TABOR
BRUCE
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September 1, 2021

JD Boruff
Operations and Facilities Director
City of Bloomington Public Works
401 N Morton St.
Bloomington, Indiana 47404

Re: Facility Assessment-320 West 8th Street.

Dear JD:

I have attached our evaluation of 320 West 8th Street. The evaluation was based on life safety, mechanical and structural surveys we performed. These reviews were to consider the life span of the existing facility, no destructive testing was performed.

Based on these reviews, it is our opinion that the existing building is in sound shape and should meet the desirable goal of a 3 to 5-year lifespan. For the relocation of Police and Fire headquarters, there are various code issues they would need to be addressed but methods in the 2018 Indiana Building Code allow for a review to meet those requirements.

Please let me know if I can answer any other questions or review information in this evaluation that may not come across clearly, we have strived to simplify it in a manner that is best understood. We did not complete a "destructive" survey to look into walls and ceilings and only made observations where we could get easy access, sometimes items may be left unseen that could have an impact on our assumptions and materials and labor costs are becoming a moving target. This evaluation should act as a guide for you to look down the road for a more detailed scope of work and refined numbers if you decide on a future relocation or addition of city offices.

Sincerely,

Howard Douglas Bruce
President-Architect
Tabor/Bruce Architecture & Design, Inc.

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INTRODUCTION

This study is to focus on the existing condition of 320 West 8th St. for the City of Bloomington. The focus is on Life Safety. plumbing, electrical, mechanical systems, and structural evaluation to an existing two story, 64,000 structure.

Tabor/Bruce Architecture & Design has been commissioned to provide an evaluation of the structure, and produce a report to accomplish the following goals:

1. Review of existing HVAC and mechanical systems.
2. Review existing structural systems
3. Provide cost numbers for repairs if needed.

We consulted with both Jim Lewis of LJ Engineering, a structural engineering consultant, and The Engineering Collaborative to review the mechanical, electrical, plumbing systems. This evaluation occurred on August 15th and 16th of 2022.

INDIANA BUILDING CODES

The Structure falls under the jurisdiction of the current 2018 Indiana Building Code. This is a combination of the 2012 International Building Code adopted and modified with Indiana Amendments.

The two-story building is comprised of exterior brick masonry unit bearing walls with a post and beam framing system. The entire existing structure measures approximately 192,000 square feet and was constructed in 1910 and renovated into office use in 1990.

RULES FOR EXISTING BUILDINGS

Existing buildings that were constructed in accordance with the rules of that time of existence are permitted to have their existence continued without having to be altered to comply with current rules. There are two exceptions to this:

1. The use of the building is changed which causes the building to be classified into a different occupancy group or a different division within the same occupancy group.
2. New work or alterations to the existing building must comply with the provisions of the current code. Portions of the structure not altered and not affected by the alternations are not required to comply with the code requirements for a new structure.

The Structure has been renovated under the 1988 Indiana Building code and underwent a change in use from factory to office. Code regulations only require any building alterations or change in use, to meet current code requirements.

OCCUPANCY and CONSTRUCTION TYPE

The Structure is classified as a Type M and B Occupancy use. The second floor is currently only a B use.

The building is a Type III-B Construction. This indicates that all exterior walls are created of a noncombustible material while interior building materials may be of combustible materials. The building may rise to four stories in height total, 55 feet maximum. The 'III-B' classification signifies that the building is a non-rated building with no required, rated fire protected structural members, however the structure appears to have a NFPA sprinkler system throughout.

OCCUPANT LOAD

B, Business occupancy allows for a minimum floor area per occupant of 100 square feet. Total occupant loads are outside of this evaluation, however, the required number of exits and stairs for each floor were met for the current uses and required egress.

DRINKING FOUNTAIN

Current building codes stipulates that there should be one drinking fountain for this use and one is provided.

MEANS OF EGRESS (Exiting from spaces)
One exit is required from individual rooms or spaces containing less than 50 persons in an Assembly Occupancy. For spaces over 50 persons (750 square feet), two exits are required.

EXIT TRAVEL DISTANCE
Exit access travel distance for business (B) or retail (M) occupancy allows a maximum of 300 linear feet from occupied space to the exterior in a building without a sprinkler system (1016.2). A minimum of two independent exits from occupied spaces to exterior are required in a building with occupancy under 500 persons (1015). These seemed to all be met in the current floor plan layout.

MAJOR ALTERATIONS or REMODELLING
The Indiana General Administrative Rules allows for the use of Chapter 3410 Code Review in an existing building to review if the building can be renovated and not need to meet all of the conditions for the current building codes. It is a scoring system that provides positive points for life safety items to exceed points deducted for deficiencies.

The potential exists that we could use the Chapter 3410 matrix on any renovations to the existing structure which may not require a major renovation to that portion to meet the new building codes. This would be required to place a high risk occupancy such as police headquarters or fire department headquarters within the building. These high risk uses are discussed in Table 1604.5, Risk Category. Seismic requirements would require substantial upgrades, or the entire structure would need to be evaluated per Chapter 3410.

ACCESSIBILITY
Chapter 11 of the Indiana Building Code prescribes standards and accommodations that must be followed to provide access to public and commercial buildings by disabled persons. These standards require that reasonable accommodations be made to allow a person to obtain access to the main level of a building. Any specific feature or experience within the building must be provided on that floor.

The basic premise of Chapter 11 requirements is to provide an accessible route to the building and to public use spaces within the building. The code is compatible with American's with Disabilities (ADA). Guidelines. In regard the Structure, it does fulfill the requirements for accessibility. There are designated handicapped parking spaces. The west entry enters the first floor of the building at grade. There is an existing elevator for second level access. This permits acceptable clearances for a person in a wheelchair access these spaces.

Restrooms in the building seem to meet ADA / Chapter 11 requirements. There is however, no signage indicating an accessible route.

INTERIOR REVIEW

FIRST FLOOR
No issues evident-all mechanical units reviewed.
Common toilet rooms/corridor-No issues found-plumbing was in working order.

SECOND FLOOR
No issues evident-all mechanical units reviewed.
Common toilet rooms/corridor-No issues found-plumbing was in working order.

ELEVATOR
A detailed inspection was not performed-the elevator was used and found to be in operating order. The elevator equipment room was entered and no leaks were evident.

ROOF CONDITION
Firestone membrane roof-no evidence of issues present in flashings/gutters. Roof was not inspected as we had no access, however, the roof installer was contacted and the roof is only a few years old and has a transferrable warranty.

EXTERIOR
The exterior appearance of the building had no visible issues. Some tuckpointing has recently taken place. No evidence of window issues or skylight issues was readily apparent, and they all seemed in working order.

HEATING/COOLING/ELECTRICAL/PLUMBING and CONDITION ASSESSMENT/ANALYSIS
See the attached exhibit of those systems.

September 2, 2022

Mechanical, Electrical, and Plumbing Systems

ANALYSIS OF EXISTING CONDITIONS

for the

Showers Building (CFC)

122 W. Walnut St.
Bloomington, Indiana

prepared by

THE ENGINEERING COLLABORATIVE
2410 Executive Drive, Suite 100
Indianapolis, Indiana 46241
317.636.3941

Introduction

This report will include the following sections:

I. Physical Description
II. Condition Assessment
III. Code Review
IV. Recommendations: Immediate, Mid-term, and Long-term
V. Summary

I Physical Description

All systems have been visually reviewed in the field. In general, there are existing and functional electrical (power, lighting, and telephone) systems throughout the building, functional plumbing including domestic hot water, and functional heating and cooling throughout (with mechanical ventilation). There are active natural gas, domestic water, fire protection water, telephone, and power utility services,

Site Utilities

POWER

The building has an underground 2,500 amps at 277/480 v., 3 ph. power service, fed from a Duke Energy pad-mount transformer.

WATER

The meter is in the northwest corner of the mechanical room and it appears to be a 2" service line. There is no visible Reduced Pressure Zone Backflow Preventer (RPZBP).

SANITARY SEWER

The sanitary sewer was not visible on site, but it is shown on the 1994 drawings to exit to the south.

COMMUNICATIONS

There is a conventional telephone service.

NATURAL GAS

There is no natural gas service.

I Physical Description *(continued)*

Building Systems

MECHANICAL – Heating, Ventilating, and Air-conditioning
The building has a closed-loop water-source heat pump system with two (2) electric boilers for supplemental heating and a cooling tower for excess heat rejection. The latter was replaced last year. Most of the individual heat pumps have been replaced but a few original units remain.

ELECTRICAL
The 2,500 a. 277/280 v., 3 ph. service should be more than adequate for the building and the equipment is in very good condition, in the Main Distribution Panel (MDP), the dry-type transformer to 120/208 v., 3 ph., the 120/208 v. MDP, and all branch circuit panels boards.

Interior wiring appears to been have completely updated in the 1994 renovation and it appears to be in very good condition.

Lighting appears to date to the 1994 renovation. Some re-lamping with LED lamps has been done but most of the lighting uses the original lamping.

PLUMBING
All of the piping and fixtures appear to date to the 1994 renovation and they appear to be in good condition. The water heater in the mechanical room appears to be relatively new and it is in good condition. Lavatory faucets have been replaced with automatic units. There is an issue with floor-drying and associated sewer gas in some of the restrooms.

FIRE PROTECTION
The building is fully sprinklered and there is an addressable fire alarm system.

II Condition Assessment

Most of the equipment is in good to excellent condition and there should be no major issues in the short- or mid-term future. More than 10 years out, more equipment is likely to require replacement.

Power: the equipment appears to be in good condition and should be useable for a few more decades.

Lighting: the lighting is antiquated and re-lamping with LED sources or full fixture replacement should be done as soon as it is affordable.. Energy rebates may be available to reduce the cost of this work.

Plumbing: the plumbing appears to be functional and in good condition.

III Code Review

Even though all existing mechanical, electrical, and plumbing systems may have been in compliance with design and construction standards at the time of construction and newer work may have been in nominal compliance with Indiana Codes in the past, all new work undertaken in the facility in the future must be in full compliance with all current applicable rules, except the 2010 Indiana Energy Code. Due to its age, the building is entirely exempt from all requirements of the 2010 Indiana Energy Code.

A relatively minor code issue is that additional fire alarm visual notification devices will probably be need if areas are renovated because current rules require such devices in most spaces (anywhere there could be two or more occupants plus others).

IV Recommendations: Immediate, Mid-term, and Long-term

IMMEDIATE (as soon as feasible)
No items

MID-TERM (1-5 years)
E1.1 Replace all lighting.

LONG-TERM (greater than 5 years)
H1.1 Replace some heat pumps.

V Summary

Overall, the systems in building are in very good condition and little work will be needed in the near future..

Submitted by

THE ENGINEERING COLLABORATIVE

Samuel L. Hurt, P.E., R.A., R.I.D.
LC, LEED® AP, HFDP
Principal

STRUCTURAL EVALUATION

See the attached exhibit for the structural evaluation.

L.N.J. ENGINEERING, LLC
P.O. Box 1365 ▫ Columbus, IN 47202
812.372.3732 ▫ www.engineeringLJ.com

August 19, 2022

Tabor Bruce Architecture
1101 S. Walnut St
Bloomington, IN 47401

RE: CFC Tenant Space (Showers Building); 401 N Morton, Bloomington, IN

I visited the above building space on August 16, 2022, to walk through and around the tenant space providing a visual assessment of the building structure for use as a police and fire department.

This use classifies the structure as a risk category IV per ASCE-7 (2014 Indiana Building Code). This classification requires the increase in design loads and forces to maintain the safety and continued use of the facility. The importance factors for a category IV structure increases the current design loadings for snow by 20%, ice thickness 25% and earthquake (seismic) by 50%. In addition, there are overstrength factors and deflection amplification factors that affect connections and material uses.

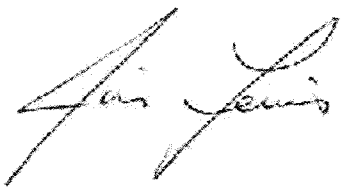
Based upon the above requirements, my opinions and observations are as follows:

- The building was built in 1910 and had some remodeling done in 1994.
- South exterior wall: a few limestone window sills should have their horizontal deteriorations cement filled to prevent further infiltration and deterioration.
- West exterior wall: there are a few, hit and miss, locations that should have some brick tuck pointing done for long term integrity.
- The exterior walls are two wythe brick. These walls are not reinforced, they have aged mortar and, in most locations, are load bearing. Therefore, it is my opinion that these walls would not meet the required design loadings for the proposed use.
- The interior framing is considered heavy timber post and beam with load bearing exterior walls. These timber connections were built with mainly vertical loading requirements and will not meet the required seismic provisions without significant upfit.
- The interior main support beams are supported by and bolted to the exterior walls. These connections will not satisfy the connection requirements of the applicable codes and will, therefore, require significant upgrade and retrofit.
- On the second floor, above the hallway, there were noticed three horizontal beams that have a horizontal split (or check) almost extending the full length of the beam. These should be addressed by either adding reinforcement or injecting an adhesive bonding agent to maintain the integrity of the wood member. It is estimated that these costs could range from $5000 to $8000.
- The saw-tooth roof system with its wood truss supports will not meet the required seismic provision due to their compression web members being only compression-fit

connections. These trusses would have to be upfit with mechanical connections to hold all members to the top and bottom chords.

Overall, the building appears to be in good structural condition, especially considering the '94 remodel. However, it is my opinion, that without significant structural upfit, this building will not meet the proposed requirements. Also, these structural modifications will require a large amount of interior finishes to be removed and redone to allow for the structural work to be done.

Sincerely,



Jim Lewis, S.E., P.E.