Floor Windows (North Tower)</b> |
| Qualitative Condition Rating:  | POOR                                     |
| Maintenance Deficiency Rating: | Serious                                  |

|  |                   |  |
|--|-------------------|--|
|  | <b>B202001-3e</b> | <b>Third-Floor Windows (South Gable)</b> |
| <p>The gable on the south elevation of the main roof has a single 4-light fan window. The window is painted on both sides and is in fair condition with some areas of failing paint.</p> |                   |  |



Exterior view of the fan window (W321) in the south gable.



Interior view of the fan window (W321).

|                                |  |
|--------------------------------|--|
| <b>B202001-3e</b>              | <b>Third-Floor Windows<br/>(South Gable)</b> |
| Qualitative Condition Rating:  | FAIR   |
| Maintenance Deficiency Rating: | Minor  |

| <b>Door Schedule</b>         |             |                                     |                 |              |                      |           |                 |                 |                |                  |
|------------------------------|-------------|-------------------------------------|-----------------|--------------|----------------------|-----------|-----------------|-----------------|----------------|------------------|
| <b>Washington Canoe Club</b> |             |                                     |                 |              |                      |           |                 |                 |                |                  |
| <b>Door No.</b>              | <b>Type</b> | <b>Description</b>                  | <b>Material</b> | <b>Phase</b> | <b>Room Location</b> |           | <b>Original</b> | <b>Hardware</b> | <b>Glazing</b> | <b>Condition</b> |
|                              |             |                                     |                 |              | <b>From</b>          | <b>To</b> |                 |                 |                |                  |
| 101                          |             | Swing, modern, 2-panel, 9-lites     | Wood            | 1            | Ext                  | 104       |                 | √               | √              | Fair             |
| 102                          |             | Swing, modern, batten               | Wood            | 1            | Ext                  | 101       |                 | √               |                | Fair             |
| 103                          | A           | Slider, modern, batten              | Wood            | 1            | Ext                  | 101       |                 | √               |                | Fair             |
| 104                          | A           | Slider, modern, batten              | Wood            | 1            | Ext                  | 101       |                 | √               |                | Fair             |
| 105                          | A           | Slider, modern, batten              | Wood            | 1            | Ext                  | 101       |                 | √               |                | Fair             |
| 106                          | A           | Slider, modern, batten              | Wood            | 1            | Ext                  | 101       |                 | √               |                | Fair             |
| 107                          |             | Swing, modern, batten               | Wood            | 1            | Ext                  | 101       |                 | √               |                | Fair             |
| 108                          |             | No door                             |                 | 1            | 101                  | 104       |                 |                 |                | Poor             |
| 109                          | B           | Swing, 5-panel                      | Wood            | 1            | 104                  | 105       | √               | √               |                | Fair             |
| 110                          |             | Swing, plywood                      | Plywd           | 1            | 102                  | 104       |                 | √               |                | Poor             |
| CL02                         | E           | Swing, 5-panel                      | Wood            | 1            | CL02                 | 102       | √               |                 |                | Fair             |
| CL03A                        | B           | Swing, 5-panel                      | Wood            | 1            | CL03<br>A            | 102       | √               | √               |                | Fair             |
| CL03B                        | B           | Swing, 5-panel                      | Wood            | 1            | CL03<br>B            | 102       | √               | √               |                | Fair             |
| 111                          |             | Swing, 6-panel                      | Wood            | 2            | 103                  | 104       | √               | √               |                | Fair             |
| 112                          |             | No door                             |                 | 2            | 105                  | 103       |                 |                 |                | Poor             |
| 113                          | B           | Swing, 5-panel                      | Wood            | 2            | 105                  | 106       | √               | √               |                | Fair             |
| 114                          | C           | Overhead roll-up + man door, modern | Metal           | 2            | Ext                  | 106       |                 | √               |                | Good             |
| 115                          | C           | Overhead roll-up, modern            | Metal           | 2            | Ext                  | 106       |                 | √               |                | Good             |
| 116                          | C           | Overhead roll-up, modern            | Metal           | 2            | Ext                  | 106       |                 | √               |                | Good             |
| 201                          | D           | Swing, 3-panel, 4-lites             | Wood            | 1            | 201                  | 212       | √               | √               | √              | Fair             |
| 202                          | E           | Swing, double, 5-panel              | Wood            | 2            | 207                  | 208       | √               | √               |                | Fair             |
| 203                          |             | Swing, hollow core                  | Wood            | 2            | 205                  | 207       |                 | √               |                | Poor             |
| 204                          | E           | Swing, 5-panel                      | Wood            | 2            | 206                  | 207       | √               | √               |                | Fair             |
| 205                          |             | No door                             |                 | 2            | 207                  | 209       |                 |                 |                | Poor             |
| 206                          | D           | Swing, 3-panel, 4-lites             | Wood            | 2            | 209                  | 211       | √               | √               | √              | Fair             |
| 207                          |             | Swing, modern                       | Plywd           | Addn         | 211                  | Ext       |                 | √               |                | Poor             |
| 208                          | B           | Swing, 5-panel                      | Wood            | 2            | 209                  | Ext       | √               | √               |                | Poor             |
| 209                          | E           | Swing, 5-panel                      | Wood            | 2            | 209                  | 206       | √               | √               |                | Fair             |
| 210                          | E           | Swing, 4.5-panel                    | Wood            | 2            | 209                  | 210       | √               | √               |                | Poor             |
| 211                          |             | Swing, hollow core                  | Luan            | 2            | 206A                 | 206       |                 | √               |                | Fair             |
| 212                          |             | Swing, hollow core                  | Luan            | 2            | 206B                 | 206       |                 | √               |                | Fair             |
| 213                          |             | No door                             |                 | 1            | 203                  | 202       |                 |                 |                | Poor             |

|  |              |                       |                                      |
|--|--------------|-----------------------|--------------------------------------|
|  | <b>B2030</b> | <b>Exterior Doors</b> | All doors located in exterior walls. |
|--|--------------|-----------------------|--------------------------------------|

|  |                |                     |
|--|----------------|---------------------|
|  | <b>B203001</b> | <b>Glazed Doors</b> |
|--|----------------|---------------------|

The canoe club building currently has only three glazed doors. A 9-light, 2-panel exterior door is located on the first floor on the south elevation (D101). The door is located within the first construction phase of the building; however the door itself is most likely a replacement door. The door is in fair condition with some areas of minor wood deterioration, paint failure, but otherwise structurally viable.



Exterior view of glazed door (D101) on the south elevation. Painted wood planks are installed over the glass panes.



Interior view of door (D101).

The other two glazed doors are of similar design and are located on the second floor. Door (D201) leads from the Ballroom (Room 201) to the exterior Balcony (Room 212) and is part of the original building construction. Door (D206) leads from the North Entry Hall (Room 209) into the Workshop (Room 211) and is considered part of the second phase of construction. Both doors have four square lights, 3 horizontal raised panels, and original door hardware. The doors are in fair condition with some areas of deteriorated wood components, failing finish and missing panes of glass (D206).



Original 3-panel, 4-light wood door (D201) leading from the Ballroom (Room 201) to the Balcony (Room 212).



Original panel door (D206) leading from the North Entry Hall (Room 209) into the Workshop (Room 211).



Opposite side of door (D206). This door is similar to door (D201).



|                                |                     |
|--------------------------------|---------------------|
| <b>B203001</b>                 | <b>Glazed Doors</b> |
| Qualitative Condition Rating:  | FAIR                |
| Maintenance Deficiency Rating: | Serious             |

|   |                |                    |
|---|----------------|--------------------|
|   | <b>B203002</b> | <b>Solid Doors</b> |
| <p>The solid exterior doors of the canoe club include sliding and swinging barn-style doors in the East Boat Storage Area (Room 101), original 5-panel wood door with raised panels at the north entrance, and a modern metal door at the Workshop entrance. The original sliding doors in the East Boat Storage Area have been replaced with newer wood batten barn-style doors.</p> <p>The hardware on the north entrance door (D208) has been modified extensively and the east entrance door (D207) is a modern metal door incompatible with the building style.</p> <p>Generally, most of the solid doors are in fair condition and still retain some original door hardware. Fair condition indicates generally structural viability, minor deterioration, finish failure, excessive wear and tear and possibly damaged or missing hardware</p> |                |                    |



Exterior of swinging door (D102) in the south wall of the West Boat Storage Area (Room 101).



Interior view of door (D102).



Exterior view of a typical sliding door (D104) in the West Boat Storage Area (Room 101).



Interior view of door (D104). Note the barn door rollers and track (arrows) at the top of the door.



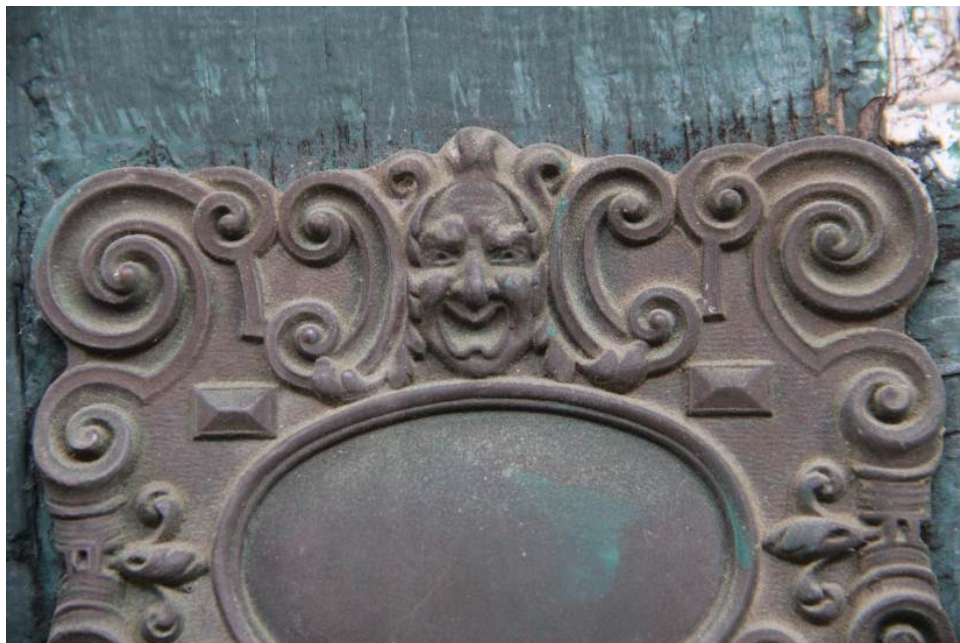
Detail of sliding door roller and track hardware.



Interior view of Door (D208). The original door hardware has been removed and replaced with panic hardware (arrow).



Exterior view of (D208). See inset photo below.



Detail of door push plate on door (D208).

|  |   |
|--|---|
|    |  |
| <p>Interior view of Door (D207). A panic bar has been applied to a plywood door.</p> | <p>Exterior view of Door (D207).</p>  |
| <p><b>B203002</b></p>  | <p><b>Solid Doors</b></p>   |
| <p>Qualitative Condition Rating:</p>   | <p>FAIR</p>   |
| <p>Maintenance Deficiency Rating:</p>  | <p>Serious</p>  |

**B203004****Overhead and Roll-up Doors**

The three bay doors (D114, D115, D116) in the West Boat Storage Area (Room 106) consist of modern overhead metal roll-up doors. The style of the original doors in these locations is unknown. The western-most door opening (D114) has been in-filled and covered with wood shingle siding to match the existing siding. A modern metal man-door has been installed within the infill. All doors are in good condition.



The original door opening of door (D114) in East Boat Storage Area (Room 106) has been in-filled and a modern metal man-door has been installed. The original door opening is indicated by the dashed line. No historic materials are extant.



Interior view of door (D114) showing the door infill and man-door. The overhead roll-up door is still installed (arrow).



Exterior view of typical overhead metal roll-up door in the East Boat Storage Area (Room 106).



Interior view of typical overhead metal roll-up door in the East Boat Storage Area (Room 106).

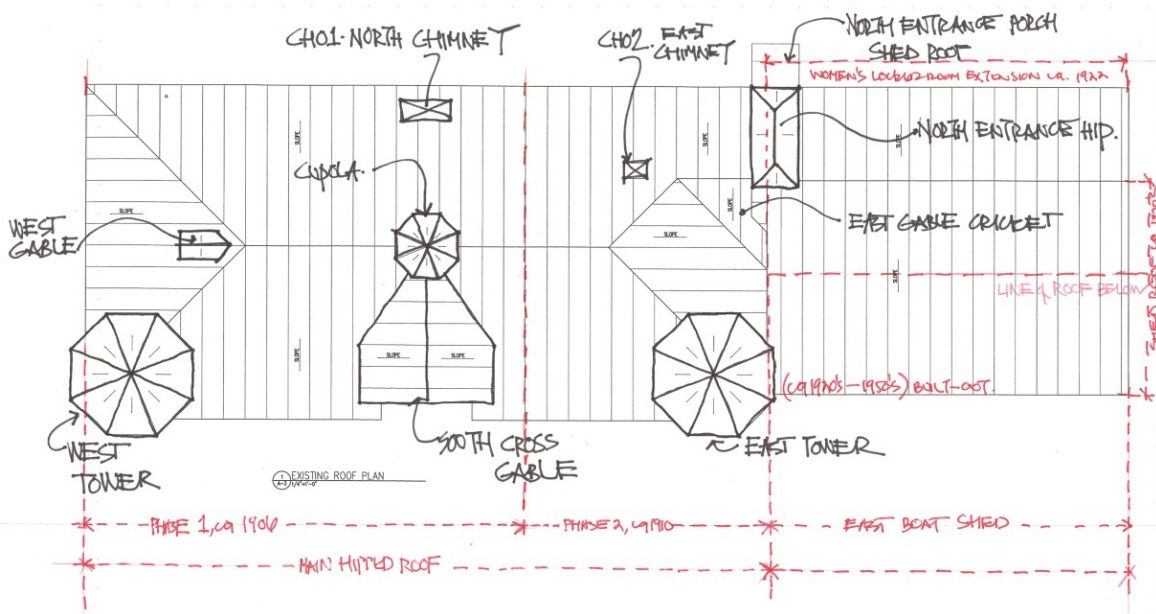
|                                |                                   |
|--------------------------------|-----------------------------------|
| <b>B203004</b>                 | <b>Overhead and Roll-up Doors</b> |
| Qualitative Condition Rating:  | GOOD                              |
| Maintenance Deficiency Rating: | Minor                             |

End of Chapter 4, Part B20 – Exterior Envelope.

|            |                |                       |   |
|------------|----------------|-----------------------|---|
| <b>B30</b> | <b>ROOFING</b> |                       |   |
|            | <b>B3010</b>   | <b>Roof Coverings</b> | Includes all waterproof roof coverings, membranes, and required trim. |
|            |                | <b>B301001</b>        | <b>Roof Finishes</b>  |



East elevation of Washington Canoe Club Building showing complex geometry of roof and various roof finish materials; primarily pre-fabricated sheet metal panels and mineral-surfaced roll roofing.



**Washington Canoe Club Building Roof Nomenclature**

NOTE: It was discovered during field work (12/20/13) that this roof plan does not accurately depict the geometry of the roof scape.



**General Definition of Roof Covering Condition Ratings:** In general all roof surfaces are in Fair to Poor condition. A rating of Fair is considered due to the observation there do not appear to be any active leaks. That said; the integrity of a roof system is only as good as the weakest link. The weak link with the WCCB roof is the Poor to Failed condition of the flashing. The roof finish materials themselves, consisting primarily of a pre-fabricated 5V crimp pattern sheet metal and mineral-surfaced roll roof material, are for the most part in the second half of their service lives, warranting a Condition Rating of Fair and a Maintenance Deficiency of Serious (based on a 5 year rating period).

For a **galvanized sheet metal panelized roof system** of the type on the WCCB the service life is expected to be 20 to 30 years if there is no other damage and it is properly installed. There are many installation and flashing anomalies with the roof system that will likely shorten its expected service life or allow leaks to begin. The gauge of the roof was not determined and the composition of the metal alloy is unknown but on average when surface rust appears the roof is in decline (unless high intervention maintenance is accomplished).

**Mineral-Surfaced roll roofing**, due to its light-weight (compared to asphalt shingles), is regarded as an inexpensive temporary material by the roofing industry. Its width (usually 30 to 36 inches) makes it vulnerable to temperature-induced shrinkage and tearing as it expands and contracts; it is also vulnerable to wind damage. Available in many weights (the specifications of the various materials applied to the WCCB roof are unknown) the service life time period may vary from 10 to 20 years. On the WCCB it is used for the smaller roof areas which would require a skilled artisan to install a sheet metal roof. These roll roof installations do not exhibit signs of extreme weathering but there are areas of damage which would indicate a Condition Rating of Poor and Critical Maintenance Deficiencies. This type of roof system is not suited to the caliber of a building such as the WCCB, and is a modern temporary substitute for a more permanent roof material such as wood shake, shingle or standing seam sheet metal. Note there is some evidence in historic images that the earliest roof coverings may have consisted of a composition slate or tile laid in the French method (on the diagonal). Refer to images in the chronology section.

Insulation: Non-extant in rafter assembly; some in ceiling of 2<sup>nd</sup> floor.

|                                |                                |
|--------------------------------|--------------------------------|
| <b>B301001</b>                 | <b>Roof Finishes (overall)</b> |
| Qualitative Condition Rating:  | FAIR                           |
| Maintenance Deficiency Rating: | Serious                        |

|  |  |  |  |
|--|--|--|--|
|  |  | <p><b>B301001-1</b></p>  | <p><b>Main Block Hipped Roof Finish:<br/>5V Crimp Metal Panels</b></p> |
|  <p>East hip gable of main block hipped roof.</p>   |  |  <p>View of ridge line facing west. South cross gable extending to photo left (south towards river).</p> |  |
|  <p>View of ridge from cupola to west hipped edge showing ribbed ridge caps.</p>                                       |  |  <p>Southwest hip ridge line with patch above west gable dormer.</p>                                    |  |
|  <p>Typical 5V crimp 24 inch wide sheet metal roof panels on main hipped roof with surface rust and damaged ribs.</p> |  |  <p>View of northwest hipped ridge line of main roof.</p>  |  |

|                                |   |
|--------------------------------|---|
| <b>B301001-1</b>               | <b>Main Block Hipped Roof Finish:<br/>5V Crimp Metal Panels</b> |
| Qualitative Condition Rating:  | FAIR  |
| Maintenance Deficiency Rating: | Serious   |

|  |                  |   |
|--|------------------|---|
|  | <b>B301001-2</b> | <b>South Cross Gable Roof Finish:<br/>5V Crimp Metal Panels</b> |
|--|------------------|---|



East roof slope of south cross gable with open valley and ridge cap. Note wooden mast at south end of ridge.



Ridge line of gable with mast at south end showing open valley flashing at either side.









Detail of ribbed ridge and closed valley intersection with south roof slope of main block hipped roof.





West roof slope of south cross gable with view of cupola base flashing to the north.



|                                |   |
|--------------------------------|---|
| <b>B301001-2</b>               | <b>South Cross Gable Roof Finish:<br/>5V Crimp Metal Panels</b> |
| Qualitative Condition Rating:  | FAIR  |
| Maintenance Deficiency Rating: | Serious   |

|  |  |   |   |
|--|--|---|---|
|  |  | <b>B301001-3</b>  | <b>West Gable Dormer Roof Finish:<br/>5V Crimp Metal Panels</b> |
|   |  |   |   |
| <p>North elevation and roof slope of west gable dormer.</p>  |  | <p>West elevation of west gable dormer with patched sill flashing condition.</p>  |   |
|    |  |    |   |
| <p>South and west elevations and roof slope of west gable dormer showing off-centered intersection with hip ridges of main block roof.</p> |  | <p>Off-centered placement of west gable dormer with main ridge line of main block roof and sheet metal flashing laid over roof surface.</p> |   |
| <b>B301001-3</b>   |  | <b>West Gable Dormer Roof Finish:<br/>5V Crimp Metal Panels</b>   |   |
| <p>Qualitative Condition Rating:</p>   |  | <p>FAIR</p>   |   |
| <p>Maintenance Deficiency Rating:</p>  |  | <p>Serious</p>  |   |

|  |  |                  |   |
|--|--|------------------|---|
|  |  | <b>B301001-4</b> | <b>East Gable Cricket and Extension:<br/>5V Crimp Metal Panels</b>  |
|       |  |                  |                                   |
| <p>View of the east and south slopes of the east gable roof extension and cricket.</p> |  |                  | <p>View from ridge of main block roof facing east showing the east gable roof configuration and closed valleys.</p> |
| <b>B301001-4</b>   |  |                  | <b>East Gable Cricket and Extension:<br/>5V Crimp Metal Panels</b>  |
| <p>Qualitative Condition Rating:</p>   |  |                  | <p>FAIR</p>   |
| <p>Maintenance Deficiency Rating:</p>  |  |                  | <p>Serious</p>  |

|  |  |                  |  |
|--|--|------------------|--|
|  |  | <b>B301001-5</b> | <b>Cupola Roof Finish:<br/>Mineral Surface Roll Roofing</b>  |
|   |  |                  |    |
| <p>East elevation of eight-sided cupola roof and sheet metal cap. Mineral-surfaced roll roof finish material is carefully cut to match the geometry of the cupola roof and nailed into position with exposed fasteners. Surface material is torn in several areas and poorly repaired with roof tar.</p> |  |                  | <p>West elevation of eight-sided cupola roof with sheet metal cap. Note the triple panel fabrication of each pyramidal shaped section of the roof cone, topped with a sheet metal cap (possibly original) and torn sheeting.</p> |

|                                |   |
|--------------------------------|---|
| <b>B301001-5</b>               | <b>Cupola Roof Finish:<br/>Mineral Surface Roll Roofing</b> |
| Qualitative Condition Rating:  | POOR  |
| Maintenance Deficiency Rating: | Serious   |

|  |   |   |   |
|--|---|---|---|
|  |   | <b>B301001-6</b>  | <b>West Tower Roof Finish:<br/>Mineral Surface Roll Roofing</b> |
|   |   |   |   |
| <p>North roof slopes of the west tower with a mast at the pinnacle of the conical roof form. Mineral surface roofs are considered in Poor condition due to installation methodology not according to industry standards.</p> |   | <p>View of north elevation of the west tower. Mineral surface roofs are considered in Poor condition due to installation methodology not according to industry standards.</p> |   |
| <b>B301001-6</b>   | <b>West Tower Roof Finish:<br/>Mineral Surface Roll Roofing</b> |   |   |
| Qualitative Condition Rating:  | POOR  |   |   |
| Maintenance Deficiency Rating:   | Serious   |   |   |

|  |  |   |  |
|--|--|---|--|
|  | <b>B301001-7</b>   | <b>East Tower Roof Finish:<br/>Mineral Surface Roll Roofing</b> |  |
| Mineral surface roofs are considered in Poor condition due to installation methodology not according to industry standards.  |  |   |  |
|  <p>East elevation of the east tower from the Workshop roof. Note low pitch of roof and center tower mast at pinnacle of roof cone.</p> |  <p>Detail of northwest sections of conical roof form with mineral-surface roll roofing. Note nailed seams, minimal overlap and damaged cone piece at pinnacle.</p> |   |  |
|  <p>View of northeastern sections of conical roof with discoloration and damaged cone piece.</p>                                    |  <p>View of northwest sections of east tower roof.</p>  |   |  |
| <b>B301001-7</b>   | <b>East Tower Roof Finish:<br/>Mineral Surface Roll Roofing</b>  |   |  |
| Qualitative Condition Rating:  | POOR   |   |  |
| Maintenance Deficiency Rating:   | Serious  |   |  |

|  |  |   |  |
|--|--|---|--|
|  |  | <p><b>B301001-8</b></p>   | <p><b>Women’s Locker Room Addition<br/>Gable Roof Finish:<br/>5V Crimp Metal Panel</b></p> |
|   |  |   |  |
| <p>East elevation of WCCB with Women’s Locker Room gable roof eave extension on exterior of building. Original roof covering is still in-situ on the south slope. The shed roof of the Workshop overhangs the south slope of the gable roof.</p> |  | <p>View of the Women’s Locker Roof facing east. The steep slope to north (left) is the original roof frame and slope. The slope south (right) of the ridge line is the shed roof over the Workshop. The north slope of the roof has similar maintenance deficiencies as other metal roof areas.</p> |  |
|   |  |   |  |
| <p><b>B301001-8</b></p>  |  | <p><b>Women’s Locker Room Addition<br/>Gable Roof Finish:<br/>5V Crimp Metal Panel</b></p>  |  |
| <p>Qualitative Condition Rating:</p>   |  | <p>POOR</p>   |  |
| <p>Maintenance Deficiency Rating:</p>  |  | <p>Serious</p>  |  |



|   |  |  |  |
|---|--|--|--|
|   |  | <b>B301001-9</b>   | <b>Workshop Shed Roof Finish:<br/>5V Crimp Metal Panel</b> |
|    |  |                |  |
| <p>View facing west of the main block roof (background) and Workshop shed roof (foreground). Low slope installation of 5V crimp metal panel roof system is not warranted by industry.</p> |  | <p>View of low-slope shed roof over the Workshop. Note exterior rusting at east end of roof.</p> |  |
|   |  |               |  |
| <p>Typical rolled ridge detail with external fasteners.</p>   |  | <p>Detail of surface of 5V crimp metal roof panel (typical).</p>                                 |  |
| <b>B301001-9</b>  |  | <b>Workshop Shed Roof Finish:<br/>5V Crimp Metal Panel</b>                                       |  |
| Qualitative Condition Rating:   |  | POOR   |  |
| Maintenance Deficiency Rating:  |  | Serious  |  |

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|--|-------------------|--|
|  | <b>B301001-10</b> | <b>North Tower Hipped Roof Finish:<br/>Mineral Surfaced Roll Roofing</b> |
|--|-------------------|--|

Mineral surface roofs are considered in Poor condition due to installation methodology not according to industry standards.



East elevation of North Tower hipped roof with non-standard installation of roof materials.









Repaired west slope and older south slope of North Tower hipped roof.









North elevation of the North Tower and shed roof over the north entrance below.



|                                |  |
|--------------------------------|--|
| <b>B301001-10</b>              | <b>North Tower Hipped Roof Finish:<br/>Mineral Surfaced Roll Roofing</b> |
| Qualitative Condition Rating:  | POOR   |
| Maintenance Deficiency Rating: | Serious  |

|  |  |                   |   |
|--|--|-------------------|---|
|  |  | <b>B301001-11</b> | <b>North Porch Shed Roof:<br/>Mineral Surfaced Roll Roofing</b>   |
|  <p>View of north porch shed roof (<i>arrow</i>) from the Capital Crescent Trail.</p> |  |                   |  <p>View of shed roof over north porch. Note recent repairs to roof finish at lower half of roof.</p> |
| <b>B301001-11</b>  |  |                   | <b>North Porch Shed Roof:<br/>Mineral Surfaced Roll Roofing</b>   |
| Qualitative Condition Rating:  |  |                   | POOR  |
| Maintenance Deficiency Rating:   |  |                   | Serious   |

|   |  |  |                                      |
|---|--|--|--------------------------------------|
|   |  | <b>B301004</b>   | <b>Flashings &amp; Trim</b>          |
|   |  | <b>B301004-1a</b>  | <b>North Chimney Flashing (CH01)</b> |
|    |  |    |                                      |
| <p>Extremely rusted step flashing (south elevation of chimney) with later repairs dating to installation of 5V crimp roof panels. Only base flashing is extant, counter-flashing is non-extant.</p> |  | <p>View of south and east elevations of chimney (CH01) with base step flashing (counter-flashing is missing) and later repairs using roof tar or other elastomeric sealant material. Note use of mastic (arrow) to fix flashing into mortar joint (non-standard installation).</p> |                                      |
| <b>B301004-1a</b>   |  | <b>North Chimney Flashing (CH01)</b>   |                                      |
| Qualitative Condition Rating:   |  | POOR   |                                      |
| Maintenance Deficiency Rating:  |  | Critical   |                                      |
|   |  | <b>B301004-1b</b>  | <b>East Chimney Flashing (CH02)</b>  |
|    |  |    |                                      |
| <p>West and north elevations of chimney (CH02). Flashing system (base and counter) is non-extant at this chimney. Roof mastic and felt paper appear to be filling void.</p>                         |  | <p>South elevation of chimney (CH02) with non-extant flashing system. Base and counter-flashing materials are missing. Outline of former cricket structure visible on chimney.</p>   |                                      |
| <b>B301004-1b</b>   |  | <b>East Chimney Flashing (CH02)</b>  |                                      |
| Qualitative Condition Rating:   |  | POOR   |                                      |
| Maintenance Deficiency Rating:  |  | Critical   |                                      |

|   |  | <b>B301004-2</b> | <b>Main Block Hipped Roof Flashing</b>  |
|---|--|------------------|---|
|  <p>Detail of sectional ribbed rolled ridge cap flashing suggesting smaller panelized (or metal shingle) roof in the past (possible second generation roof).</p>                           |  |                  | <p>Includes subsidiary roof features: South Cross Gable, West Gable Dormer, East Gable Cricket Extension.</p>  <p>View of ridge and hip flashing using same components. Installation is non-standardized and would not meet industry warranty requirements.</p> |
|  <p>Different pattern of ribbed rolled ridge flashing without central panel divide as seen in other roof areas (above). Non-standard installation does not meet industry standards.</p> |  |                  |  <p>View of side wall flashing at west dormer. Installation does not meet industry standard for base or counter-flashing installation.</p>  |




|   |  |
|---|--|
|  |    |
| <p>Ridge and valley flashing at south cross gable.</p>                            | <p>Non-standardized installation of flashing at stepped roof detail. Non-compliant base &amp; counter flashing and side wall flashing.</p> |
| <p><b>B301004-2</b></p>   | <p><b>Main Block Hipped Roof Flashing</b></p>  |
| <p>Qualitative Condition Rating:</p>  | <p>POOR</p>  |
| <p>Maintenance Deficiency Rating:</p>   | <p>Serious</p>   |

|   |   |                               |
|---|---|-------------------------------|
|   | <p><b>B301004-3</b></p>   | <p><b>Cupola Flashing</b></p> |
|                              |   |                               |
| <p>Contextual view of cupola east elevation base, shelf, louvered panels and conical roof with wooden mast.</p> | <p>South elevation of cupola base at intersection of south cross gable. Base flashing in non-standardized. The presence of counter-flashing under the wood shingle base is unknown.</p> |                               |




West elevation of cupola base and shelf flashing between base and louvered panels (possibly original) at intersection with primary ridge line. Typical of all base flashing conditions.

|                                |                        |
|--------------------------------|------------------------|
| <b>B301004-3</b>               | <b>Cupola Flashing</b> |
| Qualitative Condition Rating:  | POOR                   |
| Maintenance Deficiency Rating: | Serious                |

|  |                  |   |
|--|------------------|---|
|  | <b>B301004-4</b> | <b>West Tower Flashing</b>  |
|   |                  |   |
|  |                  | <p>Sub-standard base flashing at the west tower is typical of most extant flashing installations: non-standardized, will not meet current industry standards, uses sub-par materials and is not properly executed with typical base and counter flashing systems. Note deterioration of base wood shingles adjacent to flashing strips.</p> |
| <b>B301004-4</b>   |                  | <b>West Tower Flashing</b>  |
| Qualitative Condition Rating:  |                  | POOR  |
| Maintenance Deficiency Rating:   |                  | Serious   |



|   |   |                            |
|---|---|----------------------------|
|   | <b>B301004-5</b>  | <b>East Tower Flashing</b> |
|  <p>Northwest elevations of East Tower showing extant non-standard "flashing".</p> |  <p>Base conditions on northeast section of East Tower are typical of non-standard details.</p> |                            |
| <b>B301004-5</b>  | <b>East Tower Flashing</b>  |                            |
| Qualitative Condition Rating:   | POOR  |                            |
| Maintenance Deficiency Rating:  | Serious   |                            |

|   | <b>B301004-6</b> | <b>North Tower Flashing</b>   |
|---|------------------|---|
|  <p>East elevation of North Tower. Shed roof extends over sill line of windows with no apparent flashing installation in-situ.</p>   |                  |  <p>West elevation of North Tower. Typical non-standardized flashing installation using inappropriate materials, does not meet industry standards.</p> |
|  <p>South and east elevations of North Tower at east gable cricket and roof extension. Unique roof geometry requires advanced base and counter flashing installation.</p> |                  |  <p>Detail of use of 5V crimp roof panel to create side wall flashing at west elevation of the tower. Note deteriorated conditions of shingles.</p> |
| <b>B301004-6</b>  |                  | <b>North Tower Flashing</b>   |
| Qualitative Condition Rating:   |                  | POOR  |
| Maintenance Deficiency Rating:  |                  | Serious   |

|  |  |                  |   |
|--|--|------------------|---|
|  |  | <b>B301004-7</b> | <b>Additional Roof Flashing</b>   |
|  |  |                  | Includes Women's Locker Room and Workshop roof areas and flashing to adjacent roof areas. |



Intersection of Workshop shed roof with east elevation of East Tower. Former window location in East Tower is covered with solid panel.




Detail of east elevation at East Tower.



Detail of east elevation under main house roof overhang.

|                                |                                 |
|--------------------------------|---------------------------------|
| <b>B301004-7</b>               | <b>Additional Roof Flashing</b> |
| Qualitative Condition Rating:  | POOR                            |
| Maintenance Deficiency Rating: | Serious                         |

|   |                                 |   |
|---|---------------------------------|---|
|   | <b>B301005</b>                  | <b>Gutters &amp; Downspouts</b>   |
|   |                                 | Includes gutters, downspouts and associated work including splash blocks, diverters, etc. |
| <p>No extant roof drainage system. Physical evidence of previous system exists on the east elevation of the East Tower. The system likely precedes the addition of the East Tower and Workshop.</p> |                                 |   |
|    |                                 |   |
| <p>Remnant of a half-round gutter bracket (arrow) still exists on the eave on the Main Block roof on the side of the East Tower.</p>  |                                 |   |
| <b>B301005</b>  | <b>Gutters &amp; Downspouts</b> |   |
| Qualitative Condition Rating:   | POOR                            |   |
| Maintenance Deficiency Rating:  | Critical                        |   |

End of Chapter 4, Part B30 – Roof System.

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|          |                  |                              |                                |
|----------|------------------|------------------------------|--------------------------------|
| <b>C</b> | <b>INTERIORS</b> |                              |                                |
|          | <b>C10</b>       | <b>INTERIOR CONSTRUCTION</b> |                                |
|          |                  | <b>C1020</b>                 | <b>Interior Doors</b>          |
|          |                  | <b>C102001</b>               | <b>Standard Interior Doors</b> |

The interior doors of the canoe club consist mostly of standard hinged wood doors with 5 raised panels. Many of the doors are original to the building. Other doors consist of simple plywood or hollow core doors. Some doors have been removed from the openings completely.

Generally, most of the solid doors are in fair condition and still retain the original door hardware. Other doors are in poor condition with missing hardware, damaged or cracked components, and failing paint finishes. Some doors have been trimmed substantially in order to accommodate the changes in floor levels.



Original door (CL03A)



Original door (CL03B)

These two doors are identical and most likely original to the building; however the doors have been relocated and reused in Storage Room (Room 102).



Detail of original hardware on found on doors (CL03A and CL03B).



Door (D113) is similar to doors (D109, CL03A, and CL03B). The bottom rail (arrow) has also been trimmed.



Original 6-panel door (D111) with original hardware.



Double 5-panel doors (D202) leading from the Hall (Room 207) on the second floor into the Board Room (Room 208).



View of doors (D202) from the Board Room (Room 208).



Door (D204)



Door (D209)





Doors (D211, D212) are modern luan doors installed in the Women's Toilet Room (Room 206).



Door (D210) has been modified to fit the opening. Note the small panel at the top of the door (arrow).



The panels of door (D210) are cracked and the door is broken at the latch.

|                                |                                |
|--------------------------------|--------------------------------|
| <b>C102001</b>                 | <b>Standard Interior Doors</b> |
| Qualitative Condition Rating:  | FAIR                           |
| Maintenance Deficiency Rating: | Serious                        |

| <b>Door Schedule</b>         |      |                                     |          |       |               |     |          |          |         |           |
|------------------------------|------|-------------------------------------|----------|-------|---------------|-----|----------|----------|---------|-----------|
| <b>Washington Canoe Club</b> |      |                                     |          |       |               |     |          |          |         |           |
| Door No.                     | Type | Description                         | Material | Phase | Room Location |     | Original | Hardware | Glazing | Condition |
|                              |      |                                     |          |       | From          | To  |          |          |         |           |
| 101                          |      | Swing, modern, 2-panel, 9-lites     | Wood     | 1     | Ext           | 104 |          | √        | √       | Fair      |
| 102                          |      | Swing, modern, batten               | Wood     | 1     | Ext           | 101 |          | √        |         | Fair      |
| 103                          | A    | Slider, modern, batten              | Wood     | 1     | Ext           | 101 |          | √        |         | Fair      |
| 104                          | A    | Slider, modern, batten              | Wood     | 1     | Ext           | 101 |          | √        |         | Fair      |
| 105                          | A    | Slider, modern, batten              | Wood     | 1     | Ext           | 101 |          | √        |         | Fair      |
| 106                          | A    | Slider, modern, batten              | Wood     | 1     | Ext           | 101 |          | √        |         | Fair      |
| 107                          |      | Swing, modern, batten               | Wood     | 1     | Ext           | 101 |          | √        |         | Fair      |
| 108                          |      | No door                             |          | 1     | 101           | 104 |          |          |         | Poor      |
| 109                          | B    | Swing, 5-panel                      | Wood     | 1     | 104           | 105 | √        | √        |         | Fair      |
| 110                          |      | Swing, plywood                      | Plywd    | 1     | 102           | 104 |          | √        |         | Poor      |
| CL02                         | E    | Swing, 5-panel                      | Wood     | 1     | CL02          | 102 | √        |          |         | Fair      |
| CL03A                        | B    | Swing, 5-panel                      | Wood     | 1     | CL03<br>A     | 102 | √        | √        |         | Fair      |
| CL03B                        | B    | Swing, 5-panel                      | Wood     | 1     | CL03<br>B     | 102 | √        | √        |         | Fair      |
| 111                          |      | Swing, 6-panel                      | Wood     | 2     | 103           | 104 | √        | √        |         | Fair      |
| 112                          |      | No door                             |          | 2     | 105           | 103 |          |          |         | Poor      |
| 113                          | B    | Swing, 5-panel                      | Wood     | 2     | 105           | 106 | √        | √        |         | Fair      |
| 114                          | C    | Overhead roll-up + man door, modern | Metal    | 2     | Ext           | 106 |          | √        |         | Good      |
| 115                          | C    | Overhead roll-up, modern            | Metal    | 2     | Ext           | 106 |          | √        |         | Good      |
| 116                          | C    | Overhead roll-up, modern            | Metal    | 2     | Ext           | 106 |          | √        |         | Good      |
| 201                          | D    | Swing, 3-panel, 4-lites             | Wood     | 1     | 201           | 212 | √        | √        | √       | Fair      |
| 202                          | E    | Swing, double, 5-panel              | Wood     | 2     | 207           | 208 | √        | √        |         | Fair      |
| 203                          |      | Swing, hollow core                  | Wood     | 2     | 205           | 207 |          | √        |         | Poor      |
| 204                          | E    | Swing, 5-panel                      | Wood     | 2     | 206           | 207 | √        | √        |         | Fair      |
| 205                          |      | No door                             |          | 2     | 207           | 209 |          |          |         | Poor      |
| 206                          | D    | Swing, 3-panel, 4-lites             | Wood     | 2     | 209           | 211 | √        | √        | √       | Fair      |
| 207                          |      | Swing, modern                       | Plywd    | Addn  | 211           | Ext |          | √        |         | Poor      |
| 208                          | B    | Swing, 5-panel                      | Wood     | 2     | 209           | Ext | √        | √        |         | Poor      |
| 209                          | E    | Swing, 5-panel                      | Wood     | 2     | 209           | 206 | √        | √        |         | Fair      |
| 210                          | E    | Swing, 4.5-panel                    | Wood     | 2     | 209           | 210 | √        | √        |         | Poor      |
| 211                          |      | Swing, hollow core                  | Luan     | 2     | 206A          | 206 |          | √        |         | Fair      |
| 212                          |      | Swing, hollow core                  | Luan     | 2     | 206B          | 206 |          | √        |         | Fair      |
| 213                          |      | No door                             |          | 1     | 203           | 202 |          |          |         | Poor      |

|  |  |                  |   |
|--|--|------------------|---|
|  |  | <b>C1030</b>     | <b>Fittings</b>   |
|  |  | <b>C103009</b>   | <b>Cabinets</b> - Built in case-work, cabinets integral with interior architecture (character-defining feature) |
|  |  | <b>C103009-1</b> | <b>Ballroom Fireplace Cabinets</b>  |

The Ballroom (Room 201) has two built-in wood cabinets on either side of the fireplace on the north wall. The cabinets are not original but were likely installed during the second phase of construction. The cabinets consist of a stained wood frame with two glass doors and two storage compartments below with hinges doors and with glass pulls. Each cabinet has two glass shelves on the interior. The cabinets are in poor condition with broken or cracked wood components, cracked door glass, and missing hardware.



West built-in cabinet to the left of the fireplace in the Ballroom (Room 201).



East built-in cabinet to the right of the fireplace in the Ballroom (Room 201).



Two storage compartments are located below the glass cabinet doors. The compartment doors have butterfly hinges and glass pulls (arrows).

|                                |                                    |
|--------------------------------|------------------------------------|
| <b>C1030009-1</b>              | <b>Ballroom Fireplace Cabinets</b> |
| Qualitative Condition Rating:  | POOR                               |
| Maintenance Deficiency Rating: | Minor                              |

|  | <b>C103009-2</b>  | <b>Board Room Built-In Cabinet</b> |
|--|---|------------------------------------|
|    |  |                                    |
| <p>The corner cabinet in the Board Room (Room 208) consists of stained wood, two glass doors, and glass shelves on the interior.</p> |   |                                    |
| <p><b>C103009-2</b></p>  | <p><b>Board Room Built-In Cabinet</b></p>   |                                    |
| <p>Qualitative Condition Rating:</p>   | <p>FAIR</p>   |                                    |
| <p>Maintenance Deficiency Rating:</p>  | <p>Minor</p>  |                                    |

|            |               |                           |   |
|------------|---------------|---------------------------|---|
| <b>C20</b> | <b>STAIRS</b> |                           |   |
|            | <b>C2010</b>  | <b>Stair Construction</b> | All items associated with interior and exterior stairs. |
|            |               | <b>C201001</b>            | <b>Interior Stair Structure</b>                         |
|            |               | <b>C201001-1</b>          | <b>ST01 - West Boat Storage</b>                         |

The stairs (ST01) in the northwest corner of the West Boat Storage (Room 101) are constructed of wood and are in poor condition. The lower steps have been removed to accommodate temporary shoring and the landing has been replaced with a flimsy section of plywood. The steps to the second floor lack adequate support and a handrail.



Stairs (ST01) in the northeast corner of West Boat Storage (Room 101) leading to the Men’s Locker Room (Room 203).

|                                |                                 |
|--------------------------------|---------------------------------|
| <b>C201001-1</b>               | <b>ST01 - West Boat Storage</b> |
| Qualitative Condition Rating:  | Poor                            |
| Maintenance Deficiency Rating: | Critical                        |

|  |  |                  |                         |
|--|--|------------------|-------------------------|
|  |  | <b>C201001-2</b> | <b>ST02 - Main Hall</b> |
|--|--|------------------|-------------------------|

The main stairs (ST02) in the center of the building lead from the first floor hall (Room 104) to the main hall on the second floor (Room 207). The stairs consist of painted wood treads and risers with wall-mounted wood handrails. A wood balustrade with newel posts and decorative balusters surrounds the stair opening on the second floor. All stair components are in fair condition. The treads have worn nosings and a scuffed finish from years of foot traffic.



Stairs (ST02) in the first floor hall (Room 104) leading to the second floor hall (Room 207).

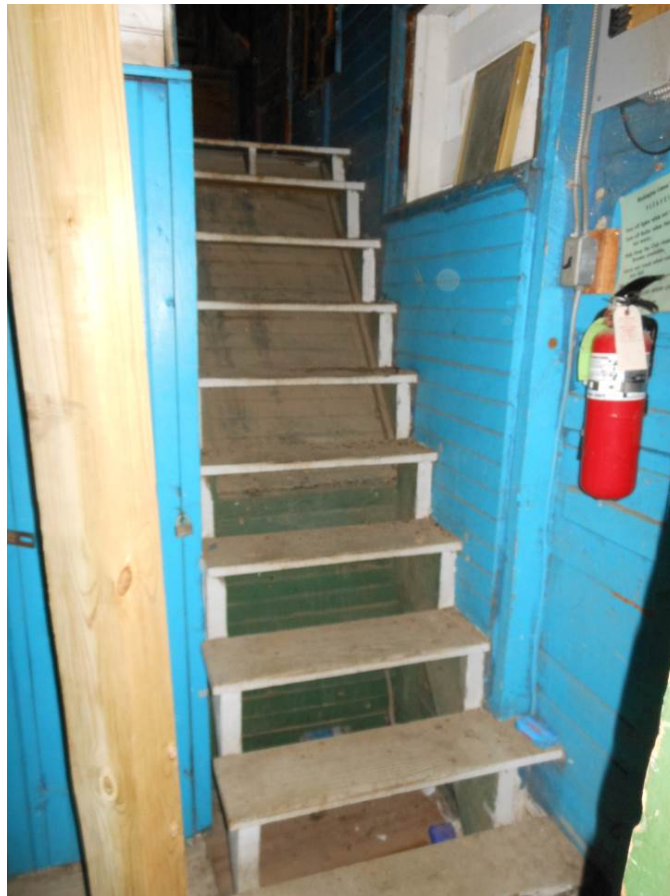


Balustrade surrounding the main stairs (ST02) on the second floor.

|                                |                         |
|--------------------------------|-------------------------|
| <b>C201001-2</b>               | <b>ST02 – Main Hall</b> |
| Qualitative Condition Rating:  | Fair                    |
| Maintenance Deficiency Rating: | Critical                |

|  |  |  |                  |   |
|--|--|--|------------------|---|
|  |  |  | <b>C201001-3</b> | <b>ST05 - Men’s Locker Room Mezzanine</b> |
|--|--|--|------------------|---|

The stairs (ST05) lead from the Men’s Locker Room (Room 203) up to the mezzanine level of the locker room. The stairs are in fair condition and consist of wood treads and stringers. However, the stairs are steep, have open risers, and have no handrails installed.



Wood stairs (ST05) lead from the Men’s Locker Room (Room 203) the mezzanine of the locker room.

|                                |   |
|--------------------------------|---|
| <b>C201001-3</b>               | <b>ST05 – Men’s Locker Room Mezzanine</b> |
| Qualitative Condition Rating:  | FAIR                                      |
| Maintenance Deficiency Rating: | Serious                                   |



|  |  |  |                  |                                    |
|--|--|--|------------------|------------------------------------|
|  |  |  | <b>C201002</b>   | <b>Exterior Stair Structures</b>   |
|  |  |  | <b>C201002-1</b> | <b>ST03 - North Porch Entrance</b> |

The north entrance to the building has a wood ramp installed over the former stairs (ST03) leading to the door (D208). The ramp consists of dimensional lumber railings and structure and a plywood surface. The ramp leads to a wood plank landing in front of the door. The ramp structure is in poor condition with missing railing components, warped plywood surface, and overgrown vegetation.



A wood ramp is installed over the stairs (ST03) leading to the north entrance door (D208) on the north elevation.



View looking down the ramp towards the east. Note the sloping handrails (arrows) for the original stairs underneath the ramp.



The wood stairs (ST03) are still located under the wood ramp at the north entrance.

|                                |                                    |
|--------------------------------|------------------------------------|
| <b>C201002-1</b>               | <b>ST03 – North Porch Entrance</b> |
| Qualitative Condition Rating:  | Poor                               |
| Maintenance Deficiency Rating: | Critical                           |

|  |  |                  |                             |
|--|--|------------------|-----------------------------|
|  |  | <b>C201002-2</b> | <b>ST04 - East Entrance</b> |
|--|--|------------------|-----------------------------|

The stairs (ST04) at the east entrance consist of painted dimensional lumber treads, stringers, and one handrail. The stairs have open risers and are in poor condition. The structure is unstable, the lumber is warped or loose, and the finish is failing on the majority of the structure.



Stairs (ST04) at the east entrance.



Deteriorated plywood landing at the top of the east entrance stairs (ST04).



View looking down the east entrance stairs (ST04) from the Workshop (Room 211).

|                                |                             |
|--------------------------------|-----------------------------|
| <b>C201002-2</b>               | <b>ST04 – East Entrance</b> |
| Qualitative Condition Rating:  | Poor                        |
| Maintenance Deficiency Rating: | Critical                    |

|   |                          |                      |
|---|--------------------------|----------------------|
| <b>C30</b>  | <b>INTERIOR FINISHES</b> |                      |
|   | <b>C3010</b>             | <b>Wall Finishes</b> |
| <p>The canoe club building has several different wall finishes in varying conditions. Wall finishes include painted tongue-and-groove wood paneling, stained vertical groove paneling, plaster, painted cloth, and exposed framing and sheathing. Generally the wall finishes are in fair to good condition with some areas of failing paint finish or broken or missing boards. Some areas of wall finishes have been removed for structural investigation. The wall material in these areas will be re-installed or replaced during rehabilitation.</p> |                          |                      |



Plaster wall finish in the Grill Room (Room 105). Does not include mural area.



A piece of painted wall fabric is torn on a wall in the Ballroom (Room 201) which reveals the beaded board paneling underneath.

|                                |                      |
|--------------------------------|----------------------|
| <b>C3010</b>                   | <b>Wall Finishes</b> |
| Qualitative Condition Rating:  | FAIR                 |
| Maintenance Deficiency Rating: | Minor                |


|  |                |                                   |
|--|----------------|-----------------------------------|
|  | <b>C301099</b> | <b>Wall Frieze (Mural Panels)</b> |
|--|----------------|-----------------------------------|

The Grill Room features a cartoon wall frieze consisting of a series of painted panels hung on the interior wall surface (approximately 28 – 34 pieces); no inventory or analysis was conducted of the panels. They feature a scene depicting the Canoe Club membership in its early days and were painted by Washington, D.C. Evening Star cartoonist Felix Mahoney. It is specifically mentioned in the National Register Nomination. These wall panels were individually photographed as part of the NPS documentation of the building by the Historic American Buildings Survey and carry file number DC-876-30 (CT) to 38 (CT). Several of the panels have been removed from the Grill Room since the HABS photographs were taken. See Appendix E for HABS documentation.



An example of one panel of the cartoon wall frieze mural. As the panel was determined to not be included as a character-defining feature (as it is not part of the building fabric) or initially included in the condition assessment, it was neither measured nor inventoried. The substrate is a type of early Masonite-like wallboard (or perhaps a painting substrate – an artist’s medium) but it was not analyzed, nor was the paint analyzed. It is known (Note in the NR) that it was “touched-up” in 1981-82 by Charles W. Lundmark.

|                                |                                   |
|--------------------------------|-----------------------------------|
| <b>C301099</b>                 | <b>Wall Frieze (Mural Panels)</b> |
| Qualitative Condition Rating:  | POOR                              |
| Maintenance Deficiency Rating: | Serious                           |


|   | <b>C3020</b> | <b>Floor Finishes</b> |
|---|--------------|-----------------------|
| <p>The floor finishes in the canoe club building include unfinished concrete, wood strip flooring, ceramic tile, and plywood. Generally the floor finishes are in fair condition. The finish on the wood flooring is worn and scratched from years of foot traffic. The concrete floors in the boat storage areas have cracks in some areas. Also, several large sections of concrete floor have been sawcut and removed as well as cores drilled to inspect the floor and foundation conditions.</p> |              |                       |
|  <p>Typical wood flooring in the Ballroom (Room 201) on the second floor.</p>  |              |                       |



A section of concrete floor saw cut and removed in the West Boat Storage Area (Room 101) to investigate the subfloor and foundation conditions.

|                                |                       |
|--------------------------------|-----------------------|
| <b>C3020</b>                   | <b>Floor Finishes</b> |
| Qualitative Condition Rating:  | FAIR                  |
| Maintenance Deficiency Rating: | Serious               |



|   | <b>C3030</b> | <b>Ceiling Finishes</b> |
|---|--------------|-------------------------|
| <p>The ceiling finishes in the canoe club building include painted bead board, painted tongue-and-groove paneling, and exposed framing. Generally the ceiling finishes are in fair condition with some cracked boards and localized areas of failing paint finish. Several sections of ceiling boards have been removed in various areas for structural investigation. These materials have been retained and are available for reinstallation or repair during an overall building rehabilitation.</p> |              |                         |
|  <p>Painted tongue-and-groove paneling on the ceiling in the Main Hall (Room 104) on the first floor (note mold and mildew).</p>   |              |                         |



The Ballroom (Room 201) has painted beaded board paneling on the ceiling. Note loose and separating elements.

|                                |                         |
|--------------------------------|-------------------------|
| <b>C3030</b>                   | <b>Ceiling Finishes</b> |
| Qualitative Condition Rating:  | FAIR                    |
| Maintenance Deficiency Rating: | Serious                 |

End of Chapter 4, Part C10 – Interiors.

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|  |  |   |   |
|--|--|---|---|
| <b>D</b>   | <b>SERVICES</b> - NOTE: The Plumbing system was observed as part of the interior condition assessment, but was not rated for code compliance purposes it is generally obsolete and non-compliant. It will likely be removed and replaced during a general building rehabilitation in any future reuse of the building. |   |   |
|  | <b>D20</b>   | <b>PLUMBING</b> – All water supply and waste items within the building. |   |
|  |  | <b>D2010</b>  | <b>Plumbing Fixtures</b> – All terminal devices on the domestic plumbing system which have water supplied to the fixture. |
| The extant plumbing fixtures located in the building are inoperable or obsolete. New fixtures will need to be installed during rehabilitation. |  |   |   |
| D2010  |  | PLUMBING FIXTURES   |   |
| Qualitative Condition Rating   |  | Not Rated (NR)  |   |
| Maintenance Deficiency Rating  |  | Not Rated (NR)  |   |

|  |  |                             |                                    |
|--|--|-----------------------------|------------------------------------|
|  |  | <b>D2020</b>                | <b>Domestic Water Distribution</b> |
| The building has used a seasonal water distribution system, pipes are not insulated and building is not heated in winter months. System was operational until recently. It has not been tested as part of this assessment. |  |                             |                                    |
| D2020  |  | DOMESTIC WATER DISTRIBUTION |                                    |
| Qualitative Condition Rating   |  | Not Rated (NR)              |                                    |
| Maintenance Deficiency Rating  |  | Not Rated (NR)              |                                    |

|  |  |                |                       |
|--|--|----------------|-----------------------|
|  |  | <b>D2030</b>   | <b>Sanitary Waste</b> |
| The building has used a seasonal sanitary waste line or system. Sanitary waste lines and sewer connections will have to be tested during rehabilitation. System was operational until recently. It has not been tested as part of this assessment. |  |                |                       |
| D2030  |  | SANITARY WASTE |                       |
| Qualitative Condition Rating   |  | Not Rated (NR) |                       |
| Maintenance Deficiency Rating  |  | Not Rated (NR) |                       |

|  |            |  |  |
|--|------------|--|--|
|  | <b>D30</b> | <b>HVAC Systems</b> – All equipment, distribution systems, controls, and energy supply systems required by the heating, ventilating, and air conditioning system(s). |  |
| There is no building wide heating or cooling system. Although possibly outfitted with a partial circulating hot water system using radiators (HABS) when constructed, the only extant source of heat in the building is a seasonal wood stove located in the Grill Room on the Ground Level. |            |  |  |

The recently completed *Fire & Life Safety Assessment* by The Protection Engineering Group (TPEG) indicates the possible use of a wood stove in the Grill Room on the first floor (referred to as the gallery in the TPEG report). It states, “what appears to be a code compliant, modern double-wall type flue that extends above the roof line”. There has been no physical evidence during the field work period of this report (Nov 2013 – March 2014) that the wood stove has been employed.

Other sources of seasonal heat include portable electric heaters.



View of extant wood stove in Grill Room with dismantled stove pipe (11/22/13 HPTC).



View of external wood stove flue (12/20/13 HPTC).

|                               |                     |
|-------------------------------|---------------------|
| D30                           | HVAC SYSTEMS        |
| Qualitative Condition Rating  | Not Applicable (NA) |
| Maintenance Deficiency Rating | Not Applicable (NA) |

NOTE: Fire Protection Systems and the Electrical Service have been assessed as part of the engineering contract to study the building. Refer to the *Fire & Life Safety Assessment, Washington Canoe Club* by The Protection Engineering Group (TPEG), dated March 2014. Other aspects of this report include occupancy, egress and findings/ analysis of hazards, conclusions and recommendations. Where possible (and/ or applicable) recommendations have been referenced in this HSAR.

|  |              |   |
|--|--------------|---|
|  | <b>D40</b>   | <b>Fire Protection Systems</b> – Includes standard and special fire protection systems  |
|  |              | NOTE: This section (only) provided by The Protection Engineering Group.   |
|  | <b>D4010</b> | <b>Suppression System (Sprinklers)</b> – includes the water supply equipment and related piping from equipment to the sprinkler head devices. |
| Washington Canoe Club does not contain a suppression system. |              |   |
| Qualitative Condition Rating                                 |              | POOR  |
| Maintenance Deficiency Rating                                |              | Critical  |

|  |                |   |
|--|----------------|---|
|  | <b>D4030</b>   | <b>Fire Protection Specialties</b> – includes fire extinguishing devices  |
|  | <b>D4030-1</b> | <b>Fire Extinguishing Devices</b> – includes all types of fire extinguishers, the brackets, sleeves and supporting devices. |



Photo by TPEG.



Photo by TPEG.

The WCC is equipped with ABC dry chem portable fire extinguishers.



Photo by TPEG.



Photo by TPEG.

(Above photos show) Portable ABC dry chemical fire extinguisher that has not been serviced since 2009. Extinguishers should be maintained on an annual basis.

|                               |          |
|-------------------------------|----------|
| Qualitative Condition rating  | POOR     |
| Maintenance Deficiency Rating | Critical |

|  |                |   |
|--|----------------|---|
|  | <b>D4090</b>   | <b>Other Fire Protection Systems</b>    |
|  | <b>D4090-1</b> | <b>Battery-Operated Smoke Detectors</b> |

No working smoke or heat detectors are installed throughout the building.



Photo by TPEG.

Smoke detector base with detector not in working condition.

|                               |          |
|-------------------------------|----------|
| Qualitative Condition Rating  | POOR     |
| Maintenance Deficiency Rating | Critical |



|   |              |   |
|---|--------------|---|
|   | <b>D50</b>   | <b>Electrical System</b> – This system is defined by the electric current used or regarded as a source of power.  |
| <p>The electrical system was assessed in Feb-March 2014 as part of the aforementioned Fire &amp; Life Safety Assessment by The Protection Engineering Group (TPEG). Their assessment of the electrical system will be found in their final report. In the final draft (Feb 2014) the electrical system is described as follows: “The existing electrical distribution system consists of a main panelboard and a two circuit load center. The main panelboard is located on the main (upper) level in the corridor between the Women’s Locker Room and the Women’s Lounge. It is rated 200A, single phase at 240/120 volts. It appears to be approximately 1950’s vintage. There is a 200A main circuit breaker and there are 31 branch circuit breakers. The load center is located in the Men’s Locker Room and has no markings indicating capacity. It has space for nine circuits but has only four pole circuit breakers. A few other items of note: Wiring appears to be all armored cable, much of the cabling is run exposed (unprotected), lighting is provided by a combination of fluorescent and incandescent fixtures, emergency lights and exit signs have battery back-up, only ground fault interrupting receptacles noted were on the building exterior.”</p> <p>It is also noted the 2012 National Electrical Code was used for the assessment.</p> |              |   |
| Qualitative Condition Rating  |              | POOR  |
| Maintenance Deficiency Rating   |              | Serious   |
|   | <b>D5010</b> | <b>Electrical Service &amp; Distribution</b> - Provides for all electrical devices that are required to deliver the main source of power to the facility and to distribute this power to subpanels. |
| Qualitative Condition Rating  |              | Not Individually Rated (NIR)  |
| Maintenance Deficiency Rating   |              | Not Individually Rated (NIR)  |
|   | <b>D5020</b> | <b>Lighting &amp; Branch Wiring</b> - Lighting systems including light fixtures and devices, i.e. switches, receptacles, and equipment connections.   |
| Qualitative Condition Rating  |              | Not Individually Rated (NIR)  |
| Maintenance Deficiency Rating   |              | Not Individually Rated (NIR)  |
|   | <b>D5030</b> | <b>Communications &amp; Security</b> - Includes provisions for communication devices and alarm protection systems.  |
| Non extant within WCC building.   |              |   |
| Qualitative Condition Rating  |              | Not Applicable (NA)   |
| Maintenance Deficiency Rating   |              | Not Applicable (NA)   |



|                                 |                     |                                       |
|---------------------------------|---------------------|---------------------------------------|
|                                 | <b>D5030-1</b>      | <b>Fire Alarm Notification System</b> |
| Non extant within WCC building. |                     |                                       |
| Qualitative Condition Rating    | Not Applicable (NA) |                                       |
| Maintenance Deficiency Rating   | Not Applicable (NA) |                                       |

|                                 |                     |                                  |
|---------------------------------|---------------------|----------------------------------|
|                                 | <b>D5030-3</b>      | <b>Telecommunications System</b> |
| Non extant within WCC building. |                     |                                  |
| Qualitative Condition Rating    | Not Applicable (NA) |                                  |
| Maintenance Deficiency Rating   | Not Applicable (NA) |                                  |

|                                 |                     |                                   |
|---------------------------------|---------------------|-----------------------------------|
|                                 | <b>D5030-5</b>      | <b>Intercommunications System</b> |
| Non extant within WCC building. |                     |                                   |
| Qualitative Condition Rating    | Not Applicable (NA) |                                   |
| Maintenance Deficiency Rating   | Not Applicable (NA) |                                   |

|                                 |                     |                        |
|---------------------------------|---------------------|------------------------|
|                                 | <b>D5030-8</b>      | <b>Security System</b> |
| Non extant within WCC building. |                     |                        |
| Qualitative Condition Rating    | Not Applicable (NA) |                        |
| Maintenance Deficiency Rating   | Not Applicable (NA) |                        |

|  |                |                                       |
|--|----------------|---------------------------------------|
|  | <b>D5090</b>   | <b>Other Electrical Systems</b>       |
|  | <b>D5090-2</b> | <b>Emergency Lighting &amp; Power</b> |
| From Fire & Life Safety Assessment, page 15: The emergency lights and exit signs have battery back-ups but only 30% functioned when tested. This may be because the WCC is not heated and the batteries are compromised or they may not function at all. |                |                                       |
| Qualitative Condition Rating   | POOR           |                                       |
| Maintenance Deficiency Rating  | Serious        |                                       |

|  |  |                                    |
|--|--|------------------------------------|
|  | <b>D5090-4</b>   | <b>Lightning Protection System</b> |
| <p>There is no lightning protection system located at the building. Historically there may have been a simplified point and cable system (although there is no physical evidence).</p> |  |                                    |
|  <p>View of roof looking west with no evidence of lightning protection system.</p>                    |  <p>View of roof looking east with no evidence of lightning protection system.</p> |                                    |
| <p>Qualitative Condition Rating</p>  |  | <p>POOR</p>                        |
| <p>Maintenance Deficiency Rating</p>   |  | <p>Critical</p>                    |

End of Chapter 4, Part D – Services.

|          |                      |                        |                      |
|----------|----------------------|------------------------|----------------------|
| <b>G</b> | <b>Building Site</b> |                        |                      |
|          | <b>G90</b>           | <b>Other Site Work</b> |                      |
|          |                      | <b>G9087</b>           | <b>Site Drainage</b> |

Site drainage concerns include the north wall of the building where the perimeter grade is adjacent to the foundation wall; there is no apparent drainage system at this location. Continuous drainage through the wall is discharged via a series of troughs cut into the concrete floor slab. These troughs carry the drainage water through the building, across the concrete apron between the river elevation of the building and the shore of the river. It appears to daylight directly at the shore line.



South elevation with concrete apron installed between building and river shore (4/19/13 HPTC).





Detail at SW corner with drainage trough cut into concrete slab with water discharging from north elevation area (4/19/13 HPTC).



View of interior NW corner of building at ground level with drainage troughs cut into floor slab against north (rear) wall and west (left) wall of building (11/05/13, HPTC).



View of concrete apron south of building showing drainage troughs running from the building exterior to the river shore (11/05/13, HPTC).

|  |  |
|--|--|
|         |    |
| <p>North elevation and Capital Crescent Trail adjacent to building. (4/19/13, HPTC).</p> | <p>Excavation along north elevation reveals lack of waterproofing and drainage system at this foundation area. (11/07/13, HPTC).</p> |
| <p>Qualitative Condition Rating</p>  | <p>POOR</p>  |
| <p>Maintenance Deficiency Rating</p>   | <p>Serious</p>   |

End of Chapter 4, Part G – Building Site.

| <b>Summary of Condition Assessment Ratings (Table)</b> |                     |            |  |                      |                   |
|--|---------------------|------------|--|----------------------|-------------------|
| UNIFORMAT II Outline Data                              |                     |            |  | Condition Assessment |                   |
| Category   | Topic               | Code       | Subtopic   | Condition Rating     | Deficiency Rating |
| <b>A</b>   | <b>Substructure</b> |            |  |                      |                   |
| A10  | Foundations         |            |  |                      |                   |
|  | A1010               |            | Standard Foundations   |                      |                   |
|  |                     | A1010-1    | Main Block Foundations                                       | NR (Fair)            | NR (Serious)      |
|  |                     | A1010-2    | East Addition Foundation                                     | NR (Fair)            | NR (Serious)      |
|  |                     | A1010-3    | Chimney Foundations  | NR                   | NR                |
|  |                     | A1010-4    | Historic Foundation  | NR                   | NR                |
|  | A1030               |            | Standard Slab On Grade                                       |                      |                   |
|  |                     | A1030-1    | Main Block Floor Slab  | FAIR                 | Minor             |
|  |                     | A1030-2    | East Addition Floor Slab                                     | FAIR                 | Minor             |
|  |                     |            |  |                      |                   |
|  |                     | A103006    | Foundation Drainage  | POOR                 | Serious           |
| <b>B</b>   | <b>Shell</b>        |            |  |                      |                   |
| B10  | Superstructure      |            |  |                      |                   |
|  | B1010               |            | Floor Construction   |                      |                   |
|  |                     | B101001-1a | First-Floor Structural Frame (Main Block – Phase 1)          | NA                   | NA                |
|  |                     | B101001-1b | First-Floor Structural Frame (Main Block – Phase 2)          | NA                   | NA                |
|  |                     | B101001-1c | First-Floor Structural Frame (Main Block – East Addition)    | NA                   | NA                |
|  |                     | B101001-2a | Second-Floor Structural Frame (Main Block - Phase 1)         | FAIR                 | Serious           |
|  |                     | B101001-2b | Second-Floor Structural Frame (Main Block - Phase 2)         | FAIR                 | Serious           |
|  |                     | B101001-2c | Second-Floor Structural Frame (Women's Locker Room Addition) | FAIR                 | Serious           |
|  |                     | B101001-2d | Second-Floor Structural Frame (Workshop Addition)            | FAIR                 | Serious           |
|  |                     |            |  |                      |                   |
|  |                     | B101002    | Structural Interior Walls                                    |                      |                   |
|  |                     | B101002-1a | First-Floor Interior Walls (Main Block - Phase 1)            | FAIR                 | Serious           |
|  |                     | B101002-1b | First-Floor Interior Walls (Main Block - Phase 2)            | FAIR                 | Serious           |

|            |                          |            |  |            |                |
|------------|--------------------------|------------|--|------------|----------------|
|            |                          | B101002-2a | Second-Floor Interior Walls (Main Block - Phase 1)         | FAIR       | Serious        |
|            |                          | B101002-2b | Second-Floor Interior Walls (Main Block - Phase 2)         | FAIR       | Serious        |
|            |                          | B101002-2c | Second-Floor Interior Walls (Women's Locker Room Addition) | FAIR       | Serious        |
|            |                          |            |  |            |                |
|            |                          | B101004    | Balcony Construction                                       | NR (Poor)  | NR (Serious)   |
|            | <b>B1020</b>             |            | <b>Roof Construction</b>                                   |            |                |
|            |                          | B102001-1a | Main Block Hipped Roof                                     | POOR       | Critical       |
|            |                          | B102001-1b | South Cross Gable Roof                                     | NIR (Poor) | NIR (Critical) |
|            |                          | B102001-1c | Cupola Roof  | NIR (Poor) | NIR (Critical) |
|            |                          | B102001-1d | West Tower Roof  | NIR (Poor) | NIR (Critical) |
|            |                          | B102001-1e | East Tower Roof  | NIR (Poor) | NIR (Critical) |
|            |                          | B102001-2a | Women's Locker Room Gable Roof                             | FAIR       | Serious        |
|            |                          | B102001-2b | Workshop Shed Roof   | POOR       | Critical       |
|            |                          | B102001-3  | North Entry Tower Hipped Roof                              | NIR (Fair) | NIR (Serious)  |
|            |                          | B102001-4  | North Entrance Porch Roof                                  | NIR (Fair) | NIR (Serious)  |
|            |                          | B102001-5  | East Gable Cricket   | NIR (Poor) | NIR (Serious)  |
|            |                          |            |  |            |                |
|            |                          | B102099    | Other Roof Construction (Chimneys)                         |            |                |
|            |                          | B102099-1  | North Chimney (CH01)-Ballroom Fireplace                    | POOR       | Critical       |
|            |                          | B102099-2  | South Chimney (CH02)-Kitchen                               | POOR       | Critical       |
|            |                          |            |  |            |                |
| <b>B20</b> | <b>Exterior Envelope</b> |            |  |            |                |
|            | <b>B2010</b>             |            | <b>Exterior Walls</b>                                      |            |                |
|            |                          | B201001    | Exterior Skin  | POOR       | Serious        |
|            |                          | B201005    | Exterior Louvers & Screens                                 |            |                |
|            |                          | B201005-1  | Cupola Louver Panels                                       | FAIR       | Serious        |
|            |                          | B201005-2  | Mothball Exterior Panels                                   | GOOD       | Minor          |
|            |                          | B201007    | Balcony Walls & Handrails                                  | POOR       | Critical       |
|            |                          | B201008    | Exterior Soffits   | FAIR       | Serious        |
|            |                          | B201008-1  | Main Hipped Roof Soffit                                    | FAIR       | Serious        |
|            |                          | B201008-2  | Cupola Roof Soffit   | POOR       | Serious        |
|            |                          | B201008-3  | West Tower Roof Soffit                                     | POOR       | Serious        |
|            |                          | B201008-4  | East Tower Roof Soffit                                     | FAIR       | Serious        |
|            |                          | B201008-5  | Women's Locker Room Gable Roof Soffit                      | POOR       | Serious        |

|                    |       |            |   |      |          |
|--------------------|-------|------------|---|------|----------|
|                    |       | B201008-6  | East Boat Storage Area<br>Shed Roof Soffit                    | FAIR | Serious  |
|                    |       | B201008-7  | North Tower Hipped Roof<br>Soffit                             | POOR | Critical |
|                    | B2020 |            | Exterior Windows<br>(see Window Schedule)                     |      |          |
|                    |       | B202001-1a | First-Floor Windows<br>(Main Block – Phase 1)                 | POOR | Serious  |
|                    |       | B202001-1b | First-Floor Windows<br>(Main Block – Phase 2)                 | GOOD | Minor    |
|                    |       | B202001-2a | Second-Floor Windows<br>(Main Block – Phase 1)                | FAIR | Serious  |
|                    |       | B202001-2b | Second-Floor Windows<br>(Main Block – Phase 2)                | FAIR | Serious  |
|                    |       | B202001-2c | Second-Floor Windows<br>(Women’s Locker Room<br>Addition)     | FAIR | Serious  |
|                    |       | B202001-2d | Second-Floor Windows<br>(Workshop Addition)                   | FAIR | Serious  |
|                    |       | B202001-3a | Third-Floor Windows<br>(West Dormer)                          | POOR | Serious  |
|                    |       | B202001-3b | Third-Floor Windows<br>(West Tower)                           | POOR | Serious  |
|                    |       | B202001-3c | Third-Floor Windows<br>(East Tower)                           | FAIR | Minor    |
|                    |       | B202001-3d | Third-Floor Windows<br>(North Tower)                          | POOR | Serious  |
|                    |       | B202001-3e | Third-Floor Windows<br>(South Gable)                          | FAIR | Minor    |
|                    | B2030 |            | Exterior Doors<br>(see Door Schedule)                         |      |          |
|                    |       | B203001    | Glazed Doors  | FAIR | Serious  |
|                    |       | B203002    | Solid Doors   | FAIR | Serious  |
|                    |       | B203004    | Overhead and Roll-up<br>Doors                                 | GOOD | Minor    |
| <b>B30 Roofing</b> |       |            |   |      |          |
|                    | B3010 |            | Roof Coverings  |      |          |
|                    |       | B301001    | Roof Finishes (overall)                                       | FAIR | Serious  |
|                    |       | B301001-1  | Main Block Hipped Roof<br>Finish: 5V Crimp Metal<br>Panels    | FAIR | Serious  |
|                    |       | B301001-2  | South Cross Gable Roof<br>Finish: 5V Crimp Metal<br>Panels    | FAIR | Serious  |
|                    |       | B301001-3  | West Dormer Roof Finish:<br>5V Crimp Metal Panels             | FAIR | Serious  |
|                    |       | B301001-4  | East Gable Cricket and<br>Extension: 5V Crimp Metal<br>Panels | FAIR | Serious  |



|          |                       |            |  |      |          |
|----------|-----------------------|------------|--|------|----------|
|          |                       | B301001-5  | Cupola Roof Finish:<br>Mineral Surface Roll<br>Roofing                                 | POOR | Serious  |
|          |                       | B301001-6  | West Tower Roof Finish:<br>Mineral Surface Roll<br>Roofing                             | POOR | Serious  |
|          |                       | B301001-7  | East Tower Roof Finish:<br>Mineral Surface Roll<br>Roofing                             | POOR | Serious  |
|          |                       | B301001-8  | Women's Locker Room<br>Addition Gable Roof Finish:<br>5V Crimp Metal Panel             | POOR | Serious  |
|          |                       | B301001-9  | Workshop Shed Roof<br>Finish:<br>5V Crimp Metal Panel                                  | POOR | Serious  |
|          |                       | B301001-10 | North Tower Hipped Roof<br>Finish: Mineral Surface Roll<br>Roofing                     | POOR | Serious  |
|          |                       | B301001-11 | North Porch Shed Roof<br>Finish:<br>Mineral Surface Roll<br>Roofing                    | POOR | Serious  |
|          |                       |            |  |      |          |
|          |                       | B301004    | Flashing & Trim  |      |          |
|          |                       | B301004-1a | North Chimney Flashing<br>(CH01)   | POOR | Critical |
|          |                       | B301004-1b | South Chimney Flashing<br>(CH02)   | POOR | Critical |
|          |                       | B301004-2  | Main Block Hipped Roof<br>Flashing   | POOR | Serious  |
|          |                       | B301004-3  | Cupola Flashing  | POOR | Serious  |
|          |                       | B301004-4  | West Tower Flashing  | POOR | Serious  |
|          |                       | B301004-5  | East Tower Flashing  | POOR | Serious  |
|          |                       | B301004-6  | North Tower Flashing   | POOR | Serious  |
|          |                       | B301004-7  | Additional Roof Flashing   | POOR | Serious  |
|          |                       |            |  |      |          |
|          |                       | B301005    | Gutters & Downspouts   | POOR | Critical |
| <b>C</b> | <b>Interiors</b>      |            |  |      |          |
| C10      | Interior Construction |            |  |      |          |
|          | C1010                 |            | Partitions (see B101002 Structural Interior Walls and<br>C3010 Interior Wall Finishes) |      |          |
|          | C1020                 |            | Interior Doors<br>(see Door Schedule)  |      |          |
|          |                       | C102001    | Standard Interior Doors  | FAIR | Serious  |
|          | C1030                 |            | Fittings   |      |          |
|          |                       | C103009    | Cabinets   |      |          |
|          |                       | C103009-1  | Ballroom Fireplace<br>Cabinets   | POOR | Minor    |
|          |                       | C103009-2  | Board Room Built-In<br>Cabinet   | FAIR | Minor    |

|     |                   |           |                                    |      |          |
|-----|-------------------|-----------|------------------------------------|------|----------|
| C20 | Stairs            |           |                                    |      |          |
|     | C2010             |           | Stair Construction                 |      |          |
|     |                   | C201001   | Interior Stair Structure           |      |          |
|     |                   | C201001-1 | ST01 - West Boat Storage           | POOR | Critical |
|     |                   | C201001-2 | ST02 – Main Hall                   | FAIR | Critical |
|     |                   | C201001-3 | ST05 – Men's Locker Room Mezzanine | FAIR | Serious  |
|     |                   | C201002   | Exterior Stair Structure           |      |          |
|     |                   | C201002-1 | ST03 – North Porch Entrance        | POOR | Critical |
|     |                   | C201002-2 | ST04 – East Entrance               | POOR | Critical |
| C30 | Interior Finishes |           |                                    |      |          |
|     | C3010             |           | Wall Finishes                      | FAIR | Minor    |
|     |                   | C301099   | Wall Frieze (Mural Panels)         | POOR | Serious  |
|     | C3020             |           | Floor Finishes                     | FAIR | Serious  |
|     | C3030             |           | Ceiling Finishes                   | FAIR | Serious  |

|          |  |         |                                   |           |           |
|----------|--|---------|-----------------------------------|-----------|-----------|
| <b>D</b> | <b>Services</b>  |         |                                   |           |           |
| D20      | Plumbing   |         |                                   |           |           |
|          | D2010  |         | Plumbing Fixtures                 | Not Rated | Not Rated |
|          | D2020  |         | Domestic Water Distribution       | Not Rated | Not Rated |
|          | D2030  |         | Sanitary Waste                    | Not Rated | Not Rated |
| D30      | HVAC   |         |                                   | Not Rated | Not Rated |
| D40      | Fire Protection Systems  |         |                                   |           |           |
|          | D4010  |         | Sprinklers                        | POOR      | Critical  |
|          | D4030  |         | Fire Protection Specialties       |           |           |
|          |  | D403001 | Fire Extinguishing Devices        | POOR      | Critical  |
|          | D4090  |         | Other Fire Protection Systems     |           |           |
|          |  | D4090-1 | Battery-Operated Smoke Detectors  | POOR      | Critical  |
| D50      | Electrical System (Components Not Individually Rated (NIR) by contractor.) |         |                                   | POOR      | Serious   |
|          | D5010  |         | Electrical Service & Distribution | NIR       | NIR       |
|          | D5020  |         | Lighting & Branch Wiring          | NIR       | NIR       |
|          | D5030  |         | Communications & Security         | NIR       | NIR       |
|          |  | D5030-1 | Fire Alarm Notification System    | NA        | NA        |
|          |  | D5030-3 | Telecommunications System         | NA        | NA        |
|          |  | D5030-5 | Intercommunications System        | NA        | NA        |
|          |  | D5030-8 | Security System                   | NA        | NA        |
|          | D5090  |         | Other Electrical Systems          |           |           |

|                            |                 |         |                              |      |          |
|----------------------------|-----------------|---------|------------------------------|------|----------|
|                            |                 | D509002 | Emergency Lighting and Power | POOR | Serious  |
|                            |                 | D509004 | Lightning Protection System  | POOR | Critical |
| <b>G Building Sitework</b> |                 |         |                              |      |          |
| G90                        | Other Site Work |         |                              |      |          |
|                            | G9087           |         | Site Drainage                | POOR | Serious  |

NOTE: For NPS Standards, Guidelines and Definitions see Chapter 3.

End of Chapter 4 – Condition Assessment.

## CHAPTER 5

### Introduction

The following recommended treatments are intended to repair, maintain and/ or preserve the character-defining features of the Washington Canoe Club building with the least degree of intervention while elevating the Facility Condition Index ratings to “good.” These treatments include limited replacement in-kind as defined by *The Secretary of the Interior’s Standards for the Treatment of Historic Properties*. Appendix A of this report contains definitions of various preservation treatments.

The suggested use for the building is continued use as a canoe storage, repair, and launching facility. Building code upgrades are needed to allow continued use of the interior spaces for canoe club social activities and gatherings. Any change in the use of interior spaces will take into consideration preservation of character-defining features.

The recommended treatment is maintaining the interim stabilization with short term repairs and preservation maintenance followed by a comprehensive rehabilitation which would return the building to a good, usable condition while preserving the character-defining features and National Register criterion.

### Recommended Treatments for Continued Stabilization & Mothballing

The Washington Canoe Club building was structurally stabilized and mothballed by the NPS between 2009 and 2011. Due to potentially unsafe conditions within the building, limited access has been provided to the East Boat Storage Area on the first floor only since that time. Access is also provided to the immediate grounds, the floating docks, and the river.

The remainder of the building has been vacated for several years and has lacked routine maintenance and cyclical repairs (other than mothball activities by NPS). Overall, the building is in **poor** condition with some features in fair or good condition. An enhanced stabilization treatment plan should be implemented within one year. Continued maintenance of the extant mothballing treatment and structural stabilization is the recommended treatment during this interim time period.

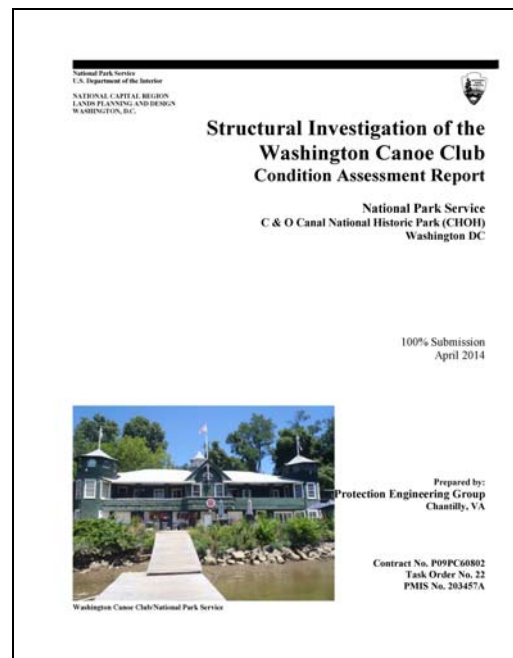
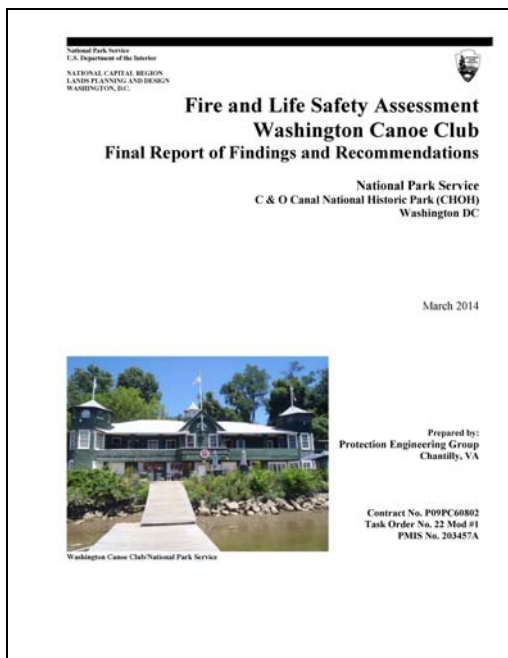
Immediate steps which should be taken are outlined in the following section: **Continued Stabilization: Prioritized Treatment List**. These stabilization treatments are intended to be immediate repairs for the building (within one [1] year) to prevent further damage and deterioration. The continued

stabilization treatments are meant to be followed by rehabilitation and permanent repairs within 3 to 5 years. Interim treatments may be designed to last for a longer period of time (5 to 10 years) if no use is imminent or if the overall rehabilitation period continues for a longer period of time.

Additional investigative engineering work was commissioned by the NPS as part of the HSAR project. Extant NPS regional office (NCRO) contracts were utilized to engage professional engineering firms with previous knowledge of the Washington Canoe Club building. Through this effort two (2) additional reports were completed. Both are supplemental to work completed within the past 5 years when full access to the structure was not possible. These reports, both fully reviewed through NPS processes, have been appended to the HSAR but also stand alone as independent engineering studies.

Contents of these reports have not been copied into the HSAR but are selectively summarized in the Recommended Treatment sections. Specific references are made to either the:

- *Fire and Life Safety Assessment, Washington Canoe Club, Report of Findings and Recommendations.* Prepared by The Protection Engineering Group, Chantilly, VA, March 2014.
- *Structural Investigation of the Washington Canoe Club Condition Assessment Report.* Prepared by The Protection Engineering Group, Chantilly, VA, April 2014. The structural assessment report and recommendations were conducted by McMullan & Associates Consulting Engineers.



| <b>CONTINUED STABILIZATION: Prioritized Recommended Treatment List</b>   |                |         |                      |
|--|----------------|---------|----------------------|
| UNIFORMAT II Outline Data  |                |         |                      |
| Category   | Topic          | Code    | Subtopic             |
| B10  | Superstructure | B102099 | Chimneys             |
| Document and dismantle the brick masonry chimneys above the roof line and provide temporary patching of roof surfaces. Salvage and store existing brick for chimney reconstruction.  |                |         |                      |
| B10  | Roofing        | B301001 | Roof Finishes        |
| Any holes or openings in the roof should be temporarily repaired or patched to prevent further water infiltration – this will require a detailed inspection of the roof surfaces. All flashings should be repaired or patched as called out in the condition assessment report. This repair may be temporary in nature as the entire roof should be replaced within 3 to 5 years.  |                |         |                      |
| D50  | Electrical     | D509004 | Lightning Protection |
| <p>The building currently does not have a lightning protection system. A permanent UL-rated lightning protection system should be installed on the extant roof system in a demountable manner to allow for eventual replacement of the roof surfaces, flashing and underlying components. Design features should include exposed downlead cables and the use of minimally-sized air terminals (government points). Penetrations through the roof covering should not be allowed. Submittals should be required from installers and include the proposed layout plan for installation for review by project architects.</p> <p>Layout should be approved by either a Registered Architect or a Professional Engineer familiar with the installation of lightning protection systems on historic buildings.</p> <p>The professional standard for lightning protection systems may be obtained from the National Fire Protection Association (NFPA) <i>Standard 780 – Standard for the Installation of Lightning Protection Systems</i>. (www.nfpa.org)</p> <p>Additional commercial information re: lightning protection systems is available at <a href="http://www.ipclp.com/html/contact.html">http://www.ipclp.com/html/contact.html</a></p> |                |         |                      |

|  |                         |         |                            |
|--|-------------------------|---------|----------------------------|
| B20  | Exterior Enclosure      | B2030   | Exterior Doors             |
| <p>Inspect all exterior doors and door panels and secure the panels as needed. Exterior doors should all be maintained in a closed position. All exterior doors should either be secured with secure heavy-duty exterior padlocks or interior whalers (lateral braces anchored to interior door frames) secured at top and bottom locations to prevent impact destruction of exterior doors (especially the north door facing the bike trail).</p>   |                         |         |                            |
| D40  | Fire Protection Systems | D403001 | Fire Extinguishing Devices |
| <p>All fire extinguishing devices should be replaced with fully charged units as per the <i>Fire and Life Safety Assessment Report (March 2014)</i>: Fire extinguishers should be maintained annually on a service contract; and current extinguishers have not been maintained since 2009. Consult with a Fire Protection Engineer or local fire authority to provide appropriate type and number of portable fire extinguishers for the interim (non-freezing weather – possibly recharge extant units and add additional units) time period and to add units for unheated conditions.</p>   |                         |         |                            |
| D50  | Electrical              |         | Electrical System          |
| <p>Disconnect the existing electrical service and remove the service meters. Provide new temporary electrical service with exterior disconnect and meter mounted on a pedestal away from building. See recommendations in <i>Fire &amp; Life Safety Assessment report (March 2014)</i>.</p>  |                         |         |                            |
| D50  | Electrical              | D5030   | Electrical System          |
| <p>Communications and Security - includes temporary fire/ smoke/ heat detection devices and alarm system, and temporary security devices (perimeter and/ or motion) and alarm system on temporary electrical supply.</p> <p>These temporary systems should be installed throughout the building to provide an adequate level of coverage during an interim mothball period. All connecting wiring should be exposed and connected to devices mounted on portable structures installed within the interior spaces (such as tripods). Temporary devices should communicate (report alarms) with NPS Central Dispatch or other community emergency services providers need to be established. Meetings should be held with responders to plan service delivery and not inadvertently damage historic materials.</p> |                         |         |                            |

|  |                               |       |  |
|--|-------------------------------|-------|--|
| B20  | Exterior Enclosure            | B2020 | Exterior Windows   |
| Inspect all exterior window panels and secure the panels and interior screening as needed. Open the sash on alternating windows to provide adequate natural cross ventilation to the interior. Block windows open without damaging sash.   |                               |       |  |
| F20  | Selective Building Demolition | F2020 | Hazardous Material Survey & Remediation (Abatement) Plan |
| A hazardous material survey should be conducted to identify all potential hazardous material such as lead-based paint and asbestos-containing materials. Recommendations for remediation and/or abatement should be executed subject to review for historic preservation compliance procedures and preservation of character-defining features. See NPS Preservation Brief No. 37 – Appropriate Methods for Reducing Lead Paint Hazards in Historic Buildings, for general guidance on retention of historic fabric. |                               |       |  |

Some stabilization (mothball) treatment tasks, as outlined above, will contribute to the permanent long-term preservation of the building. Others treatments are temporary in nature and will be replaced with more substantial or permanent materials during the rehabilitation process – which normally follows the stabilization and mothball treatment stage by several years. These long-term preservation treatments are documented in the Rehabilitation Recommended Treatments Summary Table.

During the mothball period a preservation maintenance program should be established to maintain the mothballed structure and the temporary structural support system. This will assure essential routine maintenance work tasks are identified, scheduled and performed. The plan should clarify who is responsible for maintenance of the building’s historic fabric preservation.



## **General Building Security**

Although not addressed specifically as part of the assessment, general building security is an important point to consider in long term care of structures. Any building not in active use is considered to be vulnerable to damage and vandalism. Consideration should be given to securing the building as much as possible to prevent unwanted entry. All exterior doors should be secured and locked with heavy duty deadbolts or hasps and padlocks.

## **Hazardous Materials & Historic Buildings**

Refer to NPS Preservation Brief No. 37 for a general warning about hazardous materials: Asbestos-Containing Materials (ACM) and Lead Based Paint (LBP), the two most common.

- ACM possibilities: pipe insulation, loose fill insulation, furnace wrap or plaster, wall and ceiling plaster, floor tiles and sheet goods floor covers, adhesives and mastics, etc.
- LBP possibilities: all architectural trim especially windows and doors, exterior painted woodwork especially architectural trim, etc.

A hazardous material survey and analysis is a good way to identify potential material hazards and plan for their mitigation. Mitigation also provides a safe and clean environment for those entering the building during the rehabilitation phase.

## Recommended Treatments for Rehabilitation

The recommended treatment of the Washington Canoe Club building will include preservation of character-defining features, maintenance, and possible removal of modern accretions. The interiors will be rehabilitated for improved contemporary use while preserving historic building fabric (character-defining features) to the greatest extent possible.

Of the four recognized NPS treatment standards, only **Rehabilitation** includes an opportunity to make possible an efficient contemporary use through alterations and additions and allows for the adaptive-reuse of the space.<sup>1</sup>

Therefore, the recommended overall treatment of the Washington Canoe Club building, exterior and interior, on which all other recommended treatments are based, is **Rehabilitation** as defined by *The Secretary of the Interior's Standards*.

This standard includes the replacement in-kind of selected missing character-defining features, or, if they have been detached and retained, the reinstallation of the historic materials. It encourages preservation maintenance of extant character-defining features and allows for the removal, or future reversal, of non-sympathetic treatments, materials and finishes.

Similar to the rehabilitation of the exterior, rehabilitation of the interior allows for the removal, or future reversal, of non-sympathetic treatments, materials, and finishes. Retention and preservation maintenance of remaining historic character-defining features and materials is encouraged. Where materials have been removed, the *NPS Guidelines for Rehabilitating Historic Buildings* calls for the replacement feature to be compatible with the remaining character-defining features of the historic building and the introduction of "compatible substitute materials."<sup>2</sup> Re-erection or re-installation of salvaged components is also encouraged within this treatment.

Incremental changes over several decades to functions housed within the canoe club building have resulted in numerous potentially unsafe conditions. Components of the electrical, plumbing and rudimentary heating systems, as well as life-safety systems have also been incrementally changed over time. Installation of modern building systems, or partial upgrades to older

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<sup>1</sup> The Secretary of the Interior's Standards for the Treatments of Historic Properties with Guidelines for Preserving, Rehabilitating, Restoring & Reconstructing Historic Buildings, 63.

<sup>2</sup>Standards & Guidelines, 63.

systems, has not kept up with contemporary building codes (changes in life /safety requirements).

The canoe club building will benefit from a thorough analysis of the existing structure for compliance with the National Fire Protection Association (NFPA) fire protection and cultural resource protection codes<sup>3</sup>, and the Americans with Disabilities Act Accessibility Guidelines (ADAAG) or the Architectural Barriers Act Accessibility Standards (ABAAS) guidelines (whichever applies to the property – to be determined by the AHJ), and the International Building Code (IBC) which incorporates electrical, HVAC, plumbing and other building utilities and systems.

The code analysis relates back to the occupancy classification of the building and construction type. To be meaningful, a team comprised of an architect, structural, mechanical, electrical, and mechanical engineers, fire protection engineers and life-safety engineers, should conduct the analysis. All team members should be experienced in the application of the codes to cultural properties and meet *The Secretary of the Interior's Professional Qualification Standards*<sup>4</sup>. Consultations with code and fire protection professionals are recommended.

A professional reference standard for most historic building protection systems is found in NFPA 909: *Code for the Protection of Cultural Resource Properties*<sup>5</sup> (2013); this standard consists of a comprehensive protection program. Areas addressed include fire prevention, fire protection management, security, emergency preparedness, and inspection, testing, and maintenance of protection systems. The code also covers ongoing operations and rehabilitation and acknowledges the need to preserve culturally significant and character-defining building features and sensitive, and often irreplaceable collections, as well as to provide continuity of operations. An additional standard, NFPA 914: *Code for Fire Protection of Historic Structures* (2010) focuses more specifically on the principles and practices of fire safety for historic structures and for those who operate use or visit them.

The Code Analysis should be undertaken after a user-based architectural program exercise, or Space Utilization Plan, is completed.

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<sup>3</sup> Partially completed in the March 2014 Fire & Life Safety Assessment Report.

<sup>4</sup> [http://www.nps.gov/history/local-law/arch\\_stnds\\_9.htm](http://www.nps.gov/history/local-law/arch_stnds_9.htm)

<sup>5</sup> National Fire Protection Association (NFPA), Standard 909 - Code for the Protection of Cultural Resource Properties. Quincy, MA. 2013.

### **Prioritized Maintenance Deficiency Summary Table**

The following tables place in priority order those building features with the highest level of maintenance deficiency. Starting with the rating of Poor/Critical and following through to Good/Minor in reverse order the list presents a path to good condition and lessening of the maintenance burden. It is followed by the Recommended Treatments for Rehabilitation section.

This hierarchical list divides the recommended treatments into three basic groupings based on the overall condition ratings of Good, Fair, and Poor; the NPS definitions of which are found in Chapter 3. The maintenance deficiency rating is based on the existing condition of the feature and its predicted remaining service life based on rates of deterioration.

The general preservation philosophy integrated into the HSAR is best represented by the following:

*It is better to preserve than to repair;  
Better to repair than to restore;  
Better to restore than reconstruct.*

*It is ordinarily better to retain genuine old work of several periods,  
rather than arbitrarily to "restore" the whole, by new work,  
to its aspect at a single period.<sup>6</sup>*

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<sup>6</sup> The Advisory Board on National Parks, Historic Sites, Buildings, and Monuments policy statement (1936) included in the NPS Cultural Resources Management Guideline, Introduction, page 2 (Section 3. Stewardship), Release No. 5, 1997; first written by French archeologist Adolphe-Napoleon Didron (*Bulletin Archeologique*, Vol. 1, 1839). Also referenced in *How Buildings Learn* by Stewart Brand (London: Penguin Books, 1994), 94.

| <b>Prioritized Maintenance Deficiency Summary Table - Rehabilitation</b> |                         |            |  |                      |                   |
|--|-------------------------|------------|--|----------------------|-------------------|
| UNIFORMAT II Outline Data  |                         |            |  | Condition Assessment |                   |
| Category   | Topic                   | Code       | Subtopic                                 | Condition Rating     | Deficiency Rating |
| <b>POOR</b>  |                         |            |  |                      |                   |
| B10  | Superstructure          | B102001-1a | Main Block Hipped Roof                   | POOR                 | Critical          |
| B10  | Superstructure          | B102001-1b | South Cross Gable Roof                   | POOR                 | Critical          |
| B10  | Superstructure          | B102001-1c | Cupola Roof                              | POOR                 | Critical          |
| B10  | Superstructure          | B102001-1d | West Tower Roof                          | POOR                 | Critical          |
| B10  | Superstructure          | B102001-1e | East Tower Roof                          | POOR                 | Critical          |
| B10  | Superstructure          | B102001-2b | Workshop Shed Roof                       | POOR                 | Critical          |
| B10  | Superstructure          | B102099-1  | North Chimney (CH01)- Ballroom Fireplace | POOR                 | Critical          |
| B10  | Superstructure          | B102099-2  | South Chimney (CH02)- Kitchen            | POOR                 | Critical          |
| B20  | Exterior Envelope       | B201007    | Balcony Walls & Handrails                | POOR                 | Critical          |
| B20  | Exterior Envelope       | B201008-7  | North Tower Hipped Roof Soffit           | POOR                 | Critical          |
| B30  | Roofing                 | B301004-1a | North Chimney Flashing (CH01)            | POOR                 | Critical          |
| B30  | Roofing                 | B301004-1b | South Chimney Flashing (CH02)            | POOR                 | Critical          |
| B30  | Roofing                 | B301005    | Gutters & Downspouts                     | POOR                 | Critical          |
| C20  | Interior Stairs         | C201001-1  | ST01 – West Boat Storage                 | POOR                 | Critical          |
| C20  | Exterior Stairs         | C201002-1  | ST03 – Exterior North Porch Entrance     | POOR                 | Critical          |
| C20  | Exterior Stairs         | C201002-2  | ST04 – Exterior East Entrance            | POOR                 | Critical          |
| D40  | Fire Protection Systems | D4010      | Sprinklers                               | POOR                 | Critical          |
| D40  | Fire Protection Systems | D403001    | Fire Extinguishing Devices               | POOR                 | Critical          |
| D40  | Fire Protection Systems | D4090-1    | Battery-Operated Smoke Detectors         | POOR                 | Critical          |
| D50  | Electrical System       | D509004    | Lightning Protection System              | POOR                 | Critical          |
| A10  | Foundations             | A103006    | Foundation Drainage                      | POOR                 | Serious           |
| B10  | Superstructure          | B102001-5  | East Gable Cricket Fr                    | POOR                 | Serious           |
| B20  | Exterior Envelope       | B201001    | Exterior Skin                            | POOR                 | Serious           |

| Category | Topic             | Code       | Subtopic   | Condition Rating | Deficiency Rating |
|----------|-------------------|------------|--|------------------|-------------------|
| B20      | Exterior Envelope | B201008-2  | Cupola Roof Soffit   | POOR             | Serious           |
| B20      | Exterior Envelope | B201008-3  | West Tower Roof Soffit   | POOR             | Serious           |
| B20      | Exterior Envelope | B201008-5  | Women's Locker Room Gable Roof Soffit                                | POOR             | Serious           |
| B20      | Exterior Envelope | B202001-1a | First-Floor Windows (Main Block-Phase 1)                             | POOR             | Serious           |
| B20      | Exterior Envelope | B202001-3a | Third-Floor Windows (West Dormer)                                    | POOR             | Serious           |
| B20      | Exterior Envelope | B202001-3b | Third-Floor Windows (West Tower)                                     | POOR             | Serious           |
| B20      | Exterior Envelope | B202001-3d | Third-Floor Windows (North Tower)                                    | POOR             | Serious           |
| B30      | Roofing           | B301001-5  | Cupola Roof Finish: Mineral Surface Roll Roofing                     | POOR             | Serious           |
| B30      | Roofing           | B301001-6  | West Tower Roof Finish: Mineral Surface Roll Roofing                 | POOR             | Serious           |
| B30      | Roofing           | B301001-7  | East Tower Roof Finish: Mineral Surface Roll Roofing                 | POOR             | Serious           |
| B30      | Roofing           | B301001-8  | Women's Locker Room Addition Gable Roof Finish: 5V Crimp Metal Panel | POOR             | Serious           |
| B30      | Roofing           | B301001-9  | Workshop Shed Roof Finish: 5V Crimp Metal Panel                      | POOR             | Serious           |
| B30      | Roofing           | B301001-10 | North Tower Hipped Roof Finish: Mineral Surface Roll Roofing         | POOR             | Serious           |
| B30      | Roofing           | B301001-11 | North Porch Shed Roof Finish: Mineral Surface Roll Roofing           | POOR             | Serious           |
| B30      | Roofing           | B301004-2  | Main Block Hipped Roof Flashing                                      | POOR             | Serious           |
| B30      | Roofing           | B301004-3  | Cupola Flashing  | POOR             | Serious           |
| B30      | Roofing           | B301004-4  | West Tower Flashing  | POOR             | Serious           |
| B30      | Roofing           | B301004-5  | East Tower Flashing  | POOR             | Serious           |
| B30      | Roofing           | B301004-6  | North Tower Flashing   | POOR             | Serious           |
| B30      | Roofing           | B301004-7  | Additional Roof Flashing   | POOR             | Serious           |

| Category | Topic                 | Code      | Subtopic                    | Condition Rating | Deficiency Rating |
|----------|-----------------------|-----------|-----------------------------|------------------|-------------------|
| C30      | Interior Finish       | C301099   | Wall Frieze (Mural Panels)  | POOR             | Serious           |
| D50      | Electrical System     |           |                             | POOR             | Serious           |
| D50      | Electrical System     | D509002   | Emergency Lighting & Power  | POOR             | Serious           |
| G90      | Other Site Work       | G9087     | Site Drainage               | POOR             | Serious           |
| C10      | Interior Construction | C103009-1 | Ballroom Fireplace Cabinets | POOR             | Minor             |

| <b>Prioritized Maintenance Deficiency Summary Table - Rehabilitation</b> |                   |            |  |                      |                   |
|--|-------------------|------------|--|----------------------|-------------------|
| UNIFORMAT II Outline Data  |                   |            |  | Condition Assessment |                   |
| Category   | Topic             | Code       | Subtopic   | Condition Rating     | Deficiency Rating |
| <b>FAIR</b>  |                   |            |  |                      |                   |
| C20  | Interior Stairs   | C201001-2  | ST02–Main Hall Stairs  | FAIR                 | Critical          |
| A10  | Foundations       | A1010-1    | Main Block Foundations                                       | FAIR                 | Serious           |
| A10  | Foundations       | A1010-2    | East Addition Foundation                                     | FAIR                 | Serious           |
| B10  | Superstructure    | B101001-2a | Second-Floor Structural Frame (Main Block–Phase 1)           | FAIR                 | Serious           |
| B10  | Superstructure    | B101001-2b | Second-Floor Structural Frame (Main Block–Phase 2)           | FAIR                 | Serious           |
| B10  | Superstructure    | B101001-2c | Second-Floor Structural Frame (Women's Locker Room Addition) | FAIR                 | Serious           |
| B10  | Superstructure    | B101001-2d | Second-Floor Structural Frame (Workshop Addition)            | FAIR                 | Serious           |
| B10  | Superstructure    | B101002-1a | First-Floor Interior Walls (Main Block–Phase 1)              | FAIR                 | Serious           |
| B10  | Superstructure    | B101002-1b | First-Floor Interior Walls (Main Block–Phase 2)              | FAIR                 | Serious           |
| B10  | Superstructure    | B101002-2a | Second-Floor Interior Walls (Main Block-Phase 1)             | FAIR                 | Serious           |
| B10  | Superstructure    | B101002-2b | Second-Floor Interior Walls (Main Block–Phase 2)             | FAIR                 | Serious           |
| B10  | Superstructure    | B101002-2c | Second-Floor Interior Walls (Women's Locker Room)            | FAIR                 | Serious           |
| B10  | Superstructure    | B102001-2a | Women's Locker Room Gable Roof                               | FAIR                 | Serious           |
| B10  | Superstructure    | B102001-3  | North Entry Tower Hipped Roof                                | FAIR                 | Serious           |
| B10  | Superstructure    | B102001-4  | North Entrance Porch Roof Frame                              | FAIR                 | Serious           |
| B20  | Exterior Envelope | B201005-1  | Cupola Louver Panels   | FAIR                 | Serious           |



| Category | Topic                 | Code       | Subtopic   | Condition Rating | Deficiency Rating |
|----------|-----------------------|------------|--|------------------|-------------------|
| B20      | Exterior Envelope     | B201008    | Exterior Soffits   | FAIR             | Serious           |
| B20      | Exterior Envelope     | B201008-1  | Main Hipped Roof Soffit                                      | FAIR             | Serious           |
| B20      | Exterior Envelope     | B201008-4  | East Tower Roof Soffit                                       | FAIR             | Serious           |
| B20      | Exterior Envelope     | B201008-6  | East Boat Storage Area Shed Roof Soffit                      | FAIR             | Serious           |
| B20      | Exterior Envelope     | B202001-2a | Second-Floor Interior Windows (Main Block-Phase 1)           | FAIR             | Serious           |
| B20      | Exterior Envelope     | B202001-2b | Second-Floor Interior Windows (Main Block-Phase 2)           | FAIR             | Serious           |
| B20      | Exterior Envelope     | B202001-2c | Second-Floor Interior Windows (Women's Locker Room Addition) | FAIR             | Serious           |
| B20      | Exterior Envelope     | B202001-2d | Second-Floor Interior Windows (Workshop Addition)            | FAIR             | Serious           |
| B20      | Exterior Envelope     | B203001    | Glazed Doors   | FAIR             | Serious           |
| B20      | Exterior Envelope     | B203002    | Solid Doors  | FAIR             | Serious           |
| B30      | Roofing               | B301001    | Roof Finishes  | FAIR             | Serious           |
| B30      | Roofing               | B301001-1  | Main Block Hipped Roof Finish: 5V Crimp Metal Panels         | FAIR             | Serious           |
| B30      | Roofing               | B301001-2  | South Cross Gable Roof Finish: 5V Crimp Metal Panels         | FAIR             | Serious           |
| B30      | Roofing               | B301001-3  | West Dormer Roof Finish: 5V Crimp Metal Panels               | FAIR             | Serious           |
| B30      | Roofing               | B301001-4  | East Gable Cricket and Extension: 5V Crimp Metal Panels      | FAIR             | Serious           |
| C10      | Interior Construction | C102001    | Standard Interior Doors                                      | FAIR             | Serious           |
| C20      | Interior Stairs       | C201001-3  | ST05-Men's Locker Room Stairs Mezzanine                      | FAIR             | Serious           |
| C30      | Interior Finishes     | C3020      | Floor Finishes   | FAIR             | Serious           |
| C30      | Interior Finishes     | C3030      | Ceiling Finishes   | FAIR             | Serious           |

|     |                       |            |                                   |      |       |
|-----|-----------------------|------------|-----------------------------------|------|-------|
| A10 | Foundations           | A1030-1    | Main Block Floor Slab             | FAIR | Minor |
| A10 | Foundations           | A1030-2    | East Addition Floor Slab          | FAIR | Minor |
| B20 | Exterior Envelope     | B202001-3c | Third-Floor Windows (East Tower)  | FAIR | Minor |
| B20 | Exterior Envelope     | B202001-3e | Third-Floor Windows (South Gable) | FAIR | Minor |
| C10 | Interior Construction | C103009-2  | Board Room Built-In Cabinet       | FAIR | Minor |
| C30 | Interior Finishes     | C3010      | Wall Finishes                     | FAIR | Minor |

| <b>Prioritized Maintenance Deficiency Summary Table - Rehabilitation</b> |                   |            |  |                      |                   |
|--|-------------------|------------|--|----------------------|-------------------|
| UNIFORMAT II Outline Data  |                   |            |  | Condition Assessment |                   |
| Category   | Topic             | Code       | Subtopic                                 | Condition Rating     | Deficiency Rating |
| <b>GOOD</b>  |                   |            |  |                      |                   |
| B20  | Exterior Envelope | B201005-2  | Mothball Exterior Panels                 | GOOD                 | Minor             |
| B20  | Exterior Envelope | B202001-1b | First-Floor Windows (Main Block-Phase 2) | GOOD                 | Minor             |
| B20  | Exterior Envelope | B203004    | Overhead and Roll-up Doors               | GOOD                 | Minor             |

### **Recommended Treatments Summary Table: Rehabilitation<sup>7</sup>**

The condition assessment and limited fabric investigation of the Washington Canoe Club building determined that some features were found to be in a state of considerable deterioration or non-functional (**poor**). This rating indicates these features will need to be repaired or replaced which is recognized within the definition of preservation maintenance. The remaining features were noted with moderate to low levels of deterioration (**fair or good**) and should be repaired and/ or maintained using traditional preservation techniques rather than replaced. Other features were found to be in good condition (**good**) and should continue to be maintained.

At the time of this report, some features, components and/ or systems will require wholesale replacement. In order to restore the character-defining features of the canoe club building, any non-sympathetic treatments should be replaced with more appropriate and compatible components.

The utility systems, specifically electrical and plumbing, are in need of upgrading and replacement. As such these systems are reported in poor condition. The building systems have been observed as part of the inspection but are not assessed for code compliance.

The following recommended treatments contribute to the overall rehabilitation of the canoe club building and represent the type of repair that will slow or reverse the rate of deterioration for the assigned feature. Interior treatments are independent of exterior treatments.

The outcome of these tasks is protection of the feature, repair of the feature, or replacement of the feature in an effort to return the feature, and the structure, to good condition.

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<sup>7</sup> See Chapter 3 - Standards, Guidelines and Definitions for description of terminology based on the NPS Asset Management Process (AMP) Facility Management Program (FMP) protocol nomenclature.

**WASHINGTON CANOE CLUB BUILDING**

| <b>REHABILITATION: Recommended Treatments Summary Table</b>   |                        |                   |                                     |                      |                   |
|---|------------------------|-------------------|-------------------------------------|----------------------|-------------------|
| UNIFORMAT II Outline Data   |                        |                   |                                     | Condition Assessment |                   |
| Category  | Topic                  | Code              | Subtopic                            | Condition Rating     | Deficiency Rating |
| <b>POOR</b>   |                        |                   |                                     |                      |                   |
| <b>B10</b>  | <b>Super-structure</b> | <b>B102001-1a</b> | <b>Main Block Hipped Roof Frame</b> | <b>POOR</b>          | <b>Critical</b>   |
| The structural roof frame and roof sheathing should be strengthened, repaired and/or replaced according to the recommendations of the structural engineering report including replacing damaged members, adding supplemental members, securing all roof framing to top plates, and installing plywood sheathing. (Refer to <i>Structural Investigation of the Washington Canoe Club, Condition Assessment Report, April 2014</i> ). This recommendation also applies to the following roof areas: |                        |                   |                                     |                      |                   |
| <b>B10</b>  | <b>Super-structure</b> | <b>B102001-1b</b> | <b>South Cross Gable Roof Frame</b> | <b>POOR</b>          | <b>Critical</b>   |
| See above recommendation – B102001-1a.  |                        |                   |                                     |                      |                   |
| <b>B10</b>  | <b>Super-structure</b> | <b>B102001-1c</b> | <b>Cupola Roof Frame</b>            | <b>POOR</b>          | <b>Critical</b>   |
| See above recommendation – B102001-1a.  |                        |                   |                                     |                      |                   |
| <b>B10</b>  | <b>Super-structure</b> | <b>B102001-1d</b> | <b>West Tower Roof Frame</b>        | <b>POOR</b>          | <b>Critical</b>   |
| See above recommendation – B102001-1a.  |                        |                   |                                     |                      |                   |
| <b>B10</b>  | <b>Super-structure</b> | <b>B102001-1e</b> | <b>East Tower Roof Frame</b>        | <b>POOR</b>          | <b>Critical</b>   |
| See above recommendation – B102001-1a.  |                        |                   |                                     |                      |                   |
| <b>B10</b>  | <b>Super-structure</b> | <b>B102001-2b</b> | <b>Workshop Shed Roof Frame</b>     | <b>POOR</b>          | <b>Critical</b>   |
| See above recommendation – B102001-1a.  |                        |                   |                                     |                      |                   |

|  |                          |                  |  |             |                 |
|--|--------------------------|------------------|--|-------------|-----------------|
| <b>B10</b>   | <b>Super-structure</b>   | <b>B102099-1</b> | <b>North Chimney (CH01) Ballroom Fireplace</b> | <b>POOR</b> | <b>Critical</b> |
| <p>If the chimneys are dismantled as part of the Continued Stabilization phase they will need to be reconstructed. Numerous historic images exist which depict the chimneys during the period of significance (some are included within this report). Dismantled brick should be salvaged and incorporated into rebuilt chimneys.</p> <p>If chimneys have not been dismantled the following applies: Any loose or missing mortar in the joints of the brick chimney should be replaced with appropriate new mortar that matches the original mortar in color, texture, and bonding strength, determine through a testing program. The corbelled cap of the chimney should be dismantled and reconstructed with the existing bricks and new mortar. A new cement wash should be installed on the top of the chimney. The existing metal chimney cap should be replaced with a new custom-fitted, vented, and screened non-corrosive sheet metal cap (stainless steel, copper, or galvanized metal) to prevent water and animals from entering the chimney flue.</p> <p>For examples of recommended typical chimney caps, refer to: B&amp;B Sheet Metal <a href="http://www.bbsheetmetal.com/metal-chimney-caps">www.bbsheetmetal.com/metal-chimney-caps</a></p> |                          |                  |  |             |                 |
| <b>B10</b>   | <b>Super-structure</b>   | <b>B102099-2</b> | <b>South Chimney (CH02) Kitchen</b>            | <b>POOR</b> | <b>Critical</b> |
| <p>Refer to recommended treatment for North Chimney (CH01) - Ballroom Fireplace (B102099-1).</p>   |                          |                  |  |             |                 |
| <b>B20</b>   | <b>Exterior Envelope</b> | <b>B201007</b>   | <b>Balcony Walls &amp; Handrails</b>           | <b>POOR</b> | <b>Critical</b> |
| <p>The walls of the balcony (R212) should be repaired as required. The top railing boards and trim boards should be replaced with weather-resistant wood to match the existing boards.</p> <p>The structural framing for the balcony walls should be inspected and stabilized as required when shingles are removed and repairs conducted as per the overall rehabilitation of the building (or the aforementioned structural report). The interior face (north elevation) of the balcony walls should be sheathed and shingled to match the exterior walls.</p> <p>Any warped, cracked, broken, or missing wood shingles should be replaced in-kind to match the adjacent wall shingles. Existing historic shingles (if in good condition) should be detached, vertically aligned with extant adjacent pattern and re-secured to the wall substrate. All shingles and trim should be prepared, primed, and repainted with quality exterior-grade paint.</p>   |                          |                  |  |             |                 |

|   |                          |                   |                                       |             |                 |
|---|--------------------------|-------------------|---------------------------------------|-------------|-----------------|
| <b>B20</b>  | <b>Exterior Envelope</b> | <b>B201008-7</b>  | <b>North Tower Hipped Roof Soffit</b> | <b>POOR</b> | <b>Critical</b> |
| <p>The exposed soffit on the north tower should be repaired as needed during the proposed roof repairs. The exposed rafters should be repaired or replaced to maintain the original exposed framing appearance. The exposed sections of roof sheathing should be replaced with dimensional planking to match the original construction methodology and appearance. The remainder of the concealed sheathing can be replaced with plywood sheathing (as per structural report). All soffit components should be prepared, primed, and painted to match the exterior color or other approved color.</p>   |                          |                   |                                       |             |                 |
| <b>B30</b>  | <b>Roofing</b>           | <b>B301004-1a</b> | <b>North Chimney Flashing (CH01)</b>  | <b>POOR</b> | <b>Critical</b> |
| <p>The existing chimney flashing should be removed and replaced during the roof replacement. New flashings shall be copper or other approved metal and shall be installed using traditional flashing details.</p> <p>All flashing should meet the Sheet Metal and Air Conditioners National Contractors Association (SMACNA) standard<sup>8</sup>. The traditional sheet metal flashing associated with the character-defining roof should meet the rigorous 1929 construction standards. See SMACNA 1929 Technical Manual. Traditional construction will benefit from the installation of noble heavy gauge metal flashings (copper, stainless steel, or coated copper sheet metal) when they are eventually upgraded.</p> <p>Refer to the Sheet Metal and Air Conditioning Contractors' National Association (SMACNA) website for additional information: <a href="http://www.smacna.org/bookstore">www.smacna.org/bookstore</a></p> <p>All flashings should receive regular inspections and maintenance.</p> |                          |                   |                                       |             |                 |
| <b>B30</b>  | <b>Roofing</b>           | <b>B301004-1b</b> | <b>South Chimney Flashing (CH02)</b>  | <b>POOR</b> | <b>Critical</b> |
| <p>Refer to recommended treatment for North Chimney Flashing (CH01) - (B301004-1a).</p>   |                          |                   |                                       |             |                 |
| <b>B30</b>  | <b>Roofing</b>           | <b>B301005</b>    | <b>Gutters &amp; Downspouts</b>       | <b>POOR</b> | <b>Critical</b> |
| <p>Currently no roof drainage system exists on the building. A new drainage system should be designed and installed on the building to include gutter and downspout components that are compatible with the roof types and styles. A system of half-round gutters and round downspouts is recommended. Gutters should be installed at the eaves of all sloped roofs on all elevations. Gutters are not required on the octagonal tower roofs or on the cupola roof. The downspouts should lead to subsurface drains that direct the runoff to an approved outlet area or drainage</p>   |                          |                   |                                       |             |                 |

<sup>8</sup> Standard Practice in Sheet Metal Work of the National Association of Sheet Metal Contractors of the U.S., Pittsburgh, 1929; reprinted by the Sheet Metal and Air Conditioners National Contractors Association, Merrifield, Va., 1985.

|  |                                |                  |                                    |             |                 |
|--|--------------------------------|------------------|------------------------------------|-------------|-----------------|
| <p>system. Discharge or roof runoff into the river is not recommended.</p> <p>Gutters and downspouts should receive regular maintenance, including cleaning of gutters and flushing of downspouts.</p> <p>Recommended typical supplier: Berger Building Products<br/> <a href="http://www.bergerbuildingproducts.com">www.bergerbuildingproducts.com</a></p>   |                                |                  |                                    |             |                 |
| <b>C20</b>   | <b>Interior Stair</b>          | <b>C201001-1</b> | <b>ST01 – West Boat Storage</b>    | <b>POOR</b> | <b>Critical</b> |
| <p>The stair (ST01) in the northwest corner of the West Boat Storage (Room 101) should be removed in its entirety and reconstructed according to applicable egress and building codes. The new stair shall meet all necessary requirements including stair width, tread and riser sizing, handrails, and egress signage. (Refer to the International Building Code (IBC) Chapter 10, and National Fire Protection Association (NFPA) 101: Life Safety Code).</p>   |                                |                  |                                    |             |                 |
| <b>C20</b>   | <b>Exterior Stair</b>          | <b>C201002-1</b> | <b>ST03 – North Porch Entrance</b> | <b>POOR</b> | <b>Critical</b> |
| <p>The stair (ST03) and porch at the north entrance to the building should be removed in their entirety and reconstructed according to applicable egress and building codes. If this entrance is to be used as an accessible entrance to the building, then a new stair and a ramp shall be designed and constructed to comply with the Architectural Barriers Act of 1968 (ABA), the Architectural Barriers Act Accessibility Standards (ABAAS) and the Americans with Disabilities Act Accessibility Guidelines (ADAAG). The design and construction of the stair, railings, and ramp shall be compatible with the design and materials of the Washington Canoe Club building.</p> |                                |                  |                                    |             |                 |
| <b>C20</b>   | <b>Exterior Stair</b>          | <b>C201002-2</b> | <b>ST04 – East Entrance</b>        | <b>POOR</b> | <b>Critical</b> |
| <p>The stair (ST04) at the east entrance should be removed in its entirety and reconstructed according to applicable egress and building codes. The new stair shall meet all necessary requirements including landings, stair width, tread and riser sizing, handrails, and egress signage. (Refer to the International Building Code (IBC) Chapter 10, and National Fire Protection Association (NFPA) 101: Life Safety Code).</p>  |                                |                  |                                    |             |                 |
| <b>D40</b>   | <b>Fire Protection Systems</b> | <b>D4010</b>     | <b>Sprinklers</b>                  | <b>POOR</b> | <b>Critical</b> |
| <p>A new complete automatic sprinkler system should be installed throughout the building in accordance with NFPA 13. A dry pipe type sprinkler system is recommended since the structure is not normally heated. (Refer to the <i>Fire and Life Safety Assessment, Report of Findings and Recommendations, Washington Canoe Club</i>, [March 2014]). A recommended standard reference for this type of work is the National Fire Protection Association <i>NFPA 914 – Code for Protection of Historic Structures</i> (most current edition).</p>   |                                |                  |                                    |             |                 |

|   |                                |                |   |             |                 |
|---|--------------------------------|----------------|---|-------------|-----------------|
| <b>D40</b>  | <b>Fire Protection Systems</b> | <b>D403001</b> | <b>Fire Extinguishing Devices</b>       | <b>POOR</b> | <b>Critical</b> |
| A fire protection specialist should inspect the building to determine the appropriate type, quantity, and locations of fire extinguishers for the proposed use and occupancy of the building. All extinguishers shall be inspected and recharged on a regular basis.  |                                |                |   |             |                 |
| <b>D40</b>  | <b>Fire Protection Systems</b> | <b>D4090-1</b> | <b>Battery-Operated Smoke Detectors</b> | <b>POOR</b> | <b>Critical</b> |
| Currently, the battery-powered smoke detectors located in the building are not in working condition. New heat detectors should be provided throughout the building in lieu of smoke detectors. An approved fire alarm notification system complete with audible and visual notification should be provided per NFPA 72. (Refer to the <i>Fire and Life Safety Assessment, Report of Findings and Recommendations, Washington Canoe Club, [March 2014]</i> ) and aforementioned NFPA codes, guidelines and standards.  |                                |                |   |             |                 |
| <b>D50</b>  | <b>Electrical System</b>       | <b>D509004</b> | <b>Lightning Protection System</b>      | <b>POOR</b> | <b>Critical</b> |
| <p>The Washington Canoe Club building currently does not have a lightning protection system. A permanent UL-rated lightning protection system should be installed after completion of the new roof finishes. Design features should include exposed downlead cables and the use of minimally-sized air terminals. Penetrations through the roof covering should not be allowed. Chimneys need a minimum of one terminal per chimney. Submittals shall be required from installers and include the proposed layout plan for installation. Layout should be approved by either a Registered Architect or a Professional Engineer familiar with the installation of lightning protection systems on historic buildings.</p> <p>The professional standard for lightning protection systems may be obtained from the National Fire Protection Association (NFPA) <i>Standard 780 – Standard for the Installation of Lightning Protection Systems</i>. (<a href="http://www.nfpa.org">www.nfpa.org</a>)</p> <p>Additional commercial information re: lightning protection systems is available at <a href="http://www.ipclp.com/html/contact.html">http://www.ipclp.com/html/contact.html</a></p> |                                |                |   |             |                 |
| <b>A10</b>  | <b>Foundations</b>             | <b>A103006</b> | <b>Foundation Drainage</b>              | <b>POOR</b> | <b>Serious</b>  |
| The fill behind the west, north, and east walls should be excavated and a foundation drain should be installed per the recommendations of the structural engineering report. The subsurface drain should continue on the east and west sides of the building to divert water to an approved drainage system. Waterproofing and flashing should be installed on the foundation walls during the drain installation. (Refer to <i>Structural Investigation of the Washington Canoe Club, Condition Assessment Report, April 2014</i> )  |                                |                |   |             |                 |



|  |                          |                  |                                 |             |                |
|--|--------------------------|------------------|---------------------------------|-------------|----------------|
| <b>B10</b>   | <b>Super-structure</b>   | <b>B102001-5</b> | <b>East Gable Cricket Frame</b> | <b>POOR</b> | <b>Serious</b> |
| <p>The roof framing and sheathing of the east gable cricket should be inspected and repaired as required during the roof repairs on the main block. (Refer to <i>Structural Investigation of the Washington Canoe Club, Condition Assessment Report, April 2014</i>). See above recommendation – B102001-1a.</p>   |                          |                  |                                 |             |                |
| <b>B20</b>   | <b>Exterior Envelope</b> | <b>B201001</b>   | <b>Exterior Skin</b>            | <b>POOR</b> | <b>Serious</b> |
| <p>The recommendations in the <i>Structural Investigation of the Washington Canoe Club, Condition Assessment Report</i> for the exterior walls include removal of the existing wall sheathing to allow for direct access to repair deficient wall framing and to plumb displaced walls. In order to remove the wall sheathing, the exterior skin (wood shingles) will also have to be removed. Effort should be made to salvage the existing historic wood shingles as much as possible during removal, or leave selected areas of original shingling (with red stain seen on reverse of shingle) in-situ; however some amount of damage and loss of shingles is expected.</p> <p>After the siding has been removed and the framing repairs have been completed, installation of plywood wall sheathing is recommended per the structural engineering report for increased lateral stability. The exterior shingle siding should then be re-installed to match the original appearance. Any warped, cracked, broken, or missing wood shingles should be replaced in-kind to match the adjacent wall shingles. Installation should be in accordance with current roof and exterior wall manuals (for double coverage) produced by The Cedar Shake and Shingle Bureau, <a href="http://www.cedarbureau.org">www.cedarbureau.org</a>.</p> <p>All shingles and trim should be prepared, primed, and repainted or stained to match the color that is consistent with the selected period of significance. A comprehensive paint analysis can be performed to determine the exterior paint color chronology.</p> |                          |                  |                                 |             |                |
| <b>B20</b>   | <b>Exterior Envelope</b> | <b>B201008-2</b> | <b>Cupola Roof Soffit</b>       | <b>POOR</b> | <b>Serious</b> |
| <p>The exposed soffit on the cupola should be repaired as needed during the roof repairs. The exposed rafters should be repaired or replaced to maintain the original exposed framing appearance. The exposed sections of roof sheathing should be repaired or replaced with dimensional planking to match the original appearance. All soffit components should be prepared, primed, and painted to match the exterior color or other approved color.</p>   |                          |                  |                                 |             |                |

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| <b>B20</b>  | <b>Exterior Envelope</b> | <b>B201008-3</b>  | <b>West Tower Roof Soffit</b>                     | <b>POOR</b> | <b>Serious</b> |
| <p>The exposed soffit on the towers should be repaired as needed during the roof repairs. The exposed rafters should be repaired or replaced to maintain the original exposed framing appearance. The exposed sections of roof sheathing should be repaired or replaced with dimensional planking to match the original appearance. The remainder of the concealed sheathing can be replaced with plywood sheathing. All soffit components should be prepared, primed, and painted to match the exterior color or other approved color.</p>   |                          |                   |   |             |                |
| <b>B20</b>  | <b>Exterior Envelope</b> | <b>B201008-5</b>  | <b>Women's Locker Room Gable Roof Soffit</b>      | <b>POOR</b> | <b>Serious</b> |
| <p>The exposed soffit on the gable roof of the Women's Locker Room should be repaired as needed during the roof repairs. The exposed rafters should be repaired or replaced to maintain the original exposed framing appearance. The exposed sections of roof sheathing should be repaired or replaced with dimensional planking to match the original appearance. The remainder of the roof sheathing can be replaced with plywood sheathing per the recommendations of the structural engineering report. All soffit components should be prepared, primed, and painted to match the exterior color or other approved color. (Refer to <i>Structural Investigation of the Washington Canoe Club, Condition Assessment Report, April 2014</i>)</p>   |                          |                   |   |             |                |
| <b>B20</b>  | <b>Exterior Envelope</b> | <b>B202001-1a</b> | <b>First-Floor Windows (Main Block – Phase 1)</b> | <b>POOR</b> | <b>Serious</b> |
| <p>All of the exterior wood panels covering the window openings should be removed prior to restoring the window sashes and frames. All loose or missing glazing compound on all window sashes should be replaced with new oil-based glazing compound. Any cracked, broken, or missing glass panes should be replaced in-kind. The window frame and sash components should be repaired or replaced as needed. New material should match the original material as closely as possible. The sashes, frames, and trim should be stripped of all failing paint, prepared, primed, and repainted. All existing original window hardware should be removed, cleaned, reinstalled, and adjusted to operate properly. Missing hardware should be replaced with new hardware to match the existing components. See <i>NPS Preservation Brief No. 9 – The Repair of Historic Wooden Windows</i> and the <i>National Window Preservation Standards</i> (<a href="http://WindowStandards.org">WindowStandards.org</a>) for guidance.</p> |                          |                   |   |             |                |
| <b>B20</b>  | <b>Exterior Envelope</b> | <b>B202001-3a</b> | <b>Third-Floor Windows (West Dormer)</b>          | <b>POOR</b> | <b>Serious</b> |
| <p>The wood frame, sash, and trim components of the west dormer window (W320) should be repaired or replaced as needed. All loose or missing glazing compounds should be replaced with new glazing compound. Any cracked, broken, or missing glass panes should be replaced in-kind. New material should match the original</p>   |                          |                   |   |             |                |

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| <p>material as closely as possible. The sash, frame, and trim should be stripped of all failing paint, prepared, primed, and repainted. Any existing original window hardware should be removed, cleaned, reinstalled, and adjusted to operate properly. Missing hardware should be replaced with new hardware to match the original components.</p>   |                          |                   |   |             |                |
| <b>B20</b>   | <b>Exterior Envelope</b> | <b>B202001-3b</b> | <b>Third-Floor Windows (West Tower)</b>                     | <b>POOR</b> | <b>Serious</b> |
| <p>The eight window openings in the West Tower (Room 302) should be restored to their original appearance (no sashes). All of the exterior wood panels covering the window openings should be removed and any infill framing or paneling should be removed. The frames and trim should be repaired or replaced as required. New material should match the original material as closely as possible. The frames and trim should be prepared, primed, and repainted.</p> <p>NOTE: waterproof surfaces (roofs with drainage) will have to be installed in lieu of extant floor materials (or earlier roof systems will have to be renewed) to prevent water infiltration of lower interior areas and structural components.</p> |                          |                   |   |             |                |
| <b>B20</b>   | <b>Exterior Envelope</b> | <b>B202001-3d</b> | <b>Third-Floor Windows (North Tower)</b>                    | <b>POOR</b> | <b>Serious</b> |
| <p>The two modern windows (W317, W318) on the east elevation of the North Tower should be removed and replaced with a palladian-style window to match the original window in this location (based on historical photographs). The modern slider window (W319) should be removed and the opening in-filled or a new wood window should be installed that is more compatible with the window styles of the rest of the building.</p>   |                          |                   |   |             |                |
| <b>B30</b>   | <b>Roofing</b>           | <b>B301001-5</b>  | <b>Cupola Roof Finish: Mineral Surface Roll Roofing</b>     | <b>POOR</b> | <b>Serious</b> |
| <p>Refer to the recommendations for Roof Finishes (B301001).</p>   |                          |                   |   |             |                |
| <b>B30</b>   | <b>Roofing</b>           | <b>B301001-6</b>  | <b>West Tower Roof Finish: Mineral Surface Roll Roofing</b> | <b>POOR</b> | <b>Serious</b> |
| <p>Refer to the recommendations for Roof Finishes (B301001).</p>   |                          |                   |   |             |                |
| <b>B30</b>   | <b>Roofing</b>           | <b>B301001-7</b>  | <b>East Tower Roof Finish: Mineral Surface Roll Roofing</b> | <b>POOR</b> | <b>Serious</b> |
| <p>Refer to the recommendations for Roof Finishes (B301001).</p>   |                          |                   |   |             |                |

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| <b>B30</b>   | <b>Roofing</b> | <b>B301001-8</b>  | <b>Women's Locker Room Addition<br/>Gable Roof Finish:<br/>5V Crimp Metal Panel</b> | <b>POOR</b> | <b>Serious</b> |
| Refer to the recommendations for Roof Finishes (B301001).  |                |                   |   |             |                |
| <b>B30</b>   | <b>Roofing</b> | <b>B301001-9</b>  | <b>Workshop Shed Roof Finish: 5V Crimp Metal Panel</b>                              | <b>POOR</b> | <b>Serious</b> |
| Refer to the recommendations for Roof Finishes (B301001).  |                |                   |   |             |                |
| <b>B30</b>   | <b>Roofing</b> | <b>B301001-10</b> | <b>North Tower Hipped Roof Finish: Mineral Surface Roll Roofing</b>                 | <b>POOR</b> | <b>Serious</b> |
| Refer to the recommendations for Roof Finishes (B301001).  |                |                   |   |             |                |
| <b>B30</b>   | <b>Roofing</b> | <b>B301001-11</b> | <b>North Porch Shed Roof Finish: Mineral Surface Roll Roofing</b>                   | <b>POOR</b> | <b>Serious</b> |
| Refer to the recommendations for Roof Finishes (B301001).  |                |                   |   |             |                |
| <b>B30</b>   | <b>Roofing</b> | <b>B301004-2</b>  | <b>Main Block Hipped Roof Flashing</b>  | <b>POOR</b> | <b>Serious</b> |
| <p>All flashings on the main block hipped roof should be removed and replaced during the roof replacement including hips, valleys, counter flashing and side wall flashing against the gables and towers. New flashings shall be copper or other approved metal and shall be installed using traditional flashing details. Hip and valley flashings may also include roll roofing depending on the final roof finish. All flashings should receive regular inspections and maintenance.</p> <p>All flashing should meet the Sheet Metal and Air Conditioners National Contractors Association (SMACNA) standard<sup>9</sup>. The traditional sheet metal flashing associated with the character-defining roof should meet the rigorous 1929 construction standards. See SMACNA 1929 Technical Manual. Traditional construction will benefit from the installation of noble heavy gauge metal flashings (copper, stainless steel, or coated copper sheet metal) when they are eventually upgraded.</p> <p>Refer to the Sheet Metal and Air Conditioning Contractors' National Association (SMACNA) website for additional information: <a href="http://www.smacna.org/bookstore">www.smacna.org/bookstore</a></p> |                |                   |   |             |                |

<sup>9</sup> Standard Practice in Sheet Metal Work of the National Association of Sheet Metal Contractors of the U.S., Pittsburgh, 1929; reprinted by the Sheet Metal and Air Conditioners National Contractors Association, Merrifield, Va., 1985.

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| <b>B30</b>   | <b>Roofing</b>           | <b>B301004-3</b> | <b>Cupola Flashing</b>          | <b>POOR</b> | <b>Serious</b> |
| <p>All flashings should be removed and replaced during the roof replacement including base flashing, counter flashing, and side wall flashing. New flashings shall be copper or other approved metal and shall be installed using traditional flashing details. All flashings should receive regular inspections and maintenance.</p> <p>All flashing should meet the Sheet Metal and Air Conditioners National Contractors Association (SMACNA) standard. The traditional sheet metal flashing associated with the character-defining roof should meet the rigorous 1929 construction standards. See SMACNA 1929 Technical Manual. Traditional construction will benefit from the installation of noble heavy gauge metal flashings (copper, stainless steel, or coated copper sheet metal) when they are eventually upgraded.</p> <p>Refer to the Sheet Metal and Air Conditioning Contractors' National Association (SMACNA) website for additional information: <a href="http://www.smacna.org/bookstore">www.smacna.org/bookstore</a></p> |                          |                  |                                 |             |                |
| <b>B30</b>   | <b>Roofing</b>           | <b>B301004-4</b> | <b>West Tower Flashing</b>      | <b>POOR</b> | <b>Serious</b> |
| <p>Refer to recommended treatment for Cupola Flashing (B301004-3).</p>   |                          |                  |                                 |             |                |
| <b>B30</b>   | <b>Roofing</b>           | <b>B301004-5</b> | <b>East Tower Flashing</b>      | <b>POOR</b> | <b>Serious</b> |
| <p>Refer to recommended treatment for Cupola Flashing (B301004-3).</p>   |                          |                  |                                 |             |                |
| <b>B30</b>   | <b>Roofing</b>           | <b>B301004-6</b> | <b>North Tower Flashing</b>     | <b>POOR</b> | <b>Serious</b> |
| <p>Refer to recommended treatment for Cupola Flashing (B301004-3).</p>   |                          |                  |                                 |             |                |
| <b>B30</b>   | <b>Roofing</b>           | <b>B301004-7</b> | <b>Additional Roof Flashing</b> | <b>POOR</b> | <b>Serious</b> |
| <p>Refer to recommended treatment for Cupola Flashing (B301004-3).</p>   |                          |                  |                                 |             |                |
| <b>D50</b>   | <b>Electrical System</b> |                  |                                 | <b>POOR</b> | <b>Serious</b> |
| <p>The existing electrical system including the panelboards, branch wiring, and devices have exceeded their life expectancy and are not compliant with current National Electric Code. The entire electrical system should be upgraded to include new panelboards, wiring, electrical devices, and energy-efficient lighting. All electrical devices located in the boat storage areas (Room 101 and Room 106) should be replaced with equipment rated for wet locations. (Refer to the <i>Fire and Life Safety Assessment, Report of Findings and Recommendations, Washington Canoe Club</i>, [March 2014])</p>   |                          |                  |                                 |             |                |

|   |                              |                  |                                       |             |                |
|---|------------------------------|------------------|---------------------------------------|-------------|----------------|
| <b>D50</b>  | <b>Electrical System</b>     | <b>D509002</b>   | <b>Emergency Lighting &amp; Power</b> | <b>POOR</b> | <b>Serious</b> |
| Upgrade all emergency lighting and exit signs throughout the building. Fixtures and batteries should be selected to operate sufficiently in unconditioned spaces (cold temperatures). (Refer to the <i>Fire and Life Safety Assessment, Report of Findings and Recommendations, Washington Canoe Club, [March 2014]</i> )   |                              |                  |                                       |             |                |
| <b>G90</b>  | <b>Other Site Work</b>       | <b>G9087</b>     | <b>Site Drainage</b>                  | <b>POOR</b> | <b>Serious</b> |
| Subsurface site drainage should be installed and tied into the foundation drain system to adequately divert water away from the building and drain into the river. (Refer to recommendations for Foundation Drainage (A103006). Through wall and building floor troughs should be discontinued.   |                              |                  |                                       |             |                |
| <b>C30</b>  | <b>Interior Wall Surface</b> | <b>C301099</b>   | <b>Wall Frieze (Mural panels)</b>     | <b>Poor</b> | <b>Serious</b> |
| Recommendation for rehabilitation: remove from building to conservation facility, conduct analysis and conservation treatment, reinstall in building.<br><br>Recommendation for stabilization: remove from building and store in an environmentally controlled space (curatorial storage with archival protective measures).  |                              |                  |                                       |             |                |
| <b>C10</b>  | <b>Interior Construction</b> | <b>C103009-1</b> | <b>Ballroom Fireplace Cabinets</b>    | <b>POOR</b> | <b>Minor</b>   |
| The broken components of the wood cabinets should be repaired or replaced in kind. New components should match the original material as closely as possible. The cabinet boxes and drawer boxes should be re-secured and straightened as needed. Broken or cracked glass should be replaced with new glass that matches the quality and appearance of the original glass as closely as possible. The wood finish should be cleaned or stripped and re-applied. All existing hardware should be removed, cleaned, reinstalled, and adjusted to operate properly. Missing or broken hardware should be replaced with new hardware to match the original components. |                              |                  |                                       |             |                |

| <b>REHABILITATION: Recommended Treatments Summary Table</b>   |                        |                   |   |                      |                   |
|---|------------------------|-------------------|---|----------------------|-------------------|
| UNIFORMAT II Outline Data   |                        |                   |   | Condition Assessment |                   |
| Category  | Topic                  | Code              | Subtopic  | Condition Rating     | Deficiency Rating |
| <b>FAIR</b>   |                        |                   |   |                      |                   |
| <b>A10</b>  | <b>Foundations</b>     | <b>A1010-1</b>    | <b>Main Block Foundations</b>                               | <b>FAIR</b>          | <b>Serious</b>    |
| The foundations in the main block should be stabilized and repaired as required. The foundations and foundation walls may be supplemented or modified depending on the structural repair alternative that is selected. (Refer to <i>Structural Investigation of the Washington Canoe Club, Condition Assessment Report, April 2014</i> , for repair alternatives).  |                        |                   |   |                      |                   |
| <b>A10</b>  | <b>Foundations</b>     | <b>A1010-2</b>    | <b>East Addition Foundation</b>                             | <b>FAIR</b>          | <b>Serious</b>    |
| Refer to the recommendation for Main Block Foundations (A1010-1).   |                        |                   |   |                      |                   |
| <b>C20</b>  | <b>Interior Stair</b>  | <b>C201001-2</b>  | <b>ST02 – Main Hall Stairs</b>                              | <b>FAIR</b>          | <b>Critical</b>   |
| All components of the Main Hall Stairs (ST02) should be inspected, re-secured, and repaired or replaced as required including treads, risers, handrails, balusters, and newel posts. New material should match the original material as closely as possible. The balustrade should be prepared and repainted, and the stair treads should be refinished when the wood floors are refinished.  |                        |                   |   |                      |                   |
| <b>B10</b>  | <b>Super-structure</b> | <b>B101001-2a</b> | <b>Second-Floor Structural Frame (Main Block – Phase 1)</b> | <b>FAIR</b>          | <b>Serious</b>    |
| Generally the floor framing throughout the building is inadequate to support the required or anticipated loads. Per the structural engineering report, floor joists and beams should be strengthened particularly under the Men's Locker Room, Ballroom, Women's Locker Room, and Workshop. All floors should be returned to level. (Refer to <i>Structural Investigation of the Washington Canoe Club, Condition Assessment Report, April 2014</i> ) |                        |                   |   |                      |                   |
| <b>B10</b>  | <b>Super-structure</b> | <b>B101001-2b</b> | <b>Second-Floor Structural Frame (Main Block – Phase 2)</b> | <b>FAIR</b>          | <b>Serious</b>    |
| Refer to recommendations for Second-Floor Structural Frame, Main Block – Phase 1 (B101001-2a).  |                        |                   |   |                      |                   |

|   |                        |                   |   |             |                |
|---|------------------------|-------------------|---|-------------|----------------|
| <b>B10</b>  | <b>Super-structure</b> | <b>B101001-2c</b> | <b>Second-Floor Structural Frame (Women's Locker Room Addition)</b> | <b>FAIR</b> | <b>Serious</b> |
| Refer to recommendations for Second-Floor Structural Frame, Main Block – Phase 1 (B101001-2a).  |                        |                   |   |             |                |
| <b>B10</b>  | <b>Super-structure</b> | <b>B101001-2d</b> | <b>Second-Floor Structural Frame (Workshop Addition)</b>            | <b>FAIR</b> | <b>Serious</b> |
| Refer to recommendations for Second-Floor Structural Frame, Main Block – Phase 1 (B101001-2a).  |                        |                   |   |             |                |
| <b>B10</b>  | <b>Super-structure</b> | <b>B101002-1a</b> | <b>First-Floor Interior Walls (Main Block – Phase 1)</b>            | <b>FAIR</b> | <b>Serious</b> |
| Any areas of deteriorated interior wall framing or wall sheathing should be repaired or replaced in-kind. Removal of existing wall finishes may be necessary to access wall framing. Existing wall finishes should be removed carefully and salvaged for re-installation. (Refer to <i>Structural Investigation of the Washington Canoe Club, Condition Assessment Report, April 2014</i> ) |                        |                   |   |             |                |
| <b>B10</b>  | <b>Super-structure</b> | <b>B101002-1b</b> | <b>First-Floor Interior Walls (Main Block – Phase 2)</b>            | <b>FAIR</b> | <b>Serious</b> |
| Refer to recommendations for First-Floor Interior Walls, Main Block – Phase 1 (B101002-1a).   |                        |                   |   |             |                |
| <b>B10</b>  | <b>Super-structure</b> | <b>B101002-2a</b> | <b>Second-Floor Interior Walls (Main Block – Phase 1)</b>           | <b>FAIR</b> | <b>Serious</b> |
| Refer to recommendations for First-Floor Interior Walls, Main Block – Phase 1 (B101002-1a).   |                        |                   |   |             |                |
| <b>B10</b>  | <b>Super-structure</b> | <b>B101002-2b</b> | <b>Second-Floor Interior Walls (Main Block – Phase 2)</b>           | <b>FAIR</b> | <b>Serious</b> |
| Refer to recommendations for First-Floor Interior Walls, Main Block – Phase 1 (B101002-1a).   |                        |                   |   |             |                |



|  |                          |                   |   |             |                |
|--|--------------------------|-------------------|---|-------------|----------------|
| <b>B10</b>   | <b>Super-structure</b>   | <b>B101002-2c</b> | <b>Second-Floor Interior Walls (Women's Locker Room Addition)</b> | <b>FAIR</b> | <b>Serious</b> |
| Refer to recommendations for First-Floor Interior Walls, Main Block – Phase 1 (B101002-1a).  |                          |                   |   |             |                |
| <b>B10</b>   | <b>Super-structure</b>   | <b>B102001-2a</b> | <b>Women's Locker Room Gable Roof</b>                             | <b>FAIR</b> | <b>Serious</b> |
| The roof framing and sheathing of the gable roof on the Women's Locker Room should be repaired according to the recommendations of the structural engineering report including replacing damaged members, securing all roof framing to top plates, and installing plywood sheathing. (Refer to <i>Structural Investigation of the Washington Canoe Club, Condition Assessment Report</i> , April 2014) |                          |                   |   |             |                |
| <b>B10</b>   | <b>Super-structure</b>   | <b>B102001-3</b>  | <b>North Entry Tower Hipped Roof</b>                              | <b>FAIR</b> | <b>Serious</b> |
| The roof framing and sheathing of the north entry tower should be inspected and repaired as required during the roof repairs on the main block. (Refer to <i>Structural Investigation of the Washington Canoe Club, Condition Assessment Report</i> , April 2014)  |                          |                   |   |             |                |
| <b>B10</b>   | <b>Super-structure</b>   | <b>B102001-4</b>  | <b>North Entrance Porch Roof</b>                                  | <b>FAIR</b> | <b>Serious</b> |
| The roof framing and sheathing on the north entrance porch roof should be repaired or replaced as required using dimensional framing and plywood sheathing. All exposed roof components should be prepared, primed, and painted to match the exterior color or other approved color.   |                          |                   |   |             |                |
| <b>B20</b>   | <b>Exterior Envelope</b> | <b>B201005-1</b>  | <b>Cupola Louver Panels</b>                                       | <b>FAIR</b> | <b>Serious</b> |
| Damaged or deteriorated louvers on the cupola should be repaired or replaced in kind. The flashing at the base of the louvers should be replaced with new corrosion-resistant metal flashing. The interior metal screening should be inspected and re-secured to the louvers or replaced as required. All wood components of the louver panels should be prepared, primed, and repainted.              |                          |                   |   |             |                |
| <b>B20</b>   | <b>Exterior Envelope</b> | <b>B201008</b>    | <b>Exterior Soffits</b>   | <b>FAIR</b> | <b>Serious</b> |
| Refer to recommendations for each individual roof soffit section.  |                          |                   |   |             |                |

|   |                          |                   |  |             |                |
|---|--------------------------|-------------------|--|-------------|----------------|
| <b>B20</b>  | <b>Exterior Envelope</b> | <b>B201008-1</b>  | <b>Main Hipped Roof Soffit</b>                     | <b>FAIR</b> | <b>Serious</b> |
| <p>The exposed soffits on the main hipped roof should be repaired as needed during the roof repairs. The exposed rafters should be repaired or replaced to maintain the original exposed framing appearance. The exposed sections of roof sheathing should be repaired or replaced with dimensional planking to match the original appearance. The remainder of the concealed sheathing can be replaced with plywood sheathing per the recommendations of the structural engineering report. All soffit components should be prepared, primed, and painted to match the exterior color or other approved color. (Refer to <i>Structural Investigation of the Washington Canoe Club, Condition Assessment Report, April 2014</i>)</p>  |                          |                   |  |             |                |
| <b>B20</b>  | <b>Exterior Envelope</b> | <b>B201008-4</b>  | <b>East Tower Roof Soffit</b>                      | <b>FAIR</b> | <b>Serious</b> |
| <p>The exposed soffit on the towers should be repaired as needed during the roof repairs. The exposed rafters should be repaired or replaced to maintain the original exposed framing appearance. The exposed sections of roof sheathing should be repaired or replaced with dimensional planking to match the original appearance. The remainder of the concealed sheathing can be replaced with plywood sheathing. All soffit components should be prepared, primed, and painted to match the exterior color or other approved color.</p>   |                          |                   |  |             |                |
| <b>B20</b>  | <b>Exterior Envelope</b> | <b>B201008-6</b>  | <b>Workshop Shed Roof Soffit</b>                   | <b>FAIR</b> | <b>Serious</b> |
| <p>The exposed soffit on the workshop shed roof should be repaired as needed during the roof repairs. The exposed rafters should be repaired or replaced to maintain the original exposed framing appearance. The exposed sections of roof sheathing should be replaced with new plywood sheathing during the replacement of the roof deck on the workshop. All soffit components should be prepared, primed, and painted to match the exterior color or other approved color.</p>  |                          |                   |  |             |                |
| <b>B20</b>  | <b>Exterior Envelope</b> | <b>B202001-2a</b> | <b>Second-Floor Windows (Main Block – Phase 1)</b> | <b>FAIR</b> | <b>Serious</b> |
| <p>All of the exterior wood panels covering the window openings should be removed prior to restoring the window sashes and frames. The original full-length double casement windows (W201, W206-W208) should be repaired as required and reinstalled into their respective openings. All loose or missing glazing compounds on all windows should be replaced with new glazing compound. Any cracked, broken, or missing glass panes should be replaced in-kind. Wood frame and sash components should be repaired or replaced as needed. New material should match the original material as closely as possible. The sashes, frames, and trim should be stripped of all failing paint, prepared, primed, and repainted or re-stained. All existing original window hardware should be removed, cleaned, reinstalled, and adjusted to operate properly. Missing hardware should be replaced with new hardware to match the existing components.</p> |                          |                   |  |             |                |

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|--|--------------------------|-------------------|--|-------------|----------------|
| <b>B20</b>   | <b>Exterior Envelope</b> | <b>B202001-2b</b> | <b>Second-Floor Windows (Main Block – Phase 2)</b>         | <b>FAIR</b> | <b>Serious</b> |
| <p>All of the exterior wood panels covering the window openings should be removed prior to restoring the window sashes and frames. All loose or missing glazing compounds on all windows should be replaced with new glazing compound. Any cracked, broken, or missing glass panes should be replaced in-kind. Wood frame and sash components should be repaired or replaced as needed. New material should match the original material as closely as possible. The missing sash in window W249 should be restored to its original appearance. The sashes, frames, and trim should be stripped of all failing paint, prepared, primed, and repainted or re-stained. All existing original window hardware should be removed, cleaned, reinstalled, and adjusted to operate properly. Missing hardware should be replaced with new hardware to match the existing components.</p>   |                          |                   |  |             |                |
| <b>B20</b>   | <b>Exterior Envelope</b> | <b>B202001-2c</b> | <b>Second-Floor Windows (Women’s Locker Room Addition)</b> | <b>FAIR</b> | <b>Serious</b> |
| <p>All of the exterior wood panels covering the window openings should be removed prior to restoring the window sashes and frames. All loose or missing glazing compounds on all windows should be replaced with new glazing compound. Any cracked, broken, or missing glass panes should be replaced in-kind. Wood frame and sash components should be repaired or replaced as needed. New material should match the original material as closely as possible. The painted glass in the hopper windows in the south wall of the locker room should be replaced with clear obscure glass and the sash for window W244 should be re-installed in the opening. The sashes, frames, and trim should be stripped of all failing paint, prepared, primed, and repainted or re-stained. All existing original window hardware should be removed, cleaned, reinstalled, and adjusted to operate properly. Missing or incompatible hardware should be replaced with new hardware to match the existing components.</p> |                          |                   |  |             |                |
| <b>B20</b>   | <b>Exterior Envelope</b> | <b>B202001-2d</b> | <b>Second-Floor Windows (Workshop Addition)</b>            | <b>FAIR</b> | <b>Serious</b> |
| <p>If the enclosed Workshop (Room 211) is retained as part of the rehabilitation, then all of the existing windows, frames, and trim should be repaired as needed. All loose or missing glazing compounds on all windows should be replaced with new glazing compound. Any cracked, broken, or missing glass panes should be replaced in-kind. Wood frame and sash components should be repaired or replaced as needed. New material should match the original material as closely as possible. The sashes, frames, and trim should be stripped of all failing paint, prepared, primed, and repainted or re-stained. All existing window hardware should be removed, cleaned, reinstalled, and adjusted to operate properly. Missing hardware should be replaced with new hardware to match the existing components.</p>   |                          |                   |  |             |                |

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|---|--------------------------|------------------|---|-------------|----------------|
| <b>B20</b>  | <b>Exterior Envelope</b> | <b>B203001</b>   | <b>Glazed Doors</b>   | <b>FAIR</b> | <b>Serious</b> |
| <p>The three glazed doors (D101, D201, D206) should be repaired as required including the frames and casings. Broken or cracked glass should be replaced with new glass that matches the quality and appearance of the original glass as closely as possible. Failing paint should be removed from all doors, jambs, and trim. All door components shall be prepared, primed, and repainted or stained. All existing original door hardware should be cleaned of paint, reinstalled, and adjusted to operate properly. Missing hardware or non-compatible hardware should be replaced with new hardware to match the original components. New heavy duty deadbolt locks should be installed on all exterior doors for added security.</p>   |                          |                  |   |             |                |
| <b>B20</b>  | <b>Exterior Envelope</b> | <b>B203002</b>   | <b>Solid Doors</b>  | <b>FAIR</b> | <b>Serious</b> |
| <p>The solid exterior doors in the East Boat Storage Area are in good condition and should receive routine maintenance. The temporary bracing and modern hardware on door D107 should be removed and any holes in the door should be repaired. The north entrance door (D208) should be repaired as needed and the modern hardware should be removed. The east entrance (D207) door should be replaced with new wood panel door that is compatible with the building and the other door styles. All doors shall be prepared, primed, and repainted. All existing original door hardware should be removed, cleaned of paint, reinstalled, and adjusted to operate properly. Missing hardware or non-compatible hardware should be replaced with new hardware to match the original components. New heavy duty deadbolt locks should be installed on all exterior doors for added security.</p>  |                          |                  |   |             |                |
| <b>B30</b>  | <b>Roofing</b>           | <b>B301001</b>   | <b>Roof Finishes (material)</b>                             | <b>FAIR</b> | <b>Serious</b> |
| <p>All of the existing roof finishes (sheet metal 5V Crimped metal panels and mineral surface roll roofing) should be removed during the repair work to the roof deck and framing. A new comprehensive roof finish should be installed that closely matches the original roof finish or that is compatible with the architectural style of the building. Roof finish options could include: mineral-surfaced roll roofing, dimensional fiberglass shingles, wood shingles, or possibly composite slates or tiles that match the pattern visible in the historic photos. Additional research and analysis using historic photographs and documents may be needed to determine the original roof material / finish on the building, or other appropriate roof finishes for the particular period of significance. All roof finishes should be installed according to the manufacturer's recommendations and should receive regular inspections and routine maintenance.</p> |                          |                  |   |             |                |
| <b>B30</b>  | <b>Roofing</b>           | <b>B301001-1</b> | <b>Main Block Hipped Roof Finish: 5V Crimp Metal Panels</b> | <b>FAIR</b> | <b>Serious</b> |
| <p>Refer to the recommendations for Roof Finishes (B301001).</p>  |                          |                  |   |             |                |

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|---|------------------------------|------------------|--|-------------|----------------|
| <b>B30</b>  | <b>Roofing</b>               | <b>B301001-2</b> | <b>South Cross Gable Roof Finish: 5V Crimp Metal Panels</b>    | <b>FAIR</b> | <b>Serious</b> |
| Refer to the recommendations for Roof Finishes (B301001).   |                              |                  |  |             |                |
| <b>B30</b>  | <b>Roofing</b>               | <b>B301001-3</b> | <b>West Dormer Roof Finish: 5V Crimp Metal Panels</b>          | <b>FAIR</b> | <b>Serious</b> |
| Refer to the recommendations for Roof Finishes (B301001).   |                              |                  |  |             |                |
| <b>B30</b>  | <b>Roofing</b>               | <b>B301001-4</b> | <b>East Gable Cricket and Extension: 5V Crimp Metal Panels</b> | <b>FAIR</b> | <b>Serious</b> |
| Refer to the recommendations for Roof Finishes (B301001).   |                              |                  |  |             |                |
| <b>C10</b>  | <b>Interior Construction</b> | <b>C102001</b>   | <b>Standard Interior Doors</b>                                 | <b>FAIR</b> | <b>Serious</b> |
| <p>The interior doors, frames, and trim should be repaired as required. Modern, incompatible doors (D110, D211, D212) should be replaced with new wood panel doors that are compatible with the building style and the other interior door styles. Doors that have been trimmed or modified should be restored to fit their opening after interior rehabilitation has been completed. All door finishes shall be prepared for repainting or re-staining.</p> <p>All existing original door hardware should be removed, cleaned, reinstalled, and adjusted to operate properly. Missing hardware or non-compatible hardware should be replaced with new hardware to match the original components.</p>   |                              |                  |  |             |                |
| <b>C10</b>  | <b>Interior Stair</b>        | <b>C201001-3</b> | <b>ST05 – Men’s Locker Room Stairs Mezzanine</b>               | <b>FAIR</b> | <b>Serious</b> |
| <p>The stair (ST05) leading from the Men’s Locker Room (Room 203) to the mezzanine level is not compliant with the requirements NFPA 101. A new stair structure should be constructed that meets all necessary requirements including stair width, tread and riser sizing, handrails, and egress signage. In addition, the catwalk leading from the mezzanine level to the West Tower Chamber (Room 302) should have compliant guards or handrails installed on both sides of the walk. Refer International Building Code (IBC) Chapter 10, and National Fire Protection Association (NFPA) 101: Life Safety Code.</p> <p>NOTE: It is also recommended in the structural report that this level of occupancy be removed in which case this stair would not be required. (Refer to <i>Structural Investigation of the Washington Canoe Club, Condition Assessment Report, April 2014</i>).</p> |                              |                  |  |             |                |

| <b>C30</b>   | <b>Interior Finishes</b> | <b>C3020</b>   | <b>Floor Finishes</b>           | <b>FAIR</b> | <b>Serious</b> |
|--|--------------------------|----------------|---------------------------------|-------------|----------------|
| <p>The Washington Canoe Club building has several types of floor finishes. The concrete floors on the first floor should be cleaned of all debris and any major cracks or openings should be repaired. Unfinished concrete can remain unfinished. Ceramic tile should be cleaned and any cracked, broken, or missing tiles should be replaced in-kind. Alternatively, the floor finishes on the first floor could be replaced if substantial modifications are made to the foundation system and structural framing. New floor finishes on the first floor should be highly water-resistant such as concrete or ceramic tile due to the high probability of flooding events.</p> <p>The typical tongue-and-groove wood strip flooring throughout the building should be refinished, stained, and sealed. Damaged or deteriorated floor boards should be replaced in-kind to match the adjacent boards.</p> <p>Ceramic tile floors in the bathroom areas should be cleaned and repaired as needed. If new flooring is desired, the new floor finishes should be water-resistant and easy to clean such as ceramic tiles. Sustainable or recycled-content products are recommended.</p> <p>The plywood floor in the Workshop should be repaired and re-secured as required. Uneven joints should be leveled and damaged boards should be replaced.</p> <p>All floors should receive regular maintenance.</p> |                          |                |                                 |             |                |
| <b>C30</b>   | <b>Interior Finishes</b> | <b>C3030</b>   | <b>Ceiling Finishes</b>         | <b>FAIR</b> | <b>Serious</b> |
| <p>Ceiling finishes consist primarily of painted tongue-and-groove paneling and beaded board paneling. Loose boards should be re-secured to the ceiling framing. Boards that have been removed for structural investigation should be re-installed. Broken or missing boards should be replaced in-kind to match adjacent paneling. All ceilings should be cleaned, prepared, and repainted or stained. Areas with exposed ceilings can remain exposed.</p>  |                          |                |                                 |             |                |
| <b>A10</b>   | <b>Foundations</b>       | <b>A1030-1</b> | <b>Main Block Floor Slab</b>    | <b>FAIR</b> | <b>Minor</b>   |
| <p>The openings and cores that have been cut into the slab for investigation purposes should be filled and the concrete patched. Alternatively, the existing floor slab may be removed and replaced with a new slab if the foundation system of the building is modified. (Refer to <i>Structural Investigation of the Washington Canoe Club, Condition Assessment Report, April 2014</i>).</p>  |                          |                |                                 |             |                |
| <b>A10</b>   | <b>Foundations</b>       | <b>A1030-2</b> | <b>East Addition Floor Slab</b> | <b>FAIR</b> | <b>Minor</b>   |
| <p>Refer to the recommendations for Main Block Floor Slab (A1030-1). (Refer to <i>Structural Investigation of the Washington Canoe Club, Condition Assessment Report, April 2014</i>).</p>   |                          |                |                                 |             |                |

|   |                              |                   |  |             |              |
|---|------------------------------|-------------------|--|-------------|--------------|
| <b>B20</b>  | <b>Exterior Envelope</b>     | <b>B202001-3c</b> | <b>Third-Floor Windows (East Tower)</b>  | <b>FAIR</b> | <b>Minor</b> |
| <p>The eight window openings in the East Tower (Room 303) should be restored to their original appearance (no sashes). All of the exterior wood panels covering the window openings should be removed and any infill framing or screen panels should be removed. The frames and trim should be repaired or replaced as required. New material should match the original material as closely as possible. The frames and trim should be prepared, primed, and repainted.</p>   |                              |                   |  |             |              |
| <b>B20</b>  | <b>Exterior Envelope</b>     | <b>B202001-3e</b> | <b>Third-Floor Windows (South Gable)</b> | <b>FAIR</b> | <b>Minor</b> |
| <p>The frame, sash, and trim of 4-light fan window in the south gable should be repaired as needed. The sash should be re-secured in the frame and all components should be prepared, primed, and repainted.</p>  |                              |                   |  |             |              |
| <b>C10</b>  | <b>Interior Construction</b> | <b>C103009-2</b>  | <b>Board Room Built-In Cabinet</b>       | <b>FAIR</b> | <b>Minor</b> |
| <p>The corner built-in cabinet should be repaired and re-secured as needed. The glass shelves should be cleaned and the wood finish should be cleaned or stripped and re-applied. All existing hardware should be removed, cleaned, reinstalled, and adjusted to operate properly. Missing or broken hardware should be replaced with new hardware to match the original components.</p>  |                              |                   |  |             |              |
| <b>C30</b>  | <b>Interior Finishes</b>     | <b>C3010</b>      | <b>Wall Finishes</b>                     | <b>FAIR</b> | <b>Minor</b> |
| <p>Wall finishes include painted tongue-and-groove wood paneling, stained vertical groove paneling, plaster, painted cloth, and exposed framing and sheathing. Loose boards should be re-secured to the wall framing. Boards that have been removed for structural investigation should be re-installed. Broken or missing boards should be replaced in-kind to match adjacent paneling. Holes and cracks in plaster walls should be repaired to match the adjacent wall surface. Torn or damaged sections of painted cloth should be replaced to match the original finish as close possible. All painted walls should be cleaned, prepared, and repainted. All stained wall finishes should be cleaned, touched-up, and resealed as required. Areas with exposed wall framing can remain exposed.</p> |                              |                   |  |             |              |

| <b>REHABILITATION: Recommended Treatments Summary Table</b>   |                          |                   |   |                      |                   |
|---|--------------------------|-------------------|---|----------------------|-------------------|
| UNIFORMAT II Outline Data   |                          |                   |   | Condition Assessment |                   |
| Category  | Topic                    | Code              | Subtopic  | Condition Rating     | Deficiency Rating |
| <b>GOOD</b>   |                          |                   |   |                      |                   |
| <b>B20</b>  | <b>Exterior Envelope</b> | <b>B201005-2</b>  | <b>Mothball Exterior Panels</b>                   | <b>GOOD</b>          | <b>Minor</b>      |
| The exterior mothball panels over the window openings are secure and in good condition. The panels should receive routine inspections and repairs as needed for the duration of the mothballing period.   |                          |                   |   |                      |                   |
| <b>B20</b>  | <b>Exterior Envelope</b> | <b>B202001-1b</b> | <b>First-Floor Windows (Main Block – Phase 2)</b> | <b>GOOD</b>          | <b>Minor</b>      |
| The five newer replacement casement windows (W101-W105) in the Grill Room (Room 105) should receive routine maintenance such as painting and repairs as needed to keep the windows in good working order. The acrylic panel in the window opening (W110) in the Kitchen (Room 103) should be removed and replaced with permanent units such as glass block or wood-framed fixed sash. |                          |                   |   |                      |                   |
| <b>B20</b>  | <b>Exterior Envelope</b> | <b>B203004</b>    | <b>Overhead and Roll-up Doors</b>                 | <b>GOOD</b>          | <b>Minor</b>      |
| The three overhead roll-up doors are in good working condition and should receive regular inspections and maintenance.  |                          |                   |   |                      |                   |

End of Chapter 5.



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