MADISON COUNTY BOARD OF SUPERVISORS
MADISON COUNTY, MISSISSIPPI

WARNOCK BUILDING REPORT
158 WEST CENTER STREET
CANTON, MISSISSIPPI

Date: APRIL 20, 2018

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1. INTRODUCTION

1.1 BACKGROUND

JH&H Architects/Planners/Interiors, PA was retained by the Madison County Board of Supervisors to provide a Review of the Existing Conditions of the Warnock Office Building located at 158 West Center Street on the Square in downtown Canton, Mississippi. The building is an existing two-story structure of approximately 5,000 square feet.

It is the reviewer's understanding that the County is interested in the possibility of purchasing the building to provide additional office space for approximately 15 County personnel.

The purpose of this report is to provide the County with a Review and Analysis of the Building's Existing Conditions and to provide Opinions on possible costs to Renovate and/or correct any observed building problems or deficiencies.

1.2 PROCESS

This report is based on the following Process used to develop findings, analysis and opinions.

- Discussions with Shelton Vance and Danny Lee representing Madison County.
- Walk-Through and Visual Observations performed on April 4, 2018.
- Visual Review of Architectural, Structural, Mechanical, Electrical Building Systems.
- Building Code Overview of Observed Existing Conditions.
- Visual Review of Building Envelope.
- Cost Projections based on Visual Observations and Recent Similar Project Costs.

1.3 WALK-THROUGH

The April 12, 2018 Walk-Through was attended by the following.

- Shelton Vance — Madison County
- Danny Lee — Madison County
- Carl Franco — JH&H Architects/Planners/Interiors, PA - Architect
- Jerry Bowen — JH&H Architects/Planners/Interiors, PA – Architect Consultant
- Chas Smithers — Laird & Smithers - Structural Engineer
- Chad Moore — Engineering Resource Group – Mechanical Engineer
- Mike Wynne — Schultz & Wynne – Electrical Engineer

Additionally, the Building Owner's Representative also attended.

1.4 LIMITATIONS

The Report is based on the following Limitations.

- No Existing Building Drawings or other Existing Information were available for Review.
- Analysis, Findings and Opinions are based on Visual Observations only.
- No Destructive Testing was performed.
- No Asbestos or Hazardous Material Surveys were performed.
- No Information from the Mississippi Department of Archives and History was available.
- No Programming for Future Space was provided.
- Because of the limited access to certain areas, assumptions have been included.

1.5 BUILDING DESCRIPTION

The Existing Building is located on the North Side of what is known as *"The Square"* in Canton, Mississippi. It is understood that the building was originally constructed as a Mercantile Store and was recently used as an Office Building for an Engineering Firm. The Building is listed on the National Register of Historic Places by the U. S. Department of Interiors.

The Building is two stories approximately 5,000 square feet and appears to be Wood Construction for Floor and Roof Systems. There is a Second Floor Wood Constructed Addition that contains the second-floor restrooms. The First Floor appears to be constructed over a Crawl Space. The Walls appear to be Wood Framed with Brick Exterior Façade. It is not known if there is a wall cavity used as a drainage plane. The Roof Membrane is a Screw-Type Metal Roof which appears to be in relatively good condition.

The Interiors consist of Painted Gypsum Wall Board and Plaster with wood Wainscot Paneling in some areas. The First Floor has a Decorative Ceiling. The Second Floor has a Painted Gypsum Wallboard Ceiling. Carpet is the main floor material. The lobby floor is tile. Restroom floors are Vinyl Composition Tile. The interior walls on the first floor are approximately 8 feet tall stopping at least 4 feet below the Decorative Ceiling. Almost all the Electrical Conduit and HVAC Systems are exposed due to the existing wall and ceiling finishes. Doors and Windows are wood framed. Windows are assumed to be single pane glazed.

Restrooms include one single compartment private restroom on the first floor and a two-compartment for Men's and Women's Restrooms located in the Second Floor Addition. No Drinking Fountains are provided. There are Two Interior Stairs and a second Floor Fire Escape. No Elevator is provided.

There is a limited amount of designated parking (3-4 spaces) on the North side. There are no other designated parking spaces available. However, there is public parking spaces located on the Square.

2. OBSERVATIONS AND FINDINGS

This Section provides a Summary of Findings and Observations. A more comprehensive review of each of the Structural, Mechanical, Electrical and Code Findings and Observations are provided in the attached Appendix.

2.1 ARCHITECTURAL

2.1.1 ABILITY TO FUNCTION AS OFFICE SPACE

The most recent use of the existing building is for a Private Engineering Office. Therefore, there is no reason to believe that the Building could not be used for certain County Office Functions. However, Office Space to be used by a Governmental Entity which is accessible to the Public will be held to a much higher standard regarding Building Codes and Accessibility. Additionally, the age of the existing building will require updating of the Building Systems. It is also assumed that Renovation of the Interior Space will be needed to meet the functional requirements of the new Offices / Departments to be moved into the existing building.

2.1.2 PARKING / VEHICLE ACCESS

There are only a few (3-4) designated parking spaces. It is the author's understanding that the building could have as many as 15+ full-time staff. There are no known designated adjacent parking spaces available currently for staff use. There are public parking spaces that may be available located around the Square. However, the availability of these spaces will vary depending on shopping or other functions occurring. In general, there will be a severe lack of parking spaces not only for staff, but also for the public who may have business with the Building Users.

It is also unknown exactly how Service or Building Deliveries will be handled because of the limited vehicle access.

2.1.3 BUILDING INTERIOR

The existing Interior Finishes, walls, floors and ceilings, need to be updated and/or repaired. In some instances, this will only require a new coat of paint. In other conditions walls and ceilings will need patching and repair. There were several areas that indicated water leaks, cracking in walls from lack of control joints in walls or simply wear and tear in the finishes. New carpet squares are recommended to be provided throughout, since this will help control sound as well provide ease of maintenance.

The Existing Decorative Ceiling will probably be mandated to remain by Archives and History. This will require new office space on the first floor to be kept below the existing decorative ceiling similar to the current offices. The current interior finishes have wood door frames, wainscot, and other wood moulding. Much of this would need to be refinished, if kept. However, this wood trim work and moulding are not typically appropriate for governmental public office space and can cause higher maintenance. New Finishes and Materials should be typical to other Public Administrative spaces.

The Interior Building Systems – Lighting, Heating & Cooling, Power, Etc.- should be updated as addressed in the Mechanical and Electrical Sections.

Building Life Safety, Egress and Accessibility will also have to be upgraded as mandated by the Building Codes and the American with Disabilities Act.

2.1.4 BUILDING EXTERIOR

The Building Exterior Brick Walls need to be repaired and repointed as noted in the Structural Section. The original construction techniques and materials, the building age and the exposure to the weather over the years has led to some deterioration of the mortar and brick. We would also recommend in addition to the noted repairs, that a clear color masonry waterproofing material be applied to the exterior brick to help prevent water penetration to the interior, as well as new sealants around windows, doors and other penetrations in the exterior wall.

The Existing Metal Roof visually appears to be in acceptable condition. However, there are some areas where the Roof and/or associated flashing need to be repaired. Also, since this is a Screw Fastened Metal Roof, the screw connections should be checked to verify that these are tight and properly sealed to prevent leaks. There were some wet spots observed on the interior second floor ceilings indicating that there have been some past water leaks from the roof.

Because this building is listed on the National Register of Historic Places, any Exterior Work will have to be approved by the Mississippi Department of Archives and History.

2.1.5 BUILDING CODES AND ACCESSIBILITY

The City of Canton currently follows the 2012 International Building Code. Because this is an existing building constructed many years ago, the Code requirements for this building regarding any Renovation will have to comply with ICC Existing Building Code, as interpreted by the Authority Having Jurisdiction which is assumed to be the City of Canton. The Code Requirements will vary depending on the amount of New and Renovated Work performed.

Generally, the less amount of New Work, the less requirements will be required by the Code. However, it is a good idea to visit with the local code authorities to discuss the planned work prior to design. The local code authorities often will work with the designer and owner in order prevent unrealistic or unpractical requirements, as long as Life Safety is not compromised.

Life Safety is of prime importance. In this case the existing Building is not Sprinklered and does not have a Fire Alarm System. Since this Building is primarily constructed of Wood, the lack of these two items will cause more severe Code requirements and more-than-likely will be required to be added with any proposed renovation work.

Accessibility, as specified by the Americans with Disabilities Act, will also be required. However, again since this is a Renovation project and the building is listed on the Historical Register, the ADA Requirements will be limited somewhat. Key issues to be solved with this renovation will be Accessible Egress, Access to the Second Floor, since currently there is no elevator and Accessible Restrooms, which do not currently comply with ADA.

The Building Code Observations section in the Appendix addresses these items in more detail.

2.1.6 HAZARDOUS MATERIALS

Due to the age of the Existing Building and the Construction Type, it is very possible that Asbestos Containing Materials were used in the building construction. There also may be a possibility of other potentially Hazardous Materials present such as Lead Paint, Mold/Mildew, Radon, etc. This Review did not include any Hazardous Material surveys. If Renovation proceeds, the Department of Environmental Quality will require at a minimum an Asbestos Survey to determine if Asbestos Containing Materials are present.

It would also be advised to conduct testing / surveys for any other potential hazardous material. In recent years there has been much litigation regarding the Air Indoor Quality in buildings and how poor AIQ resulted in potential illness and sickness to building occupants. Abatement of certain types of Hazardous Materials would be required prior to any Renovation depending on the type and quantities of Hazardous Materials identified.

2.1.7 HISTORICAL BUILDING REQUIREMENTS

As previously noted, this building is listed in the National Register of Historic Places. The state agency that oversees these buildings and determines the regulations, requirements and limitations of any renovation and construction to these buildings is the Mississippi Department of Archives and History (MDAH). Generally, MDAH focuses mainly on construction items that affect the exterior character. However, their authority can also pertain to the interior spaces.

At the time of this Report, the specific requirements or limitations that would be applied to the renovation of this building were not determined. These can only be specifically determined once preliminary design plans are produced. It should be realized that the construction costs for Historical Buildings are generally higher due to the requirements of MDAH to maintain the historical building character.

2.2 STRUCTURAL

On April 4, 2018, the Structural Engineer reviewed the Structural Components that were visible or capable of being accessed. It should be noted that access to observe the structural elements was very limited. Therefore, the opinions and analysis contained herein are based on the visually accessible elements and some assumptions. A more detailed report is contained in the appendix.

In summary, it appears that the first floor is structurally adequate to support an office space with limited structural modifications. If the second floor is used an office space, strengthening the second-floor members is required to obtain the capacity to support a code required live load of 40 psf for office space. Additional Structural Support would be required if File Storage is needed. Strengthening the second floor will be extremely difficult and costly without the removal of the metal decorative first floor ceiling. Additionally, repair and repointing of the exterior brick and attaching the floor and roof diaphragms to the walls should be addressed prior to building occupancy.

2.3 MECHANICAL

2.3.1 HVAC (HEATING VENTILATION AND AIR CONDITIONING) SYSTEMS

The Building has two HVAC Units, each serving only one floor. Generally, the HVAC Units are in good shape. However, the HVAC System does not meet current Building Codes with regard to Ventilation and Return Air requirements. Additionally, there is not adequate air distribution throughout. Exhaust fans for the restrooms are not adequate and do not work. The IT / Communication / Electrical Closet does not have a cooling unit, which is needed.

New Duct Work, Thermostats, Exhaust Fans and an IT AC Unit should be provided. Additionally, the HVAC System will need to be modified with the anticipated changes to the existing floor plan.

2.3.2 PLUMBING SYSTEMS

Plumbing Fixtures in the Restrooms do not comply with the ADA requirements. No Drinking Fountain is provided. New ADA Compliant Plumbing Fixtures and a Drinking Fountain should be provided.

2.3.3 FIRE PROTECTION SYSTEMS

The Building does not have a Fire Sprinkler System. Installation of a Wet Pipe Fire Sprinkler System complying with NFPA 13 should be considered.

2.4 ELECTRICAL

2.4.1 LIGHTING SYSTEM

The Lighting Fixtures throughout the building are outdated and the Lighting Levels are below recommended standards. The existing Lighting Fixtures are inefficient. New modern efficient fixtures should be installed. It is recommended that installation of LED Light Fixtures should be considered.

2.4.2 POWER SYSTEM

The Electrical Service and Distribution System Equipment is in poor condition. The system was installed using poor methods. While the existing Electrical System may be adequate for a private office setting, the existing system is not suitable for governmental office use which can be accessed by the public. It is recommended that the Electrical Systems be replaced and upgraded.

2.4.3 FIRE DETECTION AND ALARM SYSTEM

The building does not have a central Fire Detection and Alarm System. Typical Public Office space has a central Fire Detection and Alarm System as required by Code to provide Life Safety for the public.

2.5 BUILDING CODE AND ADA ASSESSMENT

Since Renovation will require meeting certain Building Code and American with Disabilities Act (ADA) requirements, part of our team's assessment was a broad overview of what items may be required to meet these requirements.

It is assumed that the City of Canton will be the Authority Having Jurisdiction (AHJ). As such the AHJ makes the final interpretation and enforces the Building Code Requirements. ADA is a Federally Mandated Law enforced by the Department of Justice but is also incorporated into the 2012 International Building Code currently adopted by the City of Canton.

Since this is an existing building, the International Existing Building Code would apply for any Renovations and Repairs. However, the Code requirements that apply to Renovation will vary based on the amount of Renovation performed. Since the scope of Renovation has not been specifically determined at this time, it is not possible to identify all the exact requirements. Additionally, it is always a good idea to coordinate this with the AHJ to understand what they may or may not require.

The Appendix contains a summary of what typically may be expected with regard to the Code Requirements for the renovation of this existing building. However, this will need to be reviewed in detail once the final scope of renovation work is determined.

3. ESTIMATED COST PROJECTIONS

Attached are Estimated Cost Projections which consider two Options for the Building Renovation. Neither Option includes possible Hazardous Material Abatement Costs.

Option 1 projects possible Costs based on using the Building's current spaces and offices "as is" while providing new finishes and constructing only those items as viewed as necessary to comply with Codes, ADA and Life Safety Requirements for a Public Office space. Option 2

projects possible Costs based on complete Renovation of the First Floor into new Office Space while leaving the Second Floor Plan as it currently exists, but still making the necessary improvements for new finishes and required Code, ADA and Life Safety Requirements.
Since this is a Renovation Project and some areas were not visible or accessible to review, some assumptions have been regarding projected costs. A contingency is recommended for those additional unknown costs that are associated with Renovation Projects.

OPTION 1	
HVAC SYSTEM UPGRADE	$60,000
PLUMBING SYSTEM UPGRADE	$40,000
ADD FIRE SPRINKLERS	$20,000
NEW LIGHTING SYSTEM	$30,000
NEW ELECTRICAL WIRING, SERVICE & DISTIRBUTION SYSTEM	$30,000
NEW FIRE ALARM SYSTEM	$10,000
REPAIR & WATERPROOF EXTERIOR	$12,500
INTERIOR FINISHES	$50,000
CODE COMPLIANCE ALLOWANCE	$15,000
NEW RESTROOMS	$30,000
DEMOLITION	$7,500
STRUCTURAL REPAIRS ALLOWANCE	$10,000
SUBTOTAL	**$315,000**
CONTRACTOR OH&P	$80,000
CONTINGENCY @10%	$40,000
FEES & TESTING	$60,000
TOTAL OPTION 1 PROJECTED COSTS	**$495,000**

OPTION 2	
HVAC SYSTEM UPGRADE – SECOND FLOOR	$30,000
NEW FIRE SPRINKLERS	$20,000
ELECTRICAL SYSTEM UPGRADE -SECOND FLOOR	$30,000
NEW FIRE ALARM SYSTEM	$10,000
REPAIR & WATERPROOF EXTERIOR	$12,500
INTERIOR FINISHES -SECOND FLOOR	$25,000
CODE COMPLIANCE ALLOWANCE	$15,000
DEMOLITION	$20,000
NEW FIRST FLOOR LAYOUT	$325,000
STRUCTURAL REPAIR ALLOWANCE	$10,000
SUBTOTAL	**$497,500**
CONTRACTOR OH&P	$150,000
CONTINGENCY @ 10%	$65,000
FEES & TESTING	$80,000
TOTAL OPTION 2 PROJECTED COSTS	**$792,500**

ALTERNATE NO 1 – ADD ELEVATOR	$85,000

4. EXISTING BUILDING PHOTO GALLERY

4.1 FIRST FLOOR OFFICES

4.2 FIRST FLOOR DECORATIVE CEILING

4.3 TYICAL FIRST FLOOR OFFICE

4.4 ENTRY LOBBY FLOOR

4.5 FIRST FLOOR EXPOSED HVAC DUCT

4.6 FIRST FLOOR HVAC EXPOSED DUCT

4.7 BLOCKED FIRST FLOOR EGRESS

4.8 NON-COMPLIANT FIRST FLOOR DOOR

4.9 INTERIOR STAIR TO SECOND FLOOR

4.10 TYPICAL SECOND FLOOR OFFICE

4.11 SECOND FLOOR UNLEVEL CORRIDOR

4.12 SECOND FLOOR CEILING LEAK

4.13 EXPOSED ELECTRICAL CONDUIT

4.14. EXPOSED ELECTRICAL CONDUIT

4.4.15 SECOND FLOOR EXPOSED HVAC DUCT

4.16 NON-COMPLIANT RETURN AIR IN HALL

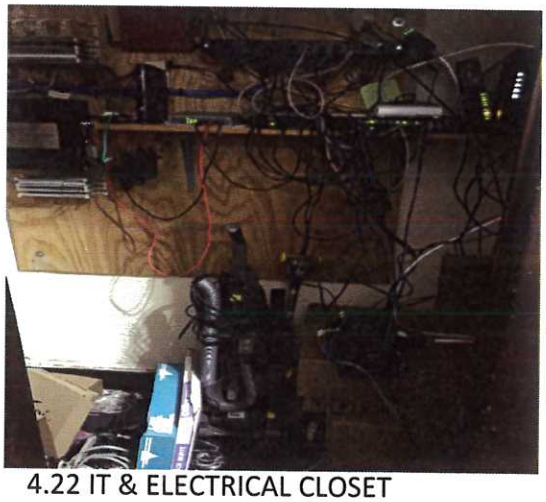
4.17 SECOND FLOOR RESTROOM

4.18 NON-COMPLIANT RESTROOM

4.19 WALL DAMAGE FROM LEAKS

4.20 MECHANICAL CLOSET

4.4.21 EXPOSED ELECTRICAL PANEL IN HALL



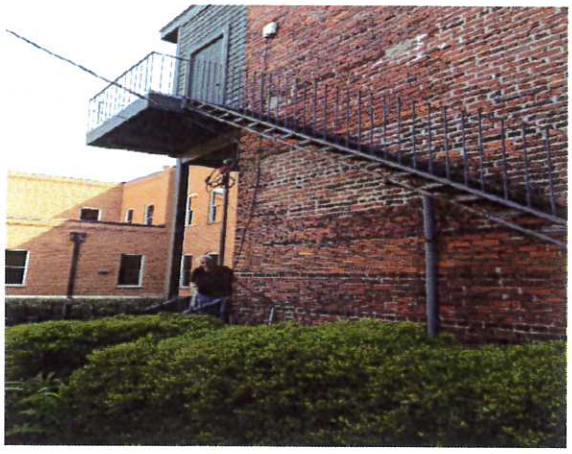
4.22 IT & ELECTRICAL CLOSET

4,23 WAINSCOTT PANELING (TYPICAL)

4.24 STEP TO SECOND FLOOR RESTROOMS

4.25 SECOND FLOOR ADDITION

4.26 EXTERIOR MECHANICAL & ELECTRICAL



4.27 SECOND FLOOR FIRE ESCAPE

4.28 FRONT ENTRANCE

4.29 EXISTING METAL ROOF

4.30 PUBLIC PARKING ON THE SQUARE

APPENDIX

STRUCTURAL REPORT
MECHANICAL REPORT
ELECTRICAL REPORT
BUILDING CODE / ADA ASSESSMENT

WARNOCK BUILDING REPORT
158 WEST CENTER STREET
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LAIRD + SMITHERS, INC.
Engineers and Consultants

April 11, 2018

J. Carl Franco, AIA, LEED© AP
Principal
JH&H Architects/Planners/Interiors, PA
1047 North Flowood Drive
Flowood, MS 39232-9533

REFERENCE: STRUCTURAL CONDITION ASSESSMENT
WARNOCK BUILDING
160 W. CENTER STREET
CANTON, MS

Dear Mr. Franco,

On Wednesday, April 4, 2018, Chas Smithers of Laird + Smithers, Inc. visited the site at 160 W. Center Street in Canton, MS to observe the existing structure. The two-story office building is approximately 25 feet by 90 feet. The building is constructed of load-bearing multi-wythe brick masonry exterior walls supporting wood floor and roof joists. See Picture Nos. 1 and 2 for exterior elevations.

Access to observe the structure of the building was extremely limited. The first floor framing was observed through a crawl space vent and approximate size and spacing of wood joists were estimated in one location while looking through the vent; see Picture No. 3. For the second floor framing, one location around the plumbing pipe in the northwest corner allowed access to measure one joist; see Picture No. 4. For the roof, the framing was inaccessible due to wood lath covering the wood wall and roof members, so no load rating of the roof was performed; see Picture No. 5. The limited amount of observed structure appeared to be in adequate condition with a few exceptions that are discussed later in this report.

Following our site visit, we load rated the existing wood floor framing to determine the load capacity. Since access to measure the structure was extremely limited, the load analysis is approximate and should be taken as such. If a more exact load analysis is needed, additional access to the structure should be provided, including selective demolition, to more accurately measure the existing structure.

Due to the limited access to the structure, the accuracy of measurements and visual grading of the existing wood framing is compromised. Based on our limited access to the structure, the first floor is supported by wood floor joists which span from the exterior walls to an interior brick footing which is located approximately in the center of the building. The first floor joists are approximately 2" x 12" spaced at approximately 2 feet on center. Assuming No. 2 grade lumber, the first floor has a total capacity of approximately 60 pounds per square foot (psf). Taking into account the dead load of the structure and other dead loads, approximately 45 psf remains for live load capacity, which is greater than code required live loads of 40 psf for an office space. The second floor joists are approximately 1 ¾" x 13 ¾" spaced at 18 inches on center, and span from exterior wall to exterior wall. Assuming No. 2 grade lumber, the second floor has a total capacity of approximately 45 pounds per square foot. Taking into account the dead load of the structure and other dead loads, approximately 30 psf remains for live load capacity, which is less than the code-required live load of 40 psf for an office space.

Several other items were not measured or analyzed at this time due to lack of access to the structure. These items include stair framing for the interior stairs, see Picture No. 6, and the steel transfer beam above the front window;

see Picture No. 7. Prior to the building being occupied, these items should be measured, analyzed and strengthened as necessary.

Another item of concern that will require attention prior to occupancy is the condition of the brick, particularly on the west elevation of the building. It appears that the brick has been re-pointed with Portland mortar, causing damage to the brick in a number of location; see Picture No. 8. The original brick is soft and porous by today's standards, allowing the brick to expand as it get wet. The original mortar would have been lime based in order for the mortar to be weaker than the brick, which is desired. Portland based mortar, which is commonly used in new structures today is much harder than the lime based mortar and stronger than the original brick. As the brick tries to expand, the Portland cement based mortar acts as a hard spot and does not allow the brick to expand, causing the face of the brick to pop-off. We recommend repointing the brick on the exterior of the building with a Portland and lime based mortar mix. Additionally, a brick in an arched lintel has fallen; see Picture No. 9. We recommend repairing this lintel to return it to original condition.

Another item which is usually not in compliance with modern codes and poses a cause for concern for buildings of this age is the attachment of the floor and roof diaphragms to the masonry walls. This condition was not observed for this particular building due to lack of access to the structure; however, it is anticipated that this repair will need to be performed at the front and rear walls at a minimum.

In summary, it is likely that the first floor is structurally adequate to support an office space with limited structural modifications. If the second floor is to be used as an office space, strengthening of the floor members is required to obtain the capacity to support a code required live load of 40 psf for office space. Strengthening the second floor will be extremely difficult and costly without removal of the metal ceiling above the first floor; see Picture No. 10. It is not known at this time if Mississippi Department of Archives and History would allow temporary removal of the ceiling in order to strengthen the second floor framing. Other items will also likely need to be addressed prior to building occupancy including repair and repointing of the brick and attaching the floor and roof diaphragms to the walls.

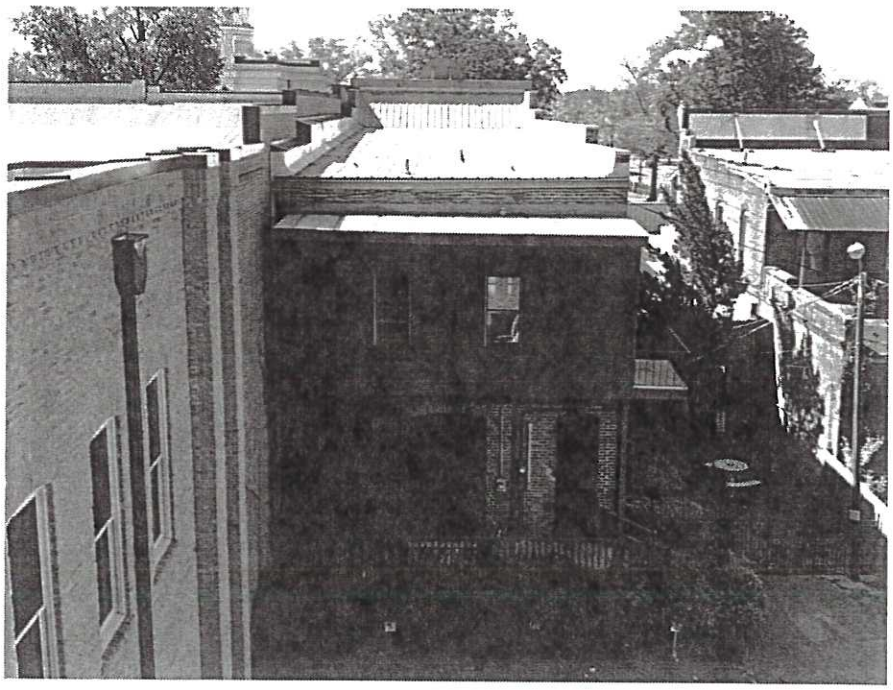
We appreciate the opportunity to provide engineering services to you. Please let us know if you have any questions or require additional information.

Sincerely,

LAIRD + SMITHERS, INC.

Charles A. Smithers, P.E., LEED AP BD+C
Principal

Picture No. 1 – Front Elevation



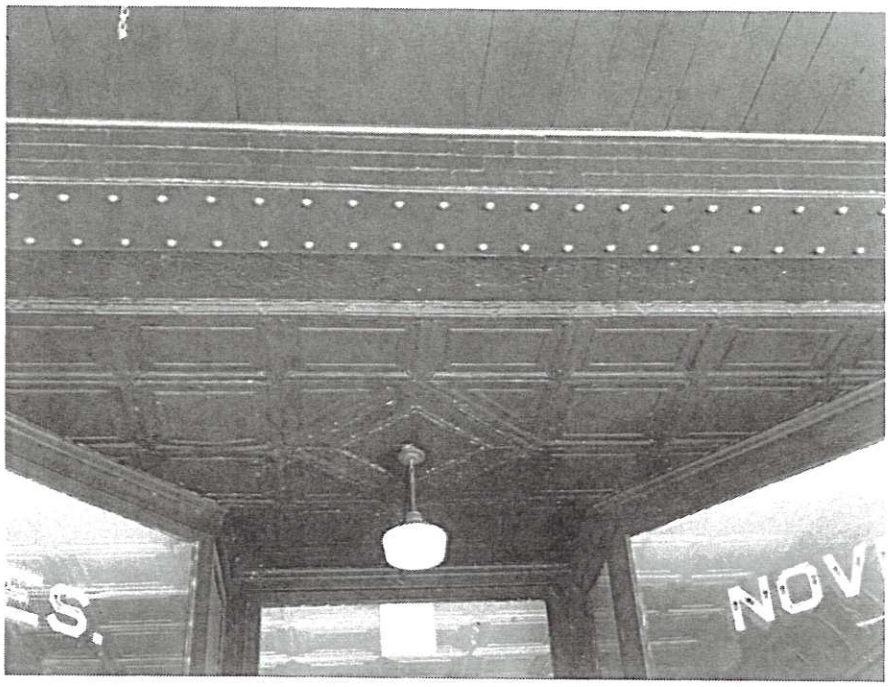
Picture No. 2 – Rear Elevation

Picture No. 3 – Crawl Space Vent Where First Floor Framing was Observed

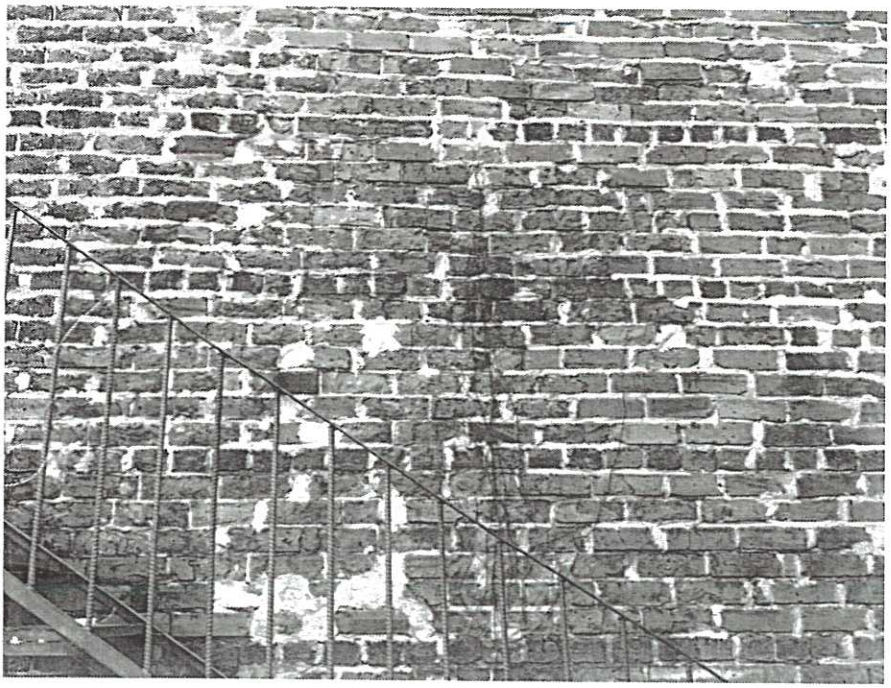
Picture No. 4 – Location of Second Floor Framing Observation

Picture No. 5 – Wood Lath and Plaster Covering Roof Framing

Picture No. 6 – Interior Stairs

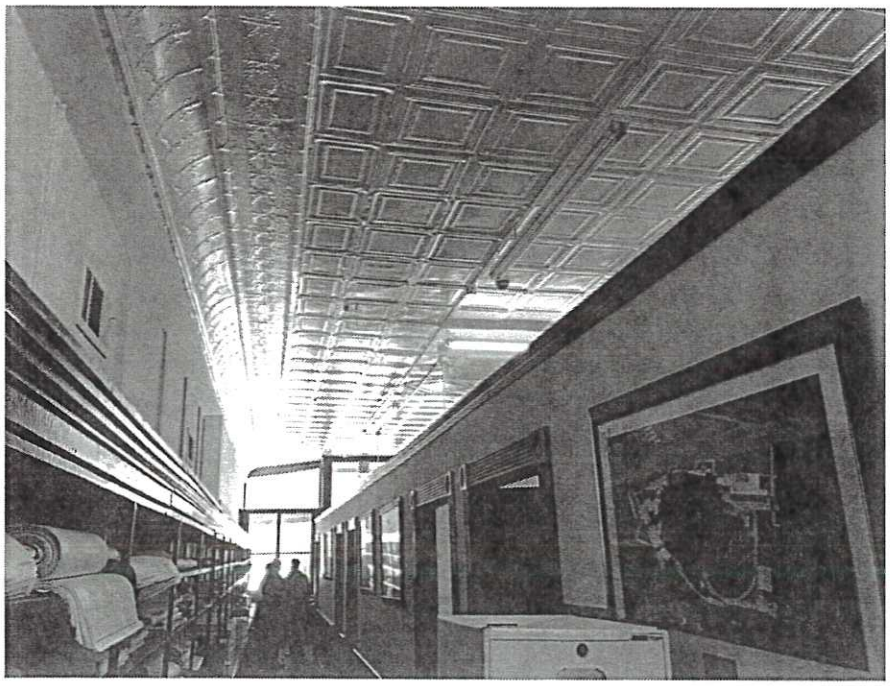


Picture No. 7 – Steel Transfer Beam Above Front Window



Picture No. 8 – Poor Condition of Brick on West Elevation

Picture No. 9 – Missing Brick in Arched Brick Lintel



Picture No. 10 – Overview of First Floor Showing Metal Ceiling Panels

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MECHANICAL REPORT

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MECHANICAL SYSTEMS ASSESSMENT REPORT

1.0 Introduction

A. Engineering Resource Group, Inc. (ERG) performed an assessment of the Warnock Building mechanical systems. Mechanical systems assessed included Heating, Ventilating, and Air Conditioning (HVAC) and plumbing systems. The goal was to assess the building mechanical systems' general condition, building code compliance, remaining service life and provide an opinion of probable cost to bring the systems up to the required building codes and standards.

B. A site visit was made on April 4, 2018 to survey the existing systems and collect data for the system assessment and report. Results from our survey and subsequent analysis is summarized below.

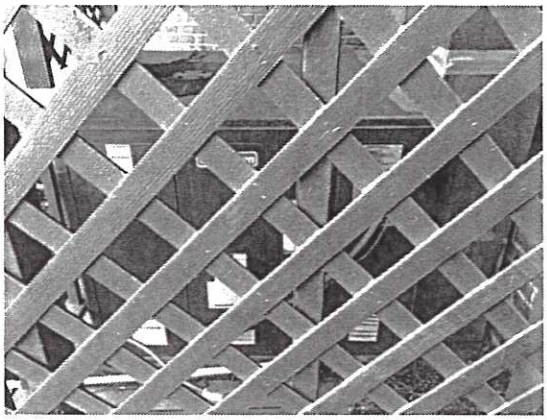
2.0 Heating, Ventilation, and Air Conditioning Systems.

A. First Floor Heating, Ventilation, and Air Conditioning (HVAC) Systems.

1. The first floor HVAC system is comprised of a 5-ton packaged unit with natural gas heat installed on the north side of the building. The packaged unit is located on the deck adjacent to the north exterior wall.
2. Supply air is ducted from the packaged unit into the building through the north exterior wall. The supply duct runs along the east wall and includes duct mounted supply grilles for air distribution.
3. Return air is ducted from the packaged unit into the building through the north exterior wall. There is a return air grille installed at the exterior wall penetration. It is through this return air grille that all the unit's return air is taken from.
4. The packaged unit is controlled by a wall mounted thermostat installed within the bookshelves along the east wall.
5. There are ceiling fans installed in each office to provide air circulation within each enclosed office.
6. The packaged unit is in good condition however, the unit currently does not include an outdoor air intake hood to provide the code required fresh air.
7. The supply and return air ductwork is not installed in a way that provides adequate air distribution.
8. Exhaust fan serving the first floor restroom does not work.
9. Recommendations:

    a. Install an outdoor air hood and motorized outdoor air damper on existing packaged unit such that the unit can provide the code required minimum outdoor air to the first floor.

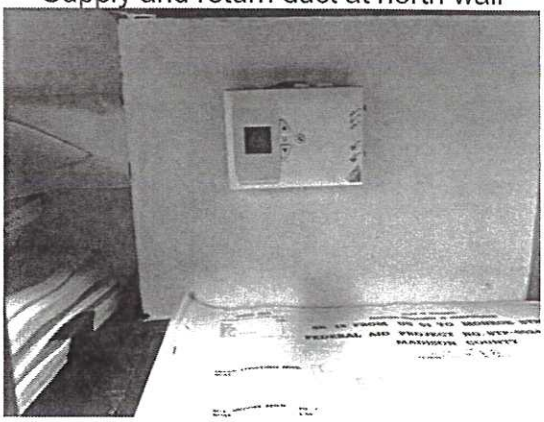
b. Install new supply and return ductwork to provide more efficient first floor air distribution.
c. Replace the exhaust fan in the first floor restroom.
d. Install a WIFI enabled programmable thermostat such that the room temperature setpoints can be setup and setback during unoccupied periods to conserve energy.



5-ton packaged unit

Supply and return duct at north wall

Supply duct along east wall



Wall mounted thermostat

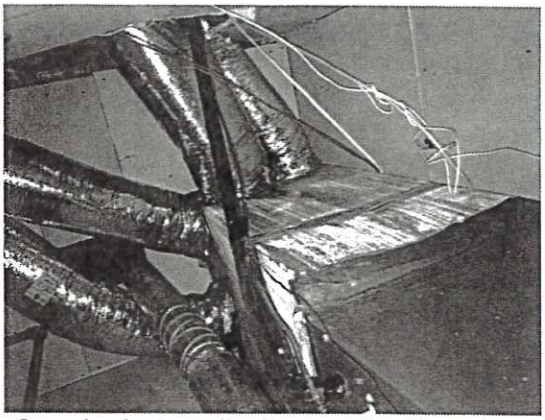
B. Second Floor HVAC Systems.

1. The second floor HVAC system is comprised of a 5-ton split system with a natural gas furnace and Direct Expansion (DX) cooling. The gas furnace is located in the second-floor mechanical closet. The condensing unit is installed on the west side of the building near the north end.
2. Supply air is ducted from the gas furnace and DX cooling coil through supply air ducts along the inside (office side) of the corridor wall. Supply air is discharged through side wall grilles in the offices and corridor. Supply air is discharged through perforated diffusers in the restrooms.

3. Return air is provided to the gas furnace from a return air grille installed on the corridor wall. Return air is transferred from the corridor to the return air plenum beneath the gas furnace. Using the exit corridor as a return air path does not meet the current building code.
4. Offices have ceiling fans.
5. The split-system is controlled by a wall mounted thermostat installed on the second floor corridor above the return air intake grille.
6. The Men's and Women's restroom do not have adequate exhaust.
7. Currently, there is an IT Closet on the second floor without cooling capability.
8. The split-system is in good condition, however, the unit currently is not provided with outdoor air and therefore does not meet current ventilation requirements.
9. The supply air duct directly downstream of the gas furnace and DX cooling coil is poorly installed.
10. There are items stored within the return air plenum. The plenum is extremely dirty.
11. Recommendations:

    a. Install outdoor air duct from new intake hood or louver to the return air plenum to provide the code required minimum outdoor air to the second floor.
    b. Install new ductwork from the gas furnace and DX cooling coil to the main ductwork trunks.
    c. Replace the exhaust fans in both the Men's and Women's restrooms.
    d. Install return air ductwork (or series of transfer grilles) such that the exit corridor is not used as the return air path.
    e. Replace all air distribution devices (grilles, registers and diffusers).
    f. Install a WIFI enabled programmable thermostat such that the room temperature setpoints can be setup and setback during unoccupied periods to conserve energy.
    g. Install dedicated ductless split-system to provide cooling to the IT room.
    h. Thoroughly clean the return air plenum. Remove all items stored within the plenum.

5-ton split-system gas furnace



Supply duct at discharge of split-system

Return air grille and thermostat

Supply duct in furring

3.0 Plumbing Systems

A. First Floor Plumbing Systems.

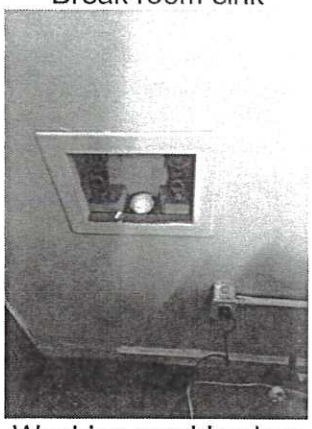
1. There is a break room on the north side of the building. There is a single compartment sink that is in poor condition.
2. The first floor restroom includes a tank-type water closet (toilet) and wall mounted lavatory. Neither the water closet nor the lavatory meet ADA requirements.
3. A washing machine box is installed in the break room area. The box is no longer used. It is recommended that the box be removed and the water and sanitary sewer piping be removed back to the main piping from which they are fed from and capped.
4. Recommendations:

    a. Replace break room sink and faucet.

b. Replace restroom water closet and lavatory. Modify existing plumbing water and sanitary sewer to make restroom ADA compliant.

Break room sink

Tank-type water closet



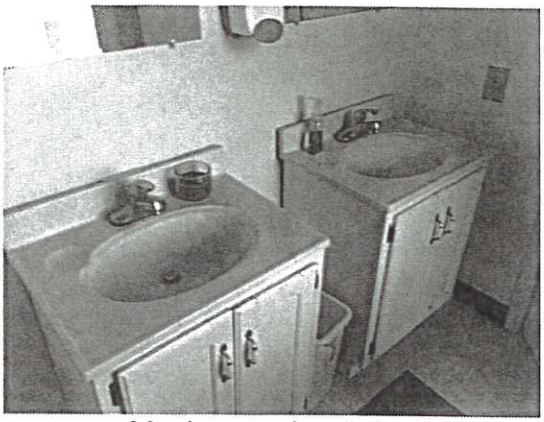
Washing machine box

B. Second Floor Plumbing Systems.

1. Installed in the women's restroom are two (2) counter mounted lavatories. The lavatories do not meet ADA requirements. Also in the women's restroom are two (2) tank-type water closets. The water closets do not meet ADA requirements.
2. Installed in the men's restroom are two (2) integral counter mounted lavatories. The lavatories do not meet ADA requirements. Two (2) showers are installed in the men's restroom along with two (2) tank-type water closets. Neither the showers nor the water closets meet ADA requirements.
3. Domestic hot water is provided by a 50 gallon natural gas water heater. The water heater appears to be in fair condition.
4. The domestic hot and cold water appears to be uninsulated.
5. Recommendations:

a. Replace all lavatories and faucets. Provide a minimum of one lavatory that is ADA compliant.
b. Replace all water closets. Provide a minimum of one water closet that is ADA compliant.
c. Remove showers.
d. Modify existing plumbing water supply and sanitary sewer piping as required to install new plumbing fixtures.
e. Replace existing 50 gallon water heater.

Women's room lavatories



Men's room lavatories

Men's room tank-type water closet

50 gallon natural gas water heater

4.0 Fire Protection Systems

A. Currently the building does not have a fire sprinkler system.

B. The design team recommends that a wet-pipe fire sprinkler system be installed throughout the building in accordance with NFPA 13.

5.0 Opinion of Probable Cost

System Description	*Estimated Cost*
HVAC System	$60,000
Plumbing System	$40,000
Fire Protection System	$20,000
Total Mechanical System Renovation	$120,000

NOTE: The estimated cost is based on modifications to the existing systems to implement the recommendations included in this report. It does not include changes to the mechanical systems that would be required due to significant changes to the floor plans and/or additional plumbing fixtures.

END OF MECHANICAL SYSTEMS ASSESSMENT REPORT

APPENDIX

ELECTRICAL REPORT

WARNOCK BUILDING REPORT
158 WEST CENTER STREET
CANTON, MISSISSIPPI

Date: APRIL 20, 2018

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FACILITY ASSESSMENT OF THE
ELECTRICAL SYSTEMS

AT THE

WARNOCK BUILDING

LOCATED IN

CANTON, MISSISSIPPI

PREPARED BY:

Schultz & Wynne, P.A.
Consulting Electrical Engineers

John M. Wynne, P.E.

APRIL 10, 2018

1.0 INTRODUCTION

1.1 Scope of Work

The scope of work for this report was to evaluate the existing electrical systems in the Warnock Building located on the north side of the square in Canton, Mississippi.

1.2 Disclaimer

Due to the facility being property of another Owner and the concealed nature of the majority of the electrical systems, the survey of the electrical systems was limited to visual observations of the electrical systems.

1.3 Background

The U.S. Federal Government has mandated that the production and import of T12 fluorescent lamps be halted in the United States to facilitate the nation's move to more energy efficient lighting sources that are now available. T12 fluorescent lamps will be ever increasingly hard to find and will more than likely demand a premium cost.

2.0 EXISTING CONDITIONS

2.1 General

The facility is a two-story, wood-framed building with brick veneer on the exterior. The building currently is being utilized as a single tenant office building.

2.2 Lighting Systems

The existing general lighting luminaires in the building on the first floor are primarily strip-type fluorescent luminaires with T12 type fluorescent lamps surface mounted on the ceiling.

The existing general lighting luminaires on the second floor are suspended globe-type incandescent luminaires. Lamping of these luminaires could not be determined. Second floor office areas are illuminated using light kits on ceiling fans lamped with screw-in type fluorescent lamps. Second floor toilets are illuminated with lay-in type fluorescent troffers.

2.3 Lighting Controls

The existing lighting controls in the building are manually operated toggle switches controlling all lighting in a common room.

2.4 Exit & Emergency Lighting

Combination Exit Signs/Emergency Lighting Units with integral emergency battery packs are located throughout the building indicating egress paths and egress doors. The operational status of these luminaires could not be determined due to mounting heights.

2.5 Power Receptacles

Receptacles are grounded-type and are adequately located for the current use of the facility.

2.6 Branch Circuit Wiring

Branch circuit wiring is a combination of conduit & conductors and Type MC cable. Most branch circuit wiring is routed exposed.

2.7 Electrical Service & Distribution

The building's electrical service is 120/240 volts, 1 phase, 3 wire, 60 Hertz. The building's electrical services consist of an overhead service drop to two electrical service masts and utility meters. One meter for the first floor and one meter for the second floor. Each meter serves a loadcenter-type panelboard located on each floor. The electrical loadcenter panelboards are located in corridors.

2.8 Telecommunication

Data and telephone cabling are routed to a closet on the second floor where Utility demark equipment and Owner network equipment were located. The space did not have dedicated climate control equipment.

2.9 Fire Detection and Alarm System

The facility did not have a central Fire Detection and Alarm System. There were devices on the ceilings that appeared to be smoke-detectors. Due to ceiling heights, these devices could not be verified.

3.0 SYSTEM EVALUATIONS

3.1 Lighting System

The observed lighting systems all appeared to be in good working order but their condition is average to poor. Illumination levels appear to be at the lower end of the recommended lighting levels for an office space. The existing fluorescent lighting fixtures utilize T12 lamps which are in the process of being phased-out by the government. T12 fluorescent lighting systems are far less energy efficient than other lighting technologies currently available.

3.2 Electrical Power Distribution System

The electrical service and distribution system equipment is in poor condition and the system was installed using poor installation methods.

4.0 SUMMARY

4.1 The existing electrical systems of the facility are typical for a private use office space in a historical building. However, the existing electrical systems and their installation, in our opinion, are not suitable for governmental office use and access by the general public. If this space is considered for governmental office space, we recommend that the electrical systems be replaced and upgraded.

5.0 BUDGETARY COST ESTIMATES

New Lighting Systems & Branch Circuits (1st Floor)	$15,000
New Lighting Systems & Branch Circuits (2nd Floor)	$15,000
New Wiring Devices & Branch Circuits (1st Floor)	$7,500
New Wiring Devices & Branch Circuits (2nd Floor)	$7,500
New Electrical Service & Distribution System	$15,000
New Fire Alarm System	$10,000

END OF STUDY

APPENDIX

BUILDING CODE / ADA ASSESSMENT REPORT

WARNOCK BUILDING REPORT
158 WEST CENTER STREET
CANTON, MISSISSIPPI

Date: APRIL 20, 2018

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Warnock Building

Site observations & ADA / Building Code Comments

Known/observed:

The existing building is in the old town square and is currently listed with the Archives and History Department putting the building on the Historical Record.

The building was an old Mercantile store and is currently used as an office building (Business Occupancy Use Group).

The building is a two-story structure of Type III construction. Wood floor system for both floors and a wood roof structural system. The ground floor does have crawl space venting openings. Exterior walls are solid masonry.

There is a flat metal plate cover, extending across the recessed entrance at the building's front property line. This may be a covered trench for utilities. Several plates were bent or misaligned with the top of the sidewalk/entrance's floor surface.

One side of the building had a vertical expansion joint cover at the abutment to the adjacent building and the other side did not have a vertical expansion joint cover. Therefore, that side has a gap of about 3/4" wide between the two buildings.

The front entrance door is a pair of doors and they are recessed under the 2nd floor.

There is an exterior side door near the recessed entrance that opens to stairs that go to the upper floor. There is another stair inside the building that goes down to the ground floor. Both stairs are open stairways and occur on the same side of the building. Stairs have only one wall attached handrail per stair. Building Code requires a handrail on each side of the stair. The stair's guard railing and handrail are currently not compliant with current code.

There is an exterior fire escape stair that is also non-compliant with current code regarding the railing system and handrails. This stair dischargers onto the ground outside in another owner's backyard. Currently there is an unlocked gate from the neighbor's backyard.

The building does not have an automatic fire suppression system.

The 2nd floor interior walls forming individual offices do extend up to the bottom of the roof framing. Existing roof assembly did have plaster applied to the bottom of the framing members. Plaster appears to have been removed but furring strips remain.

On the first floor several interior partitions, forming individual offices, do not extend to the underside of the decorative metal ceiling panels. However, at the stairs the walls do extend up to the ceiling. It could be assumed that the wall at the stair is a bearing wall. There was another location where a wall did go to the underside of the ceiling. However, this wall does not appear to penetrate the ceiling and is probably just tight to the finished ceiling.

There were several electrical boxes that were surfaced mounted to interior and exterior walls.

The main floor's decorative ceiling had suspended from it fluorescent bulb light fixtures (double 8-ft long bulbs per fixture) and ceiling fans.

The main floor has two back doors. One appears to be an old loading dock door and the other is the EXIT door. Both had additional doors on the outside. That additional door on the EXIT door could be an egress problem.

The main floor also had a very narrow and short door that opened into the back stair. The door is inadequate for exit access and is currently the only exit access door for the back of the main floor. Archives and History may have an issue with modifying this door for proper exit access.

The back porch on the main floor is elevated above the ground with a wood stair from its floor to the ground. Here again the handrail and guardrail are currently not code compliant. This porch also houses the exterior AC unit and has some floor boards missing.

There were maybe, three outside parking spaces located at the back of the building.

Codes;

City of Canton currently uses the ICC 2012 Codes. Since this is an existing building, the International Existing Building Code would be used for any renovations and repairs. New work inside the building or any additions would have to comply with the International Building Code. Not knowing the extent of any renovations, I cannot at this time evaluate the Existing Building Code's Category type that would be used for the required work.

Federal Law: ADA Title II https://www.ada.gov/ada_title_II.htm
Existing Facilities: https://www.ada.gov/regs2010/titleII_2010/titleII_2010_regulations.htm#a35150
Some excerpts from the written material that may apply to the project below. However, the entire §Part 35.150 & 35.151 should be reviewed by the designer.

§ 35.150 Existing facilities

(3) *Historic preservation programs.* In meeting the requirements of § 35.150(a) in historic preservation programs, a public entity shall give priority to methods that provide physical access to individuals with disabilities. In cases where a physical alteration to an historic property is not required because of paragraph (a)(2) or (a)(3) of this section, alternative methods of achieving program accessibility include —

(i) Using audio-visual materials and devices to depict those portions of an historic property that cannot otherwise be made accessible;

(ii) Assigning persons to guide individuals with handicaps into or through portions of historic properties that cannot otherwise be made accessible; or

(iii) Adopting other innovative methods.

The above section references previous sections which are shown below

§ 35.150 Existing facilities

(a) *General.* A public entity shall operate each service, program, or activity so that the service, program, or activity, when viewed in its entirety, is readily accessible to and usable by individuals with disabilities. This paragraph does not—

(1) Necessarily require a public entity to make each of its existing facilities accessible to and usable by individuals with disabilities;

(2) Require a public entity to take any action that would threaten or destroy the historic significance of an historic property; or

(3) Require a public entity to take any action that it can demonstrate would result in a fundamental alteration in the nature of a service, program, or activity or in undue financial and administrative burdens. In those circumstances where personnel of the public entity believe that the proposed action would fundamentally alter the service, program, or activity or would result in undue financial and administrative burdens, a public entity has the burden of proving that compliance with §35.150(a) of this part would result in such alteration or burdens. The decision that compliance would result in such alteration or burdens must be made by the head of a public entity or his or her designee after considering all resources available for use in the funding and operation of the service, program, or activity, and must be accompanied by a written statement of the reasons for reaching that conclusion. If an action would result in such an alteration or such burdens, a public entity shall take any other action that would not result in such an alteration or such burdens but would nevertheless ensure that individuals with disabilities receive the benefits or services provided by the public entity.

§ 35.151 New construction and alterations

(b) *Alterations.*

(1) Each facility or part of a facility altered by, on behalf of, or for the use of a public entity in a manner that affects or could affect the usability of the facility or part of the facility shall, to the maximum extent feasible, be altered in such manner that the altered portion of the facility is readily accessible to and usable by individuals with disabilities, if the alteration was commenced after January 26, 1992.

(2) The path of travel requirements of § 35.151(b)(4) shall apply only to alterations undertaken solely for purposes other than to meet the program accessibility requirements of § 35.150.

(3)

(i) Alterations to historic properties shall comply, to the maximum extent feasible, with the provisions applicable to historic properties in the design standards specified in § 35.151(c).

(ii) If it is not feasible to provide physical access to an historic property in a manner that will not threaten or destroy the historic significance of the building or facility, alternative methods of access shall be provided pursuant to the requirements of § 35.150.

The subsections under §35.151 *Alterations* address several items that may need an accessible *Path of Travel* to a *Primary Function* and *Disproportionality*. The designer should review all the text to determine where the building's functions will occur.

There is also under *Disproportionality* references to the cost limits and what those limits are associated with.

In my opinion for ADA requirements under the Federal Law; the following items fall under the Historic guidelines for the building in question.

1. An existing accessible route from an existing public accessible parking stall. Since the City of Canton is the owner of the street parking, the County may want to go to the City of Canton for corrections needed at the one designated accessible parking stall fronting the building on that City block. The existing designated accessible parking does not have a curb cut from the accessible parking aisle. Since, the parking is directly connected to a Public street going behind the parked car is not allowed.

2. Items at the walk surface occurring at the building's property line will require repair of the surface.
3. Door hardware will need to be changed out to lever hardware.
4. The accessible path of travel will require widths of 36" minimum and door clearance widths of 32" minimum. The Building Code also requires a door's minimum clear width of 32" which takes a 36" wide door. Also, the Building Code requires a minimum clear width of a corridor to be based on the occupant load but does give minimum widths base on the Occupancy use group. This building will be a Business use group and the minimum corridor width would be 44-inches unless the occupant load on the floor is less than 50-people. If less than 50-people, the corridor can be 36" minimum in width. Business Occupancy per the Building Code is 100-sf gross floor area per person not the number of people working on the floor if less than the calculated floor area occupant load.
5. Front door to the building will be required to be the accessible entrance and accessible EXIT. Two Exits from each floor is required but only one must be the accessible EXIT.
6. Since this building is two stories and does not have an elevator, an accessible public restroom will be required on the first floor. If the occupant load on the first floor or any floor exceeds 15-people, then two restrooms would be required; male and female.
7. Upper floor public restrooms (Men & Women) currently are not ADA compliant. The Men's restroom appears to have been an add—on and currently has a step down at what once was the back door. The step, right at the door, presents an accessibly issue and Building Code issue. Doors require landings prior to any steps or ramps. These restrooms could be removed per the Plumbing/Building Code to occur on one floor. You can have restrooms on every other floor if they are properly sized for the occupants of both floors. However, if you wish to keep restrooms on the upper floor, they will need to be ADA compliant and have the required number of fixtures for the occupant load of that floor.
8. The 2nd floor does not have to be totally ADA compliant, and there is not currently an elevator for vertical travel. However, the public facilities (restrooms) and the path of travel do have to be ADA compliant. Someone with walking issues could use the stairs and once on the floor use a wheelchair or other walking aids.
9. Single fixture/use restrooms require privacy locks.
10. I do not recall seeing any drinking fountains on any floor. The Plumbing Code requires a drinking fountain for every building. Occupant loads of 15 or fewer do not require a drinking fountain. If only one is required based on the occupant load; you must provide two anyway for ADA compliance, a high and a low one.
11. ADA and the Existing/Building Codes do address a percentage of monies that must be spend for accessibility regarding existing buildings, renovations, additions and repairs occurring to the building. The 20% is the maximum as I understand it. If the alteration costs are $300,000, then 20% of that money and no more, must be for ADA upgrades. If the ADA upgrades cost more, you only have to do the 20% allocated for ADA at that time. Additions are new work and are required to be fully ADA compliant regardless of the 20%. The 20% only applies to renovations and repairs.

This concludes my review and Code/ADA recommendations for the referenced building.

Composed by,
Jerry L. Bowen
Date: April 19, 2018