

3/19/2020

Bedrock

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Job Name: Fowler Building

Job Location: Detroit, MI

Historic Window Site Review:

The following is the written Historic Window Site Review for the windows on the Fowler Building at 1225 Woodward Ave, Detroit, MI. This information was based on a visit to the site and walk thru with the construction design team. Our recommendations are based on following the guidelines for restoration and replication for Wood Window Preservation NPS Brief #9; as well as for Steel Window Preservation NPS Brief #13. Likewise, every attempt is made to adhere to the guidelines provided by the National Park Service, the State Historic Preservation Office, and local historic district as well as experience we have gained on projects, we have participated on over the past 30 years.

1. Existing Conditions: (54) Wood Window Double Hung Windows (2,200 Sq. ft.)

The wood double hung windows are all located on the East Elevation front facade. All windows are true double hung with the original white pine frames and sash. All windows are glazed with 1/4" clear plate glass, outside putty glazed, and use pulley, weight, and chain, balances for operation. Hardware is brass lift handles and lock with keeper. The primary site line dimensions include a 4 1/4" bottom rail, 2 3/4" side and top rail, 2 1/4" meeting rail, 1 7/8" x 1/2" sash stop, 1" x 1/2" blind stop, and 1/2" x 7/8" parting bead. There are no muntins.

The windows are in very poor condition including sashes, parting bead, and interior sash trim. The master frames and sills are in good condition. We observed all the exterior components including the sill, blind stop, mullions, and all exterior millwork

was covered with custom formed break metal (type of metal to be determined). This was carefully executed and appears in very good condition especially in sealing out water penetration. Before a final analysis can be concluded this façade needs to be inspected on the exterior using a lift or swing stage. **The years of disrepair, and exposure to the elements has taken its toll on the sash components. Most all the double hung sashes have failed joinery at the meeting rails or bottom rails. Not maintaining the exterior glazing compound has allowed water to get into the sash rails and stiles causing warping, joinery failure, and decay. We estimate that over 65% have failed joinery that is not repairable.** All sashes need to be fully replaced with a replicated product. We would suspect that all the exterior perimeter caulking will need to be abated for containing asbestos which is common with a building of this age.

Recommendation: BlackBerry recommends the scope of work should replace the double hung sashes with new historic replica sashes that are aluminum clad on the exterior and wood on the interior. In our investigation we have found a manufacturer that has such a product used on a recent landmark project. Because of the sash size and profiles this type of product is not typically available. Also because of the small number of openings custom extrusions would be cost prohibitive typically. If the leaving of the exterior cladding on the exterior casework including sills, blind stops, mullions, and spandrel panels is acceptable to NPS this suggested approach would be ideal. New sashes can set in place and fixed with the replacement of parting bead and interior sash stop. The new sashes would include insulated glass with low-e/argon. Pricing would include interior and exterior finish. Windows will require lead paint and ACM abatement.

Estimated Budget Cost \$255,500.00

2. Existing Conditions: (74) Cold Rolled Steel Double Hung Windows (1,450 Sq. ft.)

These windows are located on the West Elevation, rear façade on the alley side of the building. The windows are in poor condition with heavy corrosion and rust on all exterior components. Because of water penetration there is joinery failure at the bottom sash rail and meeting and meeting rail. These windows are notoriously difficult to restore since there is no way to arrest the corrosion in the tubular profiles. Even when the exterior surfaces are in good condition the joinery will show rust deposits soon after full restoration. Glazing compound is failed and likely contains asbestos as well as all the perimeter exterior caulking. The sash and frame components mimic wood window in the era. The bottom rail is 4", the typical side rail is 1 3/4" and top rail is 1 3/4"; meeting rail is 1 3/4". The parting bead is 1/2" x 1/2" and sash stop is 1/2" x 1 3/4". Note all window components are galvanized steel. All sashes are 2" thick and have 1/4" clear plate glass. Muntins are 1 1/2", and mullions are approximately 9" but must be checked from the exterior since the window are inoperable. The interior case work is in various states of condition, some is missing, some is damaged, and some is in good shape.

Recommendation: BlackBerry would recommend the full replacement of the cold rolled steel windows with an historic replica thermally broken aluminum single hung window. The entire existing metal frames and sash would be removed and replaced. The following budget price does not include the metal door and transoms. We would need direction as to the design, hardware, and code compliance issues. Windows will require lead paint and ACM abatement.

Estimated Budget Pricing \$158,250.00

3. Existing Conditions: (3) Wood Casement/Picture Windows fully covered on the exterior front facade (550 Sq. ft.)

These windows are located on the 2nd floor of the East Elevation just above the glass block windows on this same elevation. These windows appear to have been covered over years ago during one of the façade renovations. These are large openings with two side project-out casement/transom on each side of a large picture window. Because they have been covered, they are in fair to good condition. The picture units sash frames and glazing are gone from the site; these units will require replication. The casement/transom sashes can be restored as well as the master frames and mullions. All wood components are white pine. The sash balance is made up of pulley, weight, and chain components. All glass is 1/4" clear plate glass with an outside putty glazing; the interior casework is present on the majority of the windows but damage from abuse that may require full replacement. At this point the center picture windows are beyond standard insulated glass sizing requirements and will require custom engineering and pricing or an approved reconfiguration from SHPO and NPS. Windows would require lead paint and ACM abatement

Recommendation: BlackBerry recommends the combination of the above-mentioned windows for replication and restoration.

Estimated Budget Pricing \$58,000.00

Note: None of the estimated pricing allows for new or restored interior casework including casing, mullion covers, jamb extensions, stools, or aprons.

BlackBerry has over 30 years' experience in historic window restoration and replication, as well as commercial glazing and window replacement. Our budget pricing is based on that experience and completion of many historic projects implementing various approaches. I would caution that we have only been able use approximate square foot estimates for this budget pricing; we can develop accurate vendor quotations and labor costs to verify accurate pricing once the design parameters are agreed upon.

Pricing allows for all material, tax on material, labor (non-union, non-prevailing wage), employment, insurance, staging, abatement, disposal, delivery, and supervision. Bonding and Permits are not included.

Sincerely,

MKS
Michael K. Shields
President
BlackBerry Systems, Inc.

3/19/2020



Fowler Building
Front Façade
Wood Double Hung Windows



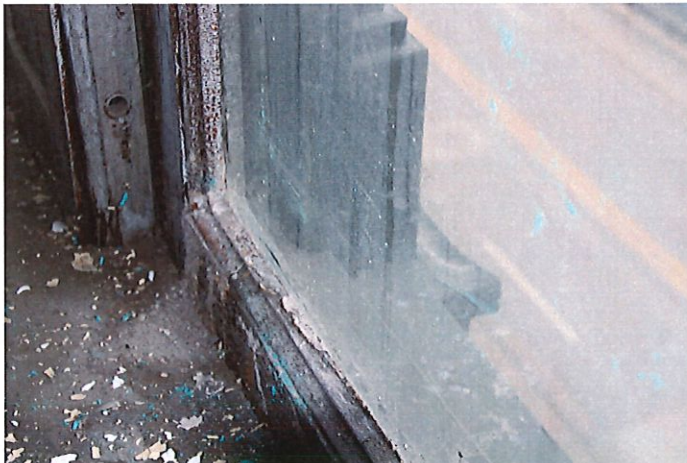
Front Façade
Wood Windows and
Cover Casework



Typical Interior
Wood Double Hung



Exterior View of Metal Clad
Casework and Master Frame



Stool/Sash Detail
Wood Double Hung



Interior Jamb Detail
Wood Double Hung



Exterior of Steel
Double Hung



Interior of Steel
Double Hung



Meeting Rail of Steel
Double Hung