Hanchett-Bartlett House
2149 St Lawrence Ave
Beloit, WI 53511

Condition Report for 2149 St Lawrence Ave Beloit, Wisconsin

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Introduction

Angus Young Associates was hired by Beloit Historical Society to provide a Property Condition Assessment (PCA) of the Hanchett-Bartlett House, 2149 St. Lawrence Ave, Beloit Wisconsin. The PCA follows the proposal that was agreed to between Angus Young Associates and Hendricks Commercial Properties dated December 15, 2017.

Purpose

The purpose of the Property Condition Assessment is to assist Beloit Historical Society in ascertaining the condition of the existing building as it is today and to have a better understanding of the current and future repair needs for building components and systems. Estimated costs will be associated with these repairs to assist Beloit Historical Society in future budgeting and fundraising purposes.

No property condition assessment can eliminate the uncertainty regarding the property and building deficiencies and their dependent systems. The walkthrough was based on visual observations of the building and the respective systems. The standard for PCA's recognizes the subjective nature associated defining the condition, quality and workmanship of the building components and their respective systems.

Scope of Work

The report was based on the following:

Site Reconnaissance

Angus Young Associates visited the property on May 24th, 2018 and May 10, 2019. During our site visits we visually observed the building and inherent systems that were exposed to view. This was a non-intrusive and nondestructive evaluation. We are not authorized or licensed to inspect hazardous materials.

Research

Angus Young completed limited research online utilizing the City of Beloit GIS and other resources for mapping and property information. There were no floor plans to reference for the walkthrough, so cardinal directions will be used in this report to assist the reader in locating the systems and components of the buildings.

General Condition

Based on Angus Young's walkthrough on May 24, 2018 and May 10, 2019 there are some immediate repairs that are required to stabilize the building envelope. These include roofing and flashings of the main house, ventilation of the crawl space of the School House, and Replacement of Septic and Domestic water supply lines from city utilities on St. Lawrence to the house.

For this PCA, we have broken the costs down into two categories. Immediate repairs are those that because of unsafe conditions, code violations or to prevent further damage require immediate attention. Deferred costs are repairs that should be budgeted to properly maintain the building and its systems.

Cost Options & Probable Cost

The costs are broken into two charts that explore immediate and long term. This is not an in-depth budget analysis, but relies mainly on general square foot or unit costs since future construction demolition and proposed layouts can't be determined at this point. For this PCA, we have included some costs that may be deemed as aesthetic and are subjective solely to our opinion. In the future, choices on materials may be chosen that will inherently affect the probable cost of replacement.

Reliance

This Property Condition Assessment is for the sole benefit of Beloit Historical Society. This document is copywritten by Angus Young Associates and may not be used by any third party without written consent of Angus Young Associates. The reliance on this document is in accordance with the proposal written by Angus Young and agreed to Beloit Historical Society.

Project Cost Summary

Item	EUL	EFF Age	RUL	Quantity	Unit	Unit Cost	Cycle Replace	Replace Percent	Immediate	Deferred
Architectural / Structural Systems										
Repair Chimneys	-	-	-	2	SF	$ 750.00	$ 1,500.00	100%	$ 1,500.00	
Tuckpoint Basement and Parge Walls	-	-	-	2208	SF	7	$ 15,456.00	100%		$ 15,456.00
Barn Floor Replacement	-	-	-	1210	SF	6.5	$ 7,865.00	100%		$ 7,865.00
School House Crawl Space Venting & Vapor Barrier	-	-	-	2	SF	350	$ 700.00	100%	$ 700.00	
South Wall Foundation Repair	-	-	-	28.5	SF	85	$ 2,422.50	100%	$ 2,422.50	
FACADE EXTERIOR WALLS										
Repair Water Damaged Plaster and Paint	-	-	-	625	SF	$ 12.00	$ 7,500.00	100%		$ 7,500.00
House: Tuckpoint & Repair Masonry	-	-	-	2,400	SF	$ 8.50	$ 20,400.00	100%	$ 20,400.00	
Barn Tuckpoint and Repair Masonry	-	-	-	480	SF	$ 8.50	$ 4,080.00	100%	$ 4,080.00	
WINDOWS AND DOORS										
Scrape and Paint Existing Windows, Doors and Trim	20	30	0	2,400	SF	$ 16.00	$ 38,400.00	100%	$ 38,400.00	
New Weatherstripping at doors				2	SF	$ 350.00	$ 700.00	100%	$ 700.00	
ROOF SUMMARY										
Remove Existing Roofing and Install New Wood Shingles with Copper Flashings	20	20	0	2,880	SF	$ 12.00	$ 34,560.00	100%	$ 34,560.00	
SITE WORK										
Replace Paving for Drive (Includes New Base Material)	-	-	-	726	SF	$ 14.50	$ 10,527.00	100%		$ 10,527.00
Brick Paver Walkway Repair	-	-	-	225	SF	$ 10.00	$ 2,250.00	100%		$ 2,250.00
Landscaping Allowance	-	-	-	1	SF	$ 12,500.00	$ 12,500.00	100%		$ 12,500.00
HVAC SYSTEMS										
Exhaust Fans	25+	-	-	1	ea	$ 430.00	$ 430.00	100%	$ 430.00	
Furnace/Air Conditioning Unit	18+	1	17	2	ea	$ 8,900.00	$ 17,800.00	100%		$ 17,800.00
New Natural Gas Piping to Furnace	-	-	17	2	ea	$ 300.00	$ 600.00	100%		$ 600.00
Ductwork, Grilles, Dampers	30+	-	10+	5,400	sf	$ 5.50	$ 29,700.00	100%		$ 29,700.00
New Condensate Pump	15+	1	14	1	ea	$ 286.00	$ 286.00	100%	$ 286.00	
Demolition - Furnaces	-	-	-	5	ea	$ 410.00	$ 2,050.00	100%		$ 2,050.00
Demolition - Ductwork, Grilles Dampers				3	day	$ 1,000.00	$ 3,000.00	100%		$ 3,000.00
ELECTRICAL NEW										
Ground Fault Interrupter	20	30+	0	2	Ea	$ 91.00	$ 182.00	100%	$ 182.00	
All electrical replacement on all floors	20	30+	0	5,400	SF	$ -	$ -	100%	$ -	
GENERAL PLUMBING NEW										
New plumbing fixtures and sanitary/water modifications for ADA Restroom Renovation	-	-	-	300	SF	$ 5.00	$ 1,500.00	100%		$ 1,500.00
Replace water heater	10	34+	0	1	ea	$ 1,300.00	$ 1,300.00	100%	$ 1,300.00	
SANITARY DRAINAGE SYSTEMS										
Replace sanitary drainage system throughout	30	30+		1	ea	$ 1,800.00	$ 1,800.00	100%	$ 1,800.00	
Abandon existing septic system	30	30+		1	ea	$ 3,000.00	$ 3,000.00	100%	$ 3,000.00	
New 4" sanitary sewer connected to existing sanitary lateral includes rock excavation	-	-	-	270	LF	$ 85.00	$ 28,950.00	100%	$ 28,950.00	
WATER DISTRIBUTION SYSTEMS										
Replace all water piping throughout with PEX	30	30+	-	1	ea	$ 4,000.00	$ 4,000.00	100%	$ 4,000.00	
New Water Service to Facility includes wet tap to main and street repair.	-	-		250	LF	$ 85.00	$ 24,250.00	100%	$ 24,250.00	
Abandon existing well & Remove Pressure tank	-	-		1	SF	$ 2,000.00	$ 2,000.00	100%	$ 2,000.00	
Total (Uninflated)									$ 168,960.50	$ 110,748.00
Estimating Contingency							10%		$ 16,896.05	$ 11,074.80
Soft Costs, (Design Fees, Permits, Utility Charges)							8%		$ 13,516.84	$ 8,859.84
Inflation Factor									1	1.06
Total (Inflated)									$ 199,374.39	$ 138,524.72

Overall General Facility Description

The property is zoned Public Land / Institution (PLI), single family residential use, located on a 1.77 acre parcel in the City of Beloit and the Beloit School District. The structures on the site include:

- House: Two story with basement that is about a 2,400 gsf footprint. The house is exterior load bearing stone masonry and wood floors and roof structure.
- School House: Single Story about 400 gsf that was moved to this location and is concrete block masonry foundation with wood floor, wall and roof structure.
- Shed: 240 gsf wood framed shed.
- Barn: Single Story, 1,210 gsf. The Barn is a grouted stone rubble foundation and exterior wall with wood timber roof structure. Floor slab is poured concrete slab on grade.

Site

Site Access and Egress

The property has a paved drive with turn around and minimal dedicated paved parking onsite for about four cars. Paving is broken, cracked and deformed. (See Photos A-30 and 31) A brick paver path leads to the main entrance to the house. This path is uneven and displaced in some areas and could pose a trip hazard to an infirm person. The majority of the site is mowed grass lawn, including approaches to the School House, Barn and Shed.

Exterior Stairs/ Concrete walks

The house includes stone steps at the main entrance. The steps have cracks, open joints between stone pieces. (See Photos A-7-8) Cracks should be filled with caulk and joints should be tuck pointed and grouted. The concrete exterior stair to the side entrance to the house is appears to be in tact with only minor rusting where the guard rails meet the concrete decking.

Landscaping

Minimal landscaping is provided on the site. Foundation plantings are primarily on the south and east sides of the house. These areas are overgrown. The landscaping along the south wall is touching the house and hiding the condition of the stone ledge, which is significantly deteriorated. (See Photos A-15-16) Repair of the ledge area will require removal of this landscaping. All other landscaping requires maintenance or replacement. The Barn is located adjacent the natural woods. The east and west sides have trees touching the building and should be trimmed back.

Utilities

The gas meter is located along the west side of the main house. There is an existing domestic water well which needs to be abandoned and a new water service lateral installed and connected to the existing water main located under St. Lawrence Avenue as required by City of Beloit Ordinance when a water main is with-in 400 feet of a structure. There is an existing septic system that has failed and requires a new sanitary sewer lateral be installed and connected to the existing lateral tap located in the terrace at St. Lawrence Ave. (See Appendix B for Site Plan)

Structural Systems and Building Envelope

Structural Systems

The House building is constructed of load bearing stone masonry walls with wood framing for the floors and the roof. On the first and second floors, the wood framing was covered in either plaster ceilings and or wood flooring, any direct observation of the wood framing wasn't attainable. Some specific soft spots in the wood flooring were noticed, along with slight differential settlement of floor joists due to overall movement of the house over time. The plaster ceilings appeared to be in adequate shape with minimal cracking and some deterioration due to roof leaks and movement. The settlement of the structure does appear to be stabilized. Any future planned renovation should consider more investigation into specific locations of concern.

The house exterior stone walls are in need of tuck pointing. One specific area of concern is the south west corner of the house has significant loss of mortar in the stone joint on the west wall. All other areas of the house require attention. Tuckpointing process should also remove any inappropriate mortar material, (Photo A-10) concrete used as mortar and caulk that may have been used in place of mortar in some areas. Some joints were filled with modern gray mortar that is cracking and delaminating. Care should be given to the type of mortar used for the tuckpointing. Samples of the mortar should be taken and analyzed for chemical make-up and similar mortar should be used. This is important to equalize the water absorption and brittleness of new mortar with the original mortar. Other masonry repairs include replacing the top of chimney with ne brick (Photo A-11).

House interior basement foundation wall was parged with a plaster coating. (Photo A-17) In some areas this is spalling due to moisture in the stone foundation. These areas should be tuckpointed where possible and new parging installed. If painting of this surface is desired, these areas should be painted with painting material that allows the transfer of moisture vapor to reduce delamination of the paint coating.

The School House was moved to the site in recent years. The school exterior siding and roof are in adequate condition. The floor of the school is showing signs of moisture deterioration. (Photo A-22) This is due to the crawl space below this framing is not vented in any way. (Photo A-23) This is trapping moisture and advancing deterioration in

the floor joists and decking of the school. This space was accessible by a small hole in the siding, it is expected that no vapor barrier is installed on the soil. The crawl space should be vented with a open louver or wire screen placed on opposite sides of the building at a size of 3 square feet of free air area total of two openings. The size of these fixed framed louvers should be a louver 24" x 18" in size. School House has a dehumidifier placed in the building. The drain hose of this unit is kinked and most likely not allowing water to flow. This should be replaced with a rigid pvc pipe to ensure flow of drain water. (Photo A-28)

The Barn's stone walls appear to be in adequate condition with minimal cracking. There is one area of concern on the north west corner. The floor slab has significantly settled in this area and a very large crack has occurred to accommodate this settlement. (Photo A-26) The wall does have cracks in this area, however their movement does not appear to equal the movement of the slab. The roof edge that is carried by the wall in this area does not display a large settlement either. The ground on the exterior of this area is lower than the floor. One possible explanation for this settlement is a crack occurred and the soil under the slab in this corner washed out and the slab dropped due to a lack of support. There is no visible signs of a large migration of soil in this area. This slab should be removed, the source of settlement and or movement of soil should be analyzed and a new slab installed. The barn had animals living in the south east corner during our recent visit on May 10th. A hole was visible in the soffit and fascia

Facades

Windows

Windows are original wood, single pane windows and some windows have modern aluminum storm windows added on this interior. These storms do not meet the historical nature of the house and should be replaced with appropriate wooden storms to better fit the age of the structure. All window should be scraped of loose paint and painted with proper latex primer and finish paint. (Photo A-8)

Many of the basement windows have been infilled with wood framing and window wells with stone fill material. (Photo A-13). These areas appear to be sources of water in the basement. Removal of the wood infill materials and blocking of windows with masonry materials or new windows should be considered. Regrading in the immediate area of the window wells to reduce the amount of water in these areas will reduce the risk of water in the basement.

Doors/ Frames

House doors are wood with wood frames. The front entrance door requires adjustment and weather stripping material be added to better seal the building. Daylight was visible on this door from the interior of the house.

Roofing

House roof should be replaced. The shingles are showing signs of age, such as curling of edges, cracking, and irregular surface. In addition to the age of the shingles, the flashings are failing or non-existent. Indications of this can be seen inside the side porch and in the ceiling of the second floor, along the walls of the upper roof and lower roof and below the cupula. Areas of the edge of roof are displaying signs of wood rot and indicate a more serious condition with the roof deck may exist. Similar to many houses of this age, no attic ventilation is provided and moisture trapped in the attic space is condensing in the colder weather and staining plaster as well. A roof replacement should include addition of attic ventilation at a rate of 1 sf / 300 sf of floor area and replacement of all flashings at base of cupula walls, intersections of stone wall of main house and kitchen wing and at valleys to dormers. A complete redesign of the flashing systems should be included in a roof replacement. It does not appear that any tin shingles are other vertical to horizonatal flashings have been installed on the house.

School house roof is in good condition and does not require immediate attention. Planned replacement should be considered in 8-10 years.

Barn roof is also in adequate condition. The south west corner of the bard fascia is significantly rotted and failing and should be replaced. A planned replacement should be considered in 8-10 years.

Regulatory Information

Building Information

This building as an historic structure with public use is governed in the building code by the International Existing Building Code (IEBC) 2015, chapter 12, Historic Buildings. This chapter outlines the requirements for repairs and alterations to a historic structure. In general repairs can be made with like materials to the original and installed to ensure similar safety to the original installation. In other words, a guard rail or railing that needs replacing should be installed at least as high as the original railing. Alterations that impact over 50% of the building area, but do not include a change of occupancy or use will require some additional consideration for Americans with Disability (ADA). If over 50%, at least one entrance should be accessible and one accessible toilet should be provided. As a single family house, the structure would not require fire sprinklers be added. Alterations that change the occupancy of the building will require adherence to the current building code in effect at the time of the change of occupancy.

Zoning

A Map provided online by the City of Beloit has the property located with zone PL-1, which is the Public Land / Institutional district.

Seismic Zone

The property is in a zone 0 seismic area according to the 1997 UBC code and a Category B earthquake zone according to the 2015 IBC code.

Flood Zone

A review of the City of Beloit Flood Plain Map, the property is not in the 100 year flood zone.

Wind Zone

A Wind speed map from FEMA has the property located in a Zone 1 wind zone. Which equates to a maximum wind speed of 70 mph.

Mechanical, Electrical and Plumbing

HVAC Systems

2149 St Lawrence Ave in Beloit, WI is served by two constant volume furnaces. One of the units is equipped with a DX cooling and associated condensing units located outside the facility. The remaining furnace is heating only. The furnaces have been furnished with a gas fired heat exchangers. Each furnace has been delivered natural gas through a 1" line located served from the meter located on the west side of the facility. The gas system appears to be regulated down to low pressure based on the size of the natural gas piping. Based on the model serial number and service date of the equipment, the furnaces and associated condensing unit were last April 2017. The American Society of Heating, Refrigeration and Air Conditioning Engineers (ASHRAE) publishes a table of estimate HVAC equipment service life's in the Application's Handbook. The estimated service life for a gas-fired furnaces, and air cooled condensing unit are approximately 18 years.

HVAC System Observations

The space has been divided into two zones. Zone one includes the rear portion of the facility. The spaces served appears to consist of the kitchen, and dining room on the first floor, as well as a bedroom on the second floor. Due to the location of the ductwork the zone may vary slightly as all of the ductwork is located within the joist cavities throughout the walls. The zone is supplied through the use of a gas fired furnace with no cooling. The indirect fired heat exchanger has been provided natural gas from a meter located on the west side of the facility. The furnace has also been provided with a Little Giant remote condensate pump (model VCMA-20ULS). The condensate pump was not in operation during the walk through of the facility.

The remaining space on the first and second floor are provided with air conditioning by means of a furnace and an associated 3 ton air cooled condensing unit (ACCU). The ACCU is located on the West side of the facility. The furnace is comprised of a DX refrigerant coil, a blower and a gas fired heat exchanger. Refrigerant lines from furnace (located in the basement of the facility) are routed to the air cooled

condensing unit located on the West side of the facility. According to ASHRAE, the furnace will reach its recommended service life in approximately seventeen years.

The furnaces are controlled through the use of a stand-alone thermostat. Through onsite review and discussion with the building owners, the existing equipment is able to handle the building heating load but if deficient on cooling.

Portions of the air distribution ductwork associated with the furnaces located in the basement appears to be 20+ years old. Based on the age of the building, and the existing conditions, the existing ductwork is in need of cleaning and may be approaching the useful life expectancy published by ASHRAE. The American Society of Heating, Refrigeration and Air Conditioning Engineers have published a useful service life of 30 years for ductwork. Refer to M-1 and M-2 for information related to existing conditions.

The space is primarily served with surface mounted grilles, registers and diffusers. A majority of the grilles, registers, and diffusers appeared to be the same age as the ductwork and are in need of cleaning, or replacement. (Refer to image M-3 and M-4)

A ceiling mounted, centrifugal exhaust fan serving the first floor lavatory was not in operation during the site visit. The expected service life of an exhaust fan is approximately 25 years according to ASHRAE. Based on the age of the facility it is anticipated that the restroom currently does not meet current mechanical code (2015 International Mechanical Code (IMC) with Wisconsin amendments).

HVAC Code Review

Based on field observation and installation of the equipment the existing furnaces appear to meet Code requirements set forth by the 2009 International Mechanical Code (IMC) with Wisconsin amendments. The source of outside air could not be identified during the walk thought. The IMC with Wisconsin amendments mandates 7.5 cfm of outside air per person. Future invitation shall be performed to insure the mechanical contractor has provided outside air ductwork to each furnace.

The first floor lavatory may not provide the minimum exhaust requirements of the International Mechanical Code (IMC) with Wisconsin Amendments. The IMC with WI amendments dictates a minimum exhaust rate of 75 cfm/fixture be required in lavatories.

Electrical Systems

Utility

Alliant Energy is the service Utility provider and enters the property via overhead line with one pole to support the overhead line halfway through the front yard. The electric meter is located on the west side of the main house, and appears to be in good operational condition and the meter recently updated in the past ten years. (Photo E-1 and E-2).

Hanchett-Bartlett Main House Service

The electrical service to this property is 200 amp 240/120 volt single phase. It appears to be in fair condition. The service meter is current with Alliant Energy's standards.

Distribution Panels

The main distribution panel (Photo E-3) is a 200 amp, 240/120 volt single phase panelboard with a 200 amp main breaker disconnect. The panelboard appears to be in fair condition but is estimated to be over twenty years old and the circuit breakers may be nearing the end of their useful life. It is recommended that a licensed electrician perform periodic maintenance on this panel board and assess the circuit breaker and internal wiring conditions for potential future replacement.

Panelboards

There are 3 panelboards located throughout the property that are fed from the main breaker panel. The first floor panelboard (Photo E-4 and E-5) is a 125 amp rated, 240/120 volt single phase panelboard. There is no room for future expansion on this panel and it appears to be in fair condition but is estimated to be over twenty years old and is recommended that a licensed electrician perform periodic maintenance and assess the internal conditions for potential future replacement. The schoolhouse panelboard (Photo E-6) is a 100 amp rated, 240/120 volt single phase six space panelboard. There are two spaces open and the panelboard would accept up to six tandem breakers to extend the circuit but due to the age and condition of the panelboard it is recommended that the panelboard and its associated feeder and branches have their condition assessed by a licensed electrician and replaced in the near future if necessary. The garage panelboard is a 100 amp rated, 240/120 volt single phase six space panelboard with three spaces open and the ability to accept tandem breakers for more circuit capacity. The panel is in poor condition and is recommended for immediate replacement at which time the feeder condition should be assessed by a licensed electrician as well.

System Grounding

The main service grounding rod system was visibly evident (photo E-7) off of the meter center. The main water service for this building appears to be a ¾" copper line that enters the basement from an existing well, the condition of the connection appears to be poor and proper grounding should be verified by a licensed electrician (Photo E-8). According to the National Electrical Code, a ground connection is required within 5 feet

of where the water service enters the building. Abandonment of this well is recommended is Plumbing Section 2.5.3.1.2 and it would be necessary to install a new ground conductor at that time.

Raceways and Wiring

EMT raceway that was in the basement seemed to be in good condition except for a few moisture damaged pieces that need to be replaced (Photo E-9) the condition of the wires should be assessed at that time as well. EMT conduit that was visible on the first floor seemed to be in good condition, but the wiring within the walls is unknown. Knob and Tube wiring and cloth wiring are both present throughout the site and should be investigated and confirmed to be disconnected on both ends (Photo E-10 thru E-12). It was noted at the schoolhouse that some of the receptacles and lighting was not functioning and it is recommended that the wiring and conduit conditions be evaluated for moisture and age related damage immediately to ensure they are up to code. Likewise, the panelboard in the garage shows signs of rust and moisture damage so the conduit and wiring in this area should be evaluated for replacement soon as well.

Wall Devices

The house interior outlets and switches appear to be in good condition but due to the age of some of the devices it is recommended that they be inspected for proper grounding and replaced if necessary (Photos E-13). It was noted that the bathroom receptacle (Photo E-14) needs to be replaced with a GFCI receptacle immediately to meet NEC requirements. The exterior GFCI receptacle should have its weatherproof cover replaced. As mentioned previously the receptacles in the schoolhouse (Photo E-15) are said to not be functional, due to their age and location conditions it is highly likely they will need to be replaced. The receptacles located in the garage appear to be in fair condition but due to the conditions of the panelboard and conduit should be inspected to ensure they are still in good condition and grounded properly.

Interior Lighting

Interior lighting fixtures throughout the main house are a mixture of Edison base, fixtures with CFL bulbs and track lighting for displays on the second floor (Photos E-18 and E-19). The porch contains two decorative Edison base fixtures. Fixtures throughout appeared to be in reasonable working condition with the exception of a pair of flying leads in the wood stove area, these wires could be inspected in the future for condition and used to provide power to a new fixture here. It is recommended that the lamps on all fixtures be switched over to LED bulbs as they fail to save costs on energy consumption. The schoolhouse was found to have no interior lighting present, besides decorative oil lamps. The garage was found to contain Edison base incandescent lamps and halogen lamps. It is recommended that these lamps be replaced with their LED equivalents as they fail to save energy costs.

Exterior Lighting

Site lighting is very minimal. There is a one lamp incandescent fixture above the front door. There is one wall pack under the soffit on the second floor. There is a dual-head

fixture above the east porch entry and one dual head fixture on the northern east side of the house and one on the north side of the house (Photo E-16). The lamps in these fixtures should be replaced with LED equivalent bulbs as they fail and the wall pack fixture is very aged and should be replaced with an LED wall pack. The schoolhouse exterior has a dual-head fixture on the south end of the building and an empty light fixture above the west entrance. The dual-head fixture should be re-lamped with equivalent LED bulbs when the current ones fail and if lighting is desired at the west schoolhouse entrance the fixture is old enough that it should be replaced entirely with an LED fixture. The garage exterior has a dual-head fixture above the entrance with one broken lamp (Photo E-17). It is recommended that these lamps be replaced immediately with LED equivalent lamps.

Tele/Communication cabling and devices

Investigation of the cabling was found to be in old condition (Photo E-20). The only observed station jacks was on the front porch (Photo E-21).

Fire Alarm

None.

HVAC Connections

Electrical connections, conduit, and wiring to the existing HVAC system appears to be in reasonable condition and up to code.

Space Summary

Recognizing that most of the electrical components are hidden in walls, above ceiling and behind covers, the exact condition is unknown; however the visible portions of the electrical system appear to be old and should be considered for complete replacement in future renovations.

Plumbing Systems

Plumbing Utilities

Building Sanitary Sewer Lateral

There is an existing septic system which has failed and is required to be abandoned in accordance with Wisconsin Administrative Code SPS 382.33. A new 4" sanitary sewer lateral needs to be installed from the entry (Photo P-1) and exit point (Photo P-4) of the building to an existing sewer lateral tap located 110' west of the nearest manhole located in St. Lawrence Ave. Lime rock is expected to be encountered during the excavation which will significantly increase the cost of the installation.

Building Water Service Lateral

There is an existing well (Photo P-3) with a pressure tank located in the basement (Photo P-2). The well is required to be abandoned (City of Beloit ordinance 27.16) and

a new Polyethylene water service lateral installed and connected to the public water main with a live tap. The public water main is located under St. Lawrence Ave. Lime rock is expected to be encountered during the excavation and street repair is required which will significantly increase the cost of the installation.

Plumbing Drainage Systems

Building Sanitary Drainage

The existing sanitary drainage and vent system is constructed with a mixture of cast iron and PVC which appears to be in good condition but because of the ADA requirements and the need to add a bath or shower it is anticipated that the majority of the sanitary drainage piping will need to be modified or replaced. It is recommended that the entire system be replaced with PVC piping and fittings.

Domestic Water Distribution Systems

The existing cold water distribution system is fed from an existing well pressure tank located in the basement. (Photo P-2) In accordance to City of Beloit ordinance 27.16 the building is required to be connected to the public water system. The well would then be required to be abandoned in accordance with Wisconsin Department of Natural Resources requirements (Wisconsin Administrative Code NR 812.26). The existing hot water system is supplied by a Rheem 52 gallon electric water heater. (Photo P-5) The Existing cold water and hot water systems are constructed with a mixture of galvanized pipe and fittings, copper pipe and fittings, PVC pipe and fittings. (Photo P-6) The galvanized pipe and fittings have exceeded their useful life expectancy. PVC pipe and fittings are not approved for use inside a building by the Wisconsin Plumbing Code. Existing cold and hot water distribution systems will need to be completely replaced with new pipe and fittings which are approved by Wisconsin Administrative Code chapters SPS 381 – SPS 387 (Wisconsin Plumbing Code).

Plumbing Fixtures and Equipment

Building Fixtures

The existing bathroom fixtures do not meet current ADA guidelines nor does the water closet meet water conservation regulations. (Photo P-7 & P-8) The fixtures are required to be replaced. Wisconsin Plumbing code requires a bath or shower for a residence so a bath or shower will need to be added. The kitchen sink and faucet appear to be serviceable however the drain is required to be rebuilt because there is back pitch in the continuous waste pipe. Exterior hose bibs are required to be replaced with approved frost proof hose bibbs.

Building Equipment

The 52 gallon electric water was manufactured in January 1983 and exceeds expected useful life expectancy and needs to be replaced. (Photo P-9)

Life Safety/ Fire Protection Systems

Fire Suppression Systems

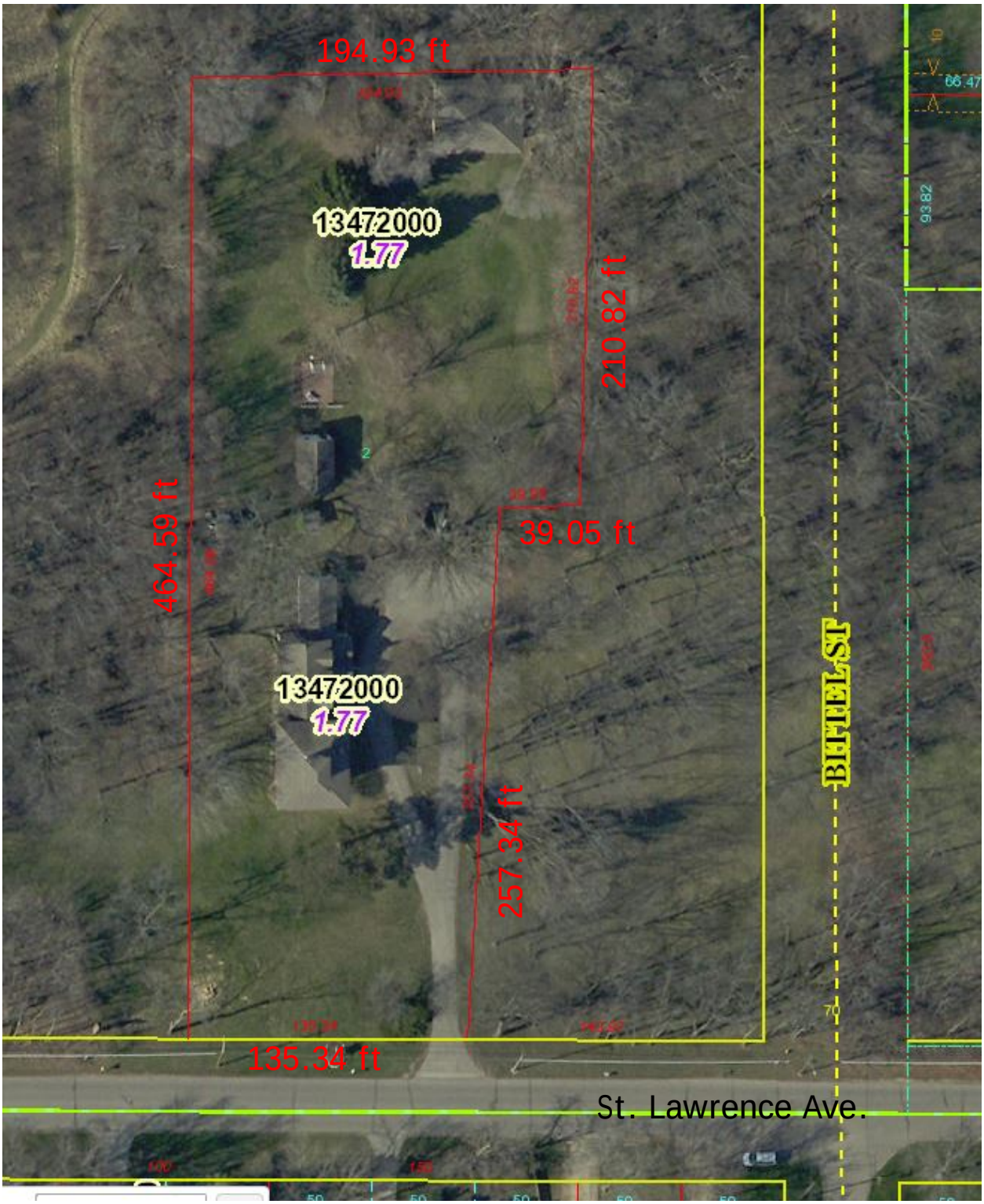
The building does not have an automatic sprinkler system and does not require sprinklers to be installed.

Alarm Systems and Other Life Safety Systems

There is not a fire alarm system in these buildings and one is not required by the building code.

Appendix A: Photographs

Site Aerial



Aerial View- Beloit GIS

A-1 Partial East Elevation

A-2 Partial East Elevation

A-3: South Elevation

A-4: Partial West Elevation

A-5 Partial West Elevation

A-6: Partial West Elevation

A-7: Crack at Entrance Stone

A-8: Entry Open Stone Joints

A-9: Stone Window Sill Stone Joints

A-10: Crack at Porch, Wrong Joint Material

A-11: Chimney Top

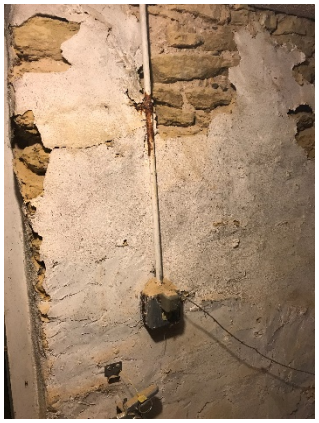
A-12: Chimney Flashing

A-13: Infilled Basement Window

A-14: Basement Wall and Ceiling at Entry

A-15: Foundation Ledge

A-16: Foundation Ledge



A-17: Basement Wall Pealing

A-18: Typical Window

A-19: Basement Stair

A-20: School House

A-22: School House Floor

A-23: School House Crawlspace

A-24: Barn South Elevation

A-25: Barn Floor Crack

A-26: Barn Floor Crack

A-27: Barn Graffiti

A-28: School House Dehumidifier Hose

A-29: Barn Roof Edge

A-30: Paving Condition

A-31: Paving Condition

Mechanical/ HVAC

M-1: Existing Ductwork

M-2: Existing Ductwork

M-3: Existing Grille

M-4: Existing Grille

Electrical

E-1: Overhead Electrical Service

E-2: Service Meter/ Telephone NID

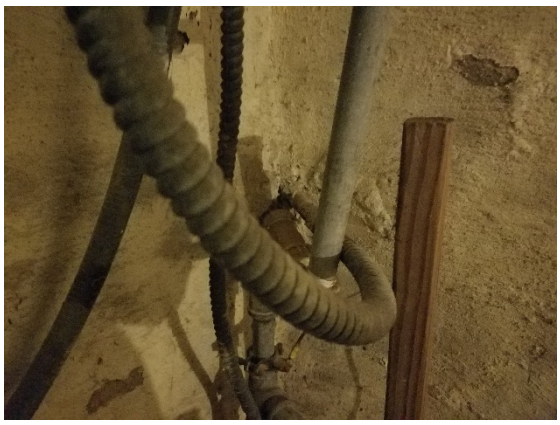
E-3: Main Disconnect/Breaker Panel

E-4: First Floor Panel

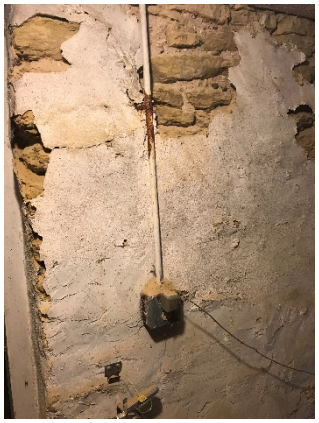
E-5: First Floor Panel Breakers

E-6: Schoolhouse Panel

E-7: Main Service Grounding



E-8: Water Service Grounding

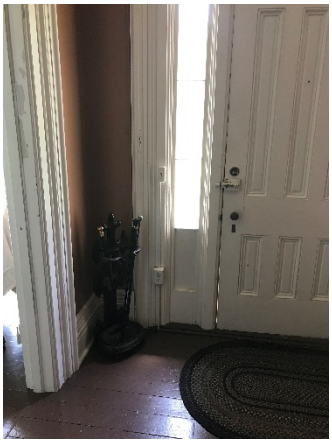


E-9: Basement – Rusted Conduit

E-10: Cloth Wrapped Conductors

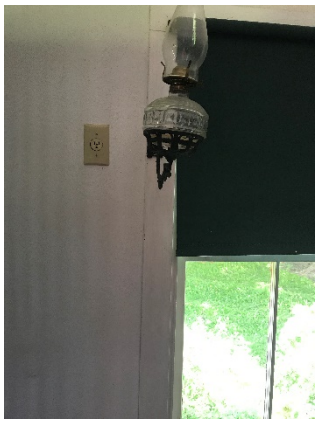
E-11: Knob and Tube Wiring

E-12: Knob and Tube Wiring



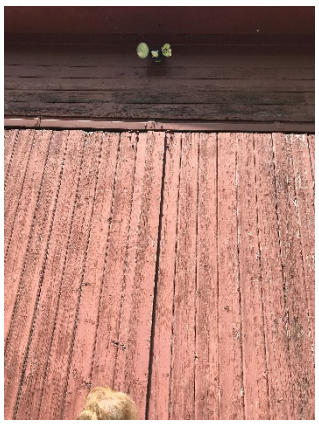
E-13: First Floor Receptacles and Switches

E-14: Non-GFCI Bathroom Receptacle



E-15: Old Schoolhouse Receptacle

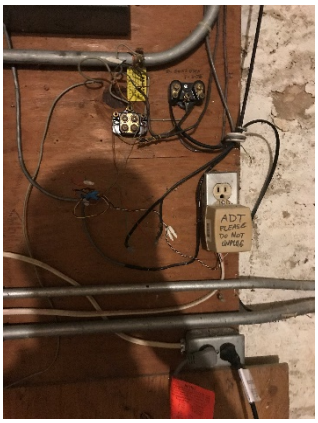
E-16: East Exterior House Lighting



E-17: Exterior Garage Lighting

E-18: Typical Edison Base Incandescent

E-19: Second Floor Display Lighting



E-20: Telephone Location

E-21: Telephone Location

Plumbing

P-1: 4” Sanitary lateral entry

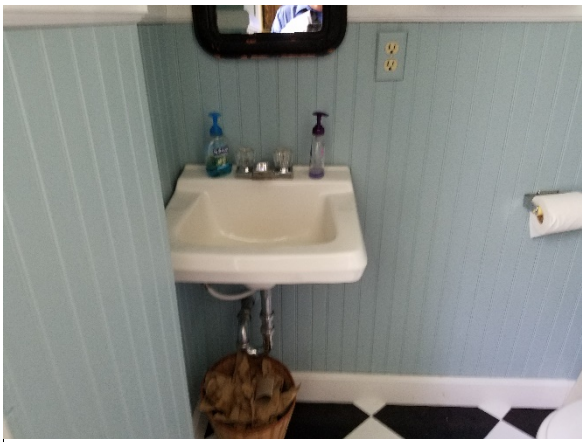
P-2: Well water service entry and pressure tank

P-3 Water Well

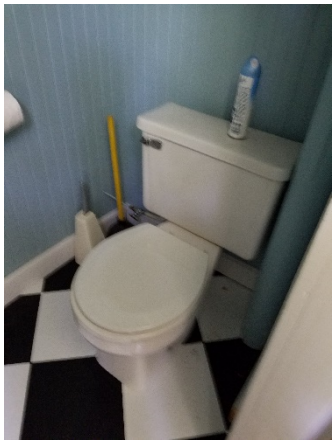
P-4: Sanitary sewer lateral exit point

P-5: Existing domestic water heater

P-6: Existing Cold and Hot water piping



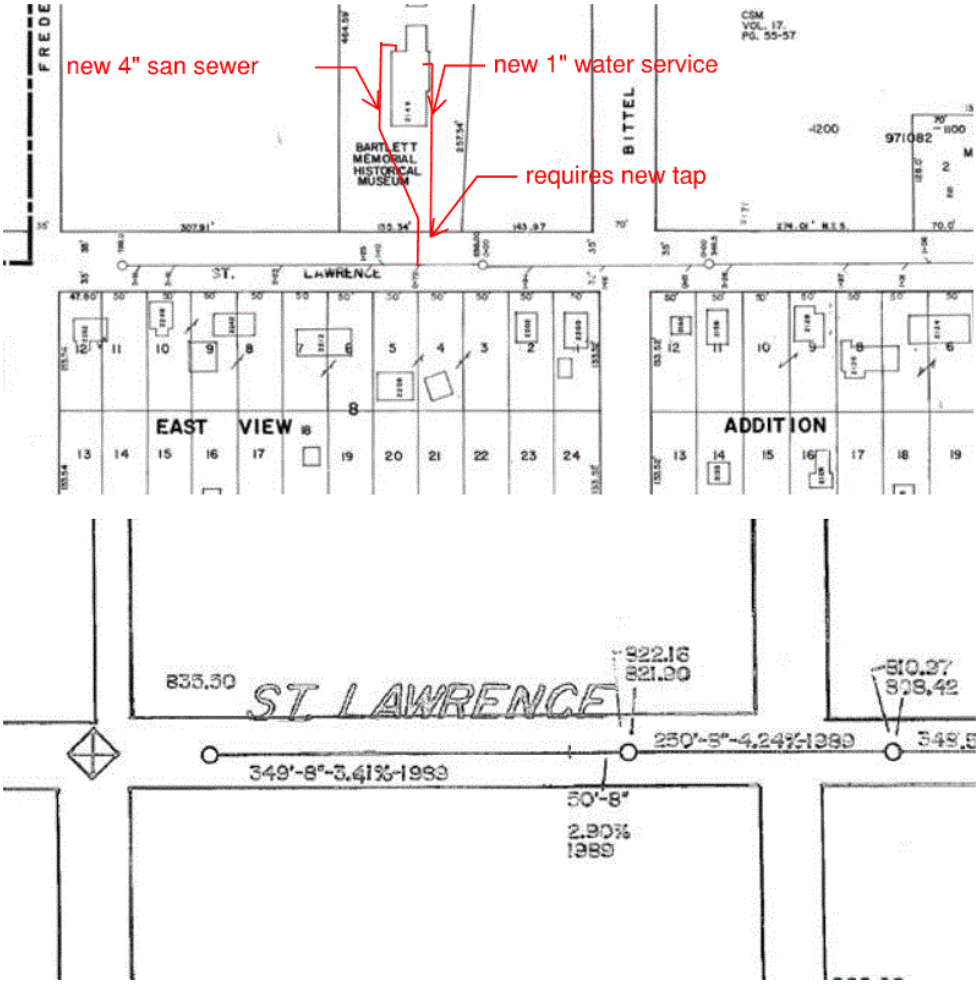
P-7: Existing lavatory



P-8: Existing Water Closet

P-9: Water Heater Label – 1st four numbers of serial number indicates date of manufacture.

Appendix B: Maps



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CITY OF BELOIT ZONING MAP