

EXISTING BUILDING REVIEW

120 W. Mifflin Street

Name: Andrew Schubert Building

Built: 1908

Designated City landmark

Overview:

Reviews of this building were performed by the following companies:

| | |
|---------------------------------------|---------------------------------------|
| Building Interior and Exterior | Wiss, Janney, Elstner Associates, Inc |
| Structural | Arnold & O'Sheridan, Inc. |
| Mechanical, Plumbing, Fire Protection | Henneman Engineering, Inc. |
| Electrical | Potter Lawson |
| Asbestos Inspection | Advanced Health & Safety LLC |

History:

The Andrew Schubert Building most recently housed an office products store at grade for many years with an apartment on the second floor. The building is currently vacant.



View of the Front Facade



Roof showing roof access structure



Alley view of sheet metal stamped with brick pattern



Roof view toward Mifflin Street



Exterior: View of the back of building showing eroding brick veneer



View of the back of facade



View from roof looking at condition of brick and parged wall



Exterior: View in the alley showing a section of delaminated parging



Exterior: View in the alley showing the delamination of the parging system from the brick veneer



View of space behind existing building showing storm basin collecting water from adjacent buildings



Basement: stormline routing to West Mifflin Street



Basement view showing stormline routing storm water from adjacent building(s) through the basement of 120 West Mifflin Street



Basement: Temporary shoring to support first floor



Basement: Temporary shoring to support first floor



Basement: View of one temporary column supporting the first floor



First Floor: View at bay window showing multiple types of flooring



First Floor



First Floor: View at back of room where the floor has been removed



First Floor: View toward back exit showing multiple cracks in floor tile



First Floor: View at back of room showing areas where tile floor has been removed



First Floor: View toward Mifflin Street entry showing multiple cracks in floor tiles



First Floor: View at entry off Mifflin Street showing three flooring surfaces. 1) Original 3/4" square tiles 2) 1" square tiles at entry 3) composite flooring at window



First Floor: View toward basement stair showing multiple cracks in tile floor



First floor: View of area where exposed concrete is installed



Second Floor Apartment



Second Floor Apartment



Second Floor: Access from Mifflin Street



Second Floor Apartment



Second Floor Apartment

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120 West Mifflin Street – Architectural Review

Walk-Through Observations: December 16, 2011

Reported by: Kenneth M. Itle

WJE No. 2011.5656

This letter summarizes the WJE observations of architectural interior and exterior features of 120 West Mifflin Street, Madison, Wisconsin. The exterior survey was performed from grade and from accessible flat roof areas. The interior survey was conducted in accessible spaces. Additional investigation would be required to develop appropriate repair recommendations.

The building at 120 West Mifflin Street is designated a landmark by the City of Madison. The two-story masonry structure was constructed in 1908, as stated in the city landmark nomination. The front facade of the rectangular building faces southeast to Mifflin Street; a side wall faces northeast along a narrow pedestrian alley; the rear wall faces northwest into a small court; and a party wall to the adjacent building forms the southwest wall.

Exterior

Mifflin Street Facade

The front facade consists of limestone at the first floor and face brick at the second floor and parapet (Figure 1). All of the masonry has been painted. There is a projecting bay window and cornice at the second floor that is clad with painted sheet metal. The sheet metal appeared intact and well anchored to the underlying framing. Some areas of the sheet metal exhibit surface corrosion.

The top west (left hand, as viewed from the street) corner of the parapet wall is displaced outward, with dislodged brick units and open mortar joints at this location (Figure 2). At the limestone masonry of the first floor, some areas of coating have debonded, revealing the stone below (Figure 3). Open mortar joints were observed in the limestone portion of the facade. Although coated, the limestone and face brick masonry at the street facade appears to be in fair to good condition.

The first floor storefront includes a three-part leaded art glass transom in good condition (Figure 4). The area of the storefront below the transom appears to have been altered following original construction, based on comparison with historic photographs included in the city landmark nomination.

Mounted to the facade in front of the transom and second floor bay window is a projecting aluminum and glass marquee.

The second floor has original wood one-over-one double hung windows covered by aluminum exterior storm windows. Where observed, the windows were in fair condition, with loss of paint and glazing putty.

Side and Rear Walls

The northeast-facing side wall and northwest-facing rear wall are common brick masonry that has been variously parged and coated. Portions within 6 feet of grade have a build-up of multiple layers of cementitious parging and coating. These layers are now debonding, exposing the original brick masonry. The common brick masonry is in poor condition, with open joints and deep face spalling of the brick units. Examples of this distress are shown in Figure 5 through Figure 8. The deterioration is most severe near grade and below the coping at the top of the wall. The ongoing deterioration of this masonry wall has resulted in detached fragments of brick, mortar, or parging.

There is a recessed area at the second floor of the building along the northeast side. The walls of this area are clad with painted sheet metal (Figure 9).

Roof

The roof is covered with a relatively new EPDM rubber membrane (Figure 10). The membrane is extended up the rear face of the parapet walls. The membrane intersects a sheet metal coping. Five circular attic vents are located near the south end of the roof. The roof slopes from south to north and is drained to a continuous galvanized metal gutter along the north wall. Ponded water was observed on the roof surface near the gutter (Figure 11). The gutter itself is in poor condition, with open seams, accumulated debris, and broken support brackets.

The roof is accessed through a small penthouse over the rear stairwell (Figure 12). The roof of the penthouse is covered with asphalt shingles that are in extremely poor condition (Figure 13). The walls of the stairwell are brick masonry and wood framing covered with painted sheet metal. Water infiltration through the walls and roof of the penthouse has occurred in the past, as the interior plaster in the stairwell is severely deteriorated.

There is also a small roof above the first floor at the northeast side recessed area. This small roof has a similar EPDM rubber membrane. The watertightness of the existing membrane is unknown; however, leakage is likely occurring or has occurred in the past, as deterioration at the first floor interior ceiling is concentrated below the location of this roof.

Potential Exterior Repairs

The Mifflin Street facade is generally in good condition. Appropriate repair would begin with removal of the existing coating from all masonry using chemical strippers, followed by a more detailed assessment of repair needs. The extent of repointing of the brick and limestone masonry can be determined following removal of the coating. At the west (left hand) top of the parapet wall at the street facade, an approximately three foot by three foot area of displaced brick masonry will likely require dismantling and reconstruction.

In contrast to the street facade, the side and rear walls are in very poor condition. Appropriate repair would include removal of existing coatings and parge materials, followed by selective replacement of the outer wythe of brick with new masonry. Replacement required is likely extensive, based on conditions observed. Based on this limited survey, the majority of the outer wythe of brick on the alley side and rear walls may require replacement, including extensive areas at grade and at the top of the walls. The condition of the backup wythes of brick masonry is not known at this time. Further investigation of the brick backup masonry, especially at grade and the parapet walls, is needed to determine if the existing deterioration extends beyond the exposed face wythe of brick and whether repair or replacement of backup masonry is required.

The penthouse roof and wall cladding requires repair or replacement to create a watertight building envelope. The main roof appears generally watertight, but further investigation is needed to ensure that perimeter flashing details are appropriately integrated with the coping and that appropriate slope for drainage is provided. The existing gutters and downspouts along the rear wall should be replaced.

The existing wood double hung windows could be restored, with repair of localized wood deterioration, stripping and repainting, reglazing, and repair of rope and counterweight balance system. New exterior or interior storm windows could be provided to improve the thermal performance of the assembly. The original leaded art glass transoms at the storefront should be investigated in greater detail and appropriate repair and reuse considered.

Interior

The first floor main interior room has four different areas of flooring consisting of elaborate decorative mosaic tile floor composed of various colors of 3/4 inch square tiles in a running bond. A portion of the ceramic tile flooring near the front door has been replaced with 1 inch square tiles with rounded edges. A second area of non-original flooring is located adjacent to the storefront at the southeast end of the space. Localized individual ceramic tiles throughout the flooring are missing and have been replaced with concrete patching. Extensive cracking, displacement, and settlement have occurred at this flooring (Figure 14). The distress in the flooring is apparently the result of significant and widespread deterioration of the basement-level wood columns, wood beams, and wood joists that support the floor. A detailed assessment of the first floor framing was beyond the scope of this study, but obvious signs of decay as well as previously installed temporary shoring were observed in the basement.

The first floor walls and ceiling are painted plaster on wood lath. Portions of the plaster have detached from the lath, likely due to water infiltration (Figure 15). Water staining and bubbling of the plaster were also observed (Figure 16).

In addition to the storefront, a notable feature of the interior first floor is one leaded glass window at the southwest party wall; the glass has been painted over (Figure 17).

The second floor interior is divided into several rooms that apparently were used as rental apartments. The floor covering is carpeting over vinyl asbestos tile in most areas, with a few areas of hardwood flooring. Walls and ceilings are painted plaster. Throughout the second floor there is original wood trim, as well as original five-panel doors with original hardware, all of which have been painted. Generally, the second floor interior spaces are in poor condition. Moisture infiltration from the exterior has resulted in staining and damage to plaster finishes in multiple locations (Figure 18 and Figure 19). Some of this damage may pre-date the installation of the existing roof membrane.

Potential Interior Repairs

The wood framing, beams, and columns in the basement that support the first floor should be reviewed by a structural engineer.

Interior plaster finishes have suffered deterioration apparently related to water infiltration through roofing and the side and rear brick masonry walls and may require replacement.

The second floor interior is in poor condition overall. Much of the interior plaster at or adjacent to the exterior walls has evidence of water infiltration damage and may require replacement. Consideration should be given to salvaging intact original elements such as interior doors and trim.

Figures



Figure 1. Overview of the building from the south. The Mifflin Street facade is at left.



Figure 2. Left. View of displaced masonry at the top corner of the parapet wall.



Figure 3. Right. At the limestone masonry of the first floor, some areas of coating have debonded.



Figure 4. The first floor storefront includes a three-part leaded art glass transom.



Figure 5. Failure of cementitious parge coat, revealing deteriorated brick masonry.



Figure 6. Deterioration of brick masonry at the rear facade.



Figure 7. Left. Loose fragments of brick/mortar/parging were removed by hand from the side wall.



Figure 8. Right. Deterioration of brick and parging near the top of the side wall.



Figure 9. A portion of the side wall is recessed at the second floor and is clad with painted sheet metal.



Figure 10. Overview of the roof.



Figure 11. Ponding on the roof near the gutter.



Figure 12. View of the penthouse walls constructed of brick masonry and painted sheet metal.



Figure 13. The penthouse roof is covered with asphalt shingles in deteriorated condition.



Figure 14. There is elaborate mosaic tile flooring at the first floor; the flooring has suffered extensive cracking and displacement.



Figure 15. Damage to interior plaster wall finish.



Figure 16. Water staining and bubbling of interior plaster ceiling.



Figure 17. Leaded glass window, which has been painted over, at the southwest party wall.



Figure 18. Plaster damage at the rear wall at the second floor of the building.



Figure 19. Moisture damage to plaster finishes at the second floor.

Walk-thru Evaluation of 120 West Mifflin Street
Madison, WI
Date of Walk-thru-01/17/08. Date of Report 01/18/08.
A+O Job Number 080027



GENERAL COMMENTS

The building is two story with A basement. First floor is retail occupancy and single occupied apartment on second floor. For the purpose of this report east/west is taken to paralleling Mifflin Street. The building is roughly 18'x65' interior dimensions.

BASEMENT

Floor is cast in place concrete on grade. Stains on bottom of wood columns indicate water entry over a period of time. Column bases to the north are rotting at the bottom. The rubble foundation walls appear in good condition. Basement access thru the sidewalk vault has been covered over with a concrete slab. The electrical and water service are in this room. The vault slab is shored up with wood cribbing on east /west faces. Repair to the bearing of this slab is thus recommended which would necessitate removal of a sidewalk panel or two.

FIRST FLOOR FRAMING

The first floor is roughly 3" concrete/tile topping on wood decking on 2x10 wood joists at 16" o/c. Floor joists span east/ west to a center support line. The floor shows significant deflection. Wood shoring has been placed along both east and west basement walls to re-support floor joists where they have rotted at their bearing in the rubble wall. The center beam line has been re-supported by metal posts to deal with rotted original wood columns. In certain areas of the center beam line the joists are pulling away from the support ledger. There have been wood materials added to deal with the ledger condition but they are not, in the writer's opinion, a permanent solution. The floor appears to sag toward the southwest stair. The support of both the first and second floor appears marginal in this area.

The quantity of defects and the deflection in the first floor result in the suggestion to replace of the entire floor system as the most logical course of action. A new floor might be constructed of concrete fill on metal form deck on sheet metal joists. It remains a possibility to re-establish support for the existing floor, but the deflection would largely remain.

The second floor is a clear span from east to west wall. Beams (probably wood) span east/ west, spaced at roughly 5'-6" o/c. Wood joists presumably span between these beams. Viewing the floor from the top side shows little deflection particularly considering the amount of materials stored on it. The floor is thus taken to be in reasonable condition.

ROOF FRAMING

The roof framing was observed by looking through the ceiling hatch. The ceiling is wood framed with about a 3 foot height up to the wood framed roof. Framing runs east to west . It appears the roof joists bear down with a cripple wall to the ceiling joists. The ceiling joists appear to be supported on the second floor partitions (where they exist at the bedroom/bathroom areas) and clear span at

the living room. From the hatch, the alignment of the roof/ceiling framing appeared to be acceptable.

EXTERIOR WALLS



The walls on the east and west sides were observed from the alleyway running along the east side. The grade level walls appear to be a porous brick with a painted parging at the surface. The pargings are usually placed to cover defects in the brick- which appears to be the case here. Areas where the faces of the brick have fallen off were observed. The east wall steps back at the second level. At this location sheet metal siding is used. The west wall was not observed but is probably a party wall with the adjacent property.

The observed walls were judged to be structurally stable but in need of repair to maintain water tightness. One option might be to cover the existing brick with an exterior insulation and finish system to economically reestablish the water barrier. Any repair system chosen should be investigated for its own tendency to trap moisture in the wall. Any projection beyond the existing wall line would have to be verified with property rights.

CONDITIONS OF THE REPORT

Existing condition observations made and reported within the context of this report were based on a visual inspection only and did not contemplate or involve the dismantling or moving of any objects or portion of the premises. Latent and concealed conditions, defects and deficiencies are excluded from our review. Arnold & O'Sheridan, Inc. shall have no liability for concealed from view or inaccessible conditions which were not or were not able to be directly observed. Our observations are limited to the conditions as they existed on the date of our observation, the real property and not the review of any personal property.

The due diligence report prepared herein is not a warranty, guarantee, insurance policy, or substitute for real estate transfer disclosures which may be required by law. This report will comment on major visible defects only with minor defects reported as a courtesy.



Figure 1 – Shoring along basement wall –also used as shelving.



Figure 2 – Rooted column base in basement.



Figure 3 – Wood materials added to aid in support of the joists and the center beam line.



Figure 4 – Spalling brick face-east exterior wall.



Figure 5 – Picture of rotted end of wood floor joist at first floor.

Existing Mechanical Conditions Narrative

Andrew Schubert Building 1908

Mechanical System

The heating system consists of an atmospheric hot water boiler that serves the upper floors. The first floor is heated from a gas-fired furnace located above the first floor front entrance. A functional domestic water heater exists in the boiler room. The roof is pitched from the front to the back and drains off the back edge to the alley below. While there are no roof drains, there is a horizontal cast iron storm pipe that runs the length of the basement. This pipe originates from a cistern in the alley that receives storm water from adjacent building downspouts (to the east of building 117-119 State) through corrugated tubing. It appears that the stormwater from the 117-119 State Street building also discharges into this cistern through an underground lateral. From the cistern, it is piped through the basement of this building and into a storm main in West Mifflin St. The sanitary piping is entirely cast iron, most all of it original. Water piping from the basement to the second floor appears to be lead.



Furnace above entrance



Deteriorated gas pipe



Deteriorated sanitary pipe



Storm main support/pitch



Leaking sanitary pipe



Roof drains into cistern that discharges through basement

Mechanical Infrastructure

There is a single natural gas service to the building and a single domestic water service. The building has a sanitary sewer lateral exiting the basement. All of these utilities are from mains in W. Mifflin St. and serve only this building. The storm sewer that originates at the cistern in the back of the building extends through the basement, out to the storm sewer in W. Mifflin St.

Condition Assessment

The boiler is estimated to be 10-15 years old and appears to be in fair condition. The hot water heating piping in the basement is newer, possibly installed when the boiler was installed but could not observe piping outside of the basement. Nothing is insulated.

The water heater appears less than 10 years old and is in good condition. Domestic hot water piping is copper in the basement but it is unknown what the material is on upper floors. Much of the cold water piping appeared to be lead. Sanitary piping is all cast iron, mostly original.

Remarks

The furnace appears to be operational but has signs of incomplete repairs from many years ago. Exact functionality is unknown. The support of the storm main is weak and the last several feet pitches upward, indicating a deteriorating system. The lead piping is an obvious health issue. A portion of the gas piping is badly deteriorated and has the potential to fail. Several sections of sanitary piping has either completely failed or is leaking. The storm main through the building is inappropriate since it doesn't directly serve the building.

With the exception of the boiler and water heater, there are no other mechanical systems or equipment that are suitable for reuse due to age, condition, capacity, or building code issues.

Written by: Kevin Lichtfuss, P.E.

Potter Lawson

Success by Design

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Madison, WI 53703
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Walk Thru Evaluation of 120 West Mifflin Street

Date of Walk Thru: November 29, 2011 Date of Report: December 9, 2011

Potter Lawson Job No. 2010.23.00

Andrew Schubert Building 1908

Electrical System

The building electrical service is 400amps at 120/208V, 3-phase, from MG&E and enters the basement from West Mifflin Street. The electrical distribution equipment is located in the basement, and there are three electrical meters for the building. Electrical panels distribute the power to building loads. The telephone service was not found.

Electrical Infrastructure

This building appears to have an independent electrical power system that does not connect to adjacent buildings.

Condition Assessment

Electrical equipment age varies from the 1930's to 1990's. The electrical service equipment in the basement was installed in the 1990's. The first floor fuse panel appears to be from the 1930's. The branch panel on the 2nd floor appeared to be from the 1980's. There were no noted obvious failures of electrical equipment, such as evidenced by heat or smoke discoloration. The MG&E electrical service equipment appeared to be in good condition.

Light fixtures were primarily incandescent in the basement and the 2nd floor apartments (about 1960's), with fluorescent strip fixtures on the first floor (about 1960's). Wiring device condition and age varies also, ranging from 1930's to 1960's. Branch circuits ranged from flexible metal conduit to EMT conduit. Although the condition of the branch circuit wiring is not known, it appeared that the installation age ranged from the 1930's to the 1960's.

The fuse panel on the 1st floor is past its reliable life, and the panel on the 2nd floor is at the end of its useable life. The fusible panel on the 1st does not meet current code requirements. The current wiring device locations in the apartment do not comply with accessibility requirements. Receptacle quantity and locations in the apartment do not comply with current NEC requirements. Compliance with current codes for these items would require branch circuit, receptacle and fuse panel replacement.

The electrical equipment appeared to be accessible for maintenance and repair.



Electrical service in the basement.



Electrical fuse panel on 1st floor.



First floor lights.



Electrical panel on 2nd floor.

Remarks

The electrical systems in this building would be removed in their entirety if the proposed single building design concept was implemented. The National Electrical Code and MG&E rules require that a single electrical service power a single building.

Written by: John Dreher, PE

ASBESTOS INSPECTION & BULK SAMPLING

120 and 120 1/2 West Mifflin Street, Madison, Wisconsin

Advanced Health & Safety LLC (AHS) was contacted to conduct an asbestos survey at the aforementioned property.

Mr. Robert J. Stigsell of AHS inspected the properties on November 8, 2011. The property was inspected for the presence of asbestos containing building materials. Bulk samples were taken for building materials found suspect to contain asbestos, as discussed. All samples were shipped overnight via Fed Ex. and were submitted to Triangle Environmental Services for analysis by Polarized Light Microscopy (PLM).

Four separate categories of materials (if applicable) will be listed for the property:

The first list (List A) will be of materials found to contain asbestos, which are **friable** or may become friable during demolition. It is **required** that these materials be removed by a certified asbestos abatement contractor prior to a demolition. **All asbestos materials in List A must be removed prior to a fire training burn.**

The second list (List B) will contain materials found to contain asbestos but are described as **Category II non-friable**. If the building is to be demolished, it is **required** that these materials be removed by a certified asbestos abatement contractor prior to a demolition. **All asbestos materials in List B must be removed prior to a fire training burn.**

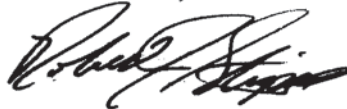
The third list (List C) will contain materials found to contain asbestos but are described as **Category I non-friable**. If the building is to be demolished, the materials may be able to remain in the building during demolition if proper steps are taken and they do not become friable. These proper steps include, but are not limited to: notifying the demolition contractor of the presence of asbestos, utilizing wet methods during demolition, notifying the landfill accepting the waste that not-friable Category I asbestos materials are present, and manifesting the waste. Also, if any of the building materials are to be recycled (ie, crushing concrete) than the asbestos must be removed from this building material. NESHAPS (DNR) does not regulate materials found at < 1% asbestos, however OSHA does still regulate materials that contain < 1% asbestos. If materials in List C are likely to be disturbed, the contractor shall ensure compliance with all appropriate OSHA regulations. **All asbestos materials in List C must be removed prior to a fire training burn.**

The fourth list (List D) will include materials that were sampled and found **not to contain asbestos**. **Removal is not required for these materials.**

If any suspect materials are found during demolition/burn that has not been sampled during this inspection, Advanced Health & Safety should be contacted to assess the situation. Inaccessible areas may exist inside walls.

Building/Dwelling: 120 and 120 1/2 West Mifflin St, Madison, WI
Building Type: Residential/Commercial
Inspector: Mr. Robert (Bob) J. Stigsell
Inspector Certification: AII-03628
Certification Expires: May 25, 2012
Inspection Date: November 8, 2011

Inspector Signature:



List A

Asbestos Containing Friable Materials

(Required to be Abated prior to Demolition or Burning)

- Asbestos on Tank in Basement (Samples 1-3)
- Paper behind Electrical Panel at Bottom of Steps (Samples 10-12)
- White 1/2" Thick Paper over Metal Pan Ceiling in Furnace Room (Samples 13-15)
- Black Spray-on under 2nd Floor Kitchen Sink (Samples 70-72)
- Brown Linoleum at 120 1/2 Entrance (Samples 76-78)

List B

Asbestos Containing Category II Non-Friable Materials

(Required to be Abated prior to Demolition or Burning)

- Window Glazing on Back Windows (Samples 43-45)
- Window Glazing in Side Windows (Samples 46-48)

List C

Asbestos Containing Category I Non-Friable Materials

(May Be Able To Remain In Building During Demo if Not Friable- Consult DNR)

(These Materials Must Be Abated Prior To Burning)

None

List D

Materials Found Not To Contain Asbestos At 1% Or Greater

(Both Tested or Known Not To Contain Asbestos)

(No Abatement Required)

- Basement Plaster Ceiling (Samples 4-6)
- Ceramic Tile Grout on 1st Floor Floor (Samples 7-9)
- Concrete Block Mortar-Basement (Samples 16-18)
- Plaster Patch in Basement Ceiling (Samples 19-21)
- Exterior Gray Thick Trowel-on on Bricks (Samples 25-27)
- Gray Roofing Mastic (Samples 28-30)
- Black Thick Roofing Mastic (Samples 31-33)
- Roofing Shingles (Samples 34-36)
- Silver Aluminum Roof Coating (Samples 37-39)
- Lean-to Roofing Inside Ceiling (Samples 40-42)
- Red Terrazzo (Samples 49-51)

9" Green with Black Feathered Floor Tile and Black Tar Paper (Samples 52-54)
9" Green with Brown feathered Floor Tile and Black Tar Paper under Carpet (Samples
55-57)

12" Black Floor Tile and Yellow Mastic (Samples 58-60)

12" Black and White Squared Floor Tile (Samples 61-63)

2' x 4'x Ceiling Tile (Samples 64-66)

Window Glazing from 2nd Floor Double Hung Windows (Samples 67-69)

12" Blue/White Steps going Upstairs (Samples 73-75)

Basement Plaster Ceiling (Samples 79-82)

Plaster Ceiling (Samples 83-88)

Tar Paper under Roofing Shingles (Samples 89-91)