



Structural Assessment of Historic Building

Location: 307 & 309 S. Madison Ave.
Aurora, MO 65605



Date of Observations: October 30, 2019 Interior and Exterior
November 8, 2019 Exterior Only

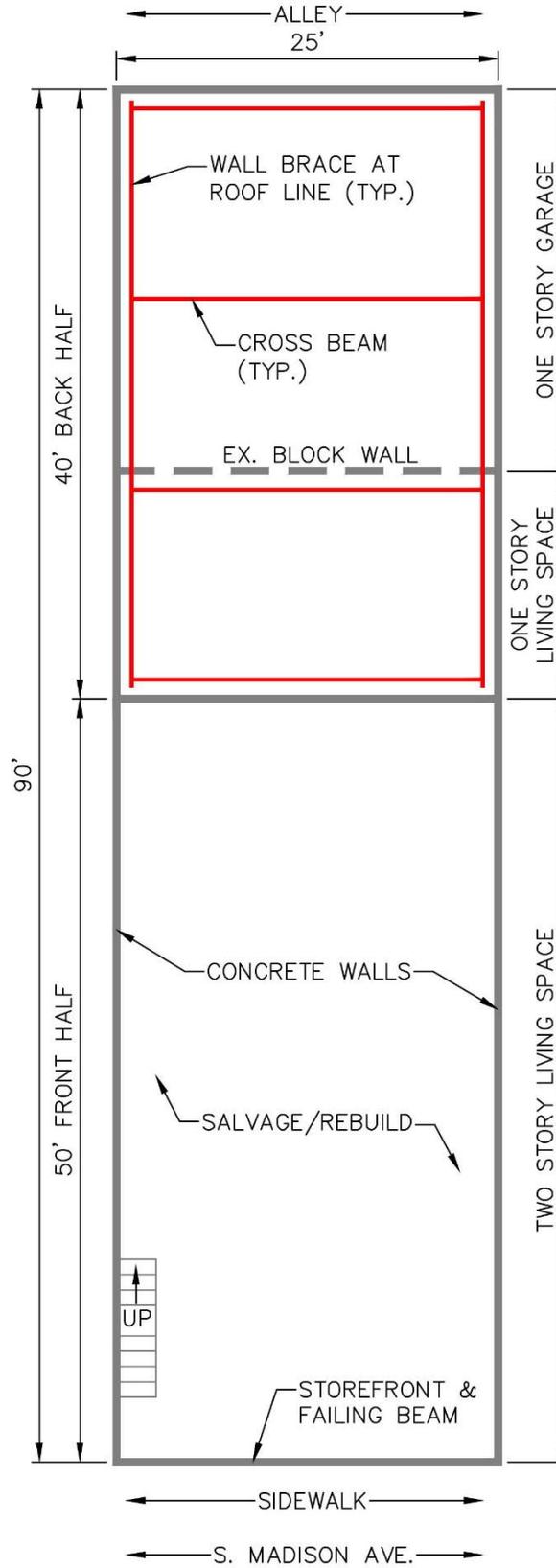
Overview: The property owner on the south side of the subject structure has informed the City that water appears to be seeping through the shared party wall. Subsequently, the City of Aurora requested that an assessment be conducted pertaining to the current condition of the structure and probable cause of the water seepage.

Structural Assessment Requested By: Carrie Howlett, Planning & Zoning Director

GENERAL DRAWING



NOTE: DIMENSIONS SHOWN ARE APPROXIMATE.



Observation and Assessment:

1. The front half (east half) of the building is two-story and in salvageable condition. The roof is leaking and needs addressed soon to prevent further damage to the walls and floors below. The masonry/concrete beam over the storefront windows is failing and needs supported or replaced.
2. The back half (west half) of the building is one-story with a section used as a garage and a section used as living space. The roof is entirely missing from the garage area and mostly missing on the living area. The roof needs replaced with a new roof or bracing as shown on the general drawing. The floor is unsalvageable in the living space and should be removed.

Overall view from the front: white two-story building in the center is the subject structure.



Failing masonry/concrete beam over storefront and cast concrete beam support/party wall.



Closer look at same masonry/concrete beam and cast concrete beam support/party wall.



Significant horizontal beam cracking.



Crack separation measurement.



Looking in from front entrance at the front room, lower level.



Looking toward the back in the upper level.



Floor in lower level, back half.



Roof in garage area.



Recommendations and Conclusions:

1. Adequate building maintenance has not been performed, leading to roof leaks, significant water damage, and structural issues. The leaking roof combined with the second floor being sloped toward the south property is likely the cause for water seeping through the shared party wall. The top of the parapet wall may also be exposed allowing water to infiltrate the shared party wall.

2. It is recommended that the back half of the building be mostly demolished by removing roof and floor remnants. Both of the shared load bearing walls are braced by the floors and roof which act as diaphragms. With these wood framing members compromised the masonry walls are not supported well laterally. Installation of steel bracing for the shared walls is required if the roof structure is not reconstructed. The block cross wall can remain if properly waterproofed. See general drawing.

2a. Additional items to consider is the roof is not reconstructed over the back half:

- The crawl space between the two areas will need to be sealed.
- The exposed shared concrete party wall exposed to the weather will need water proofed.
- The backside of the two-story area will need reworked so it is suitable for exterior exposure.

3. If the property owner intends to salvage the front half, it is recommended that the property owner select a qualified contractor experienced in salvaging and remodeling buildings of this nature to perform the required repairs to the front half of the building. Before any other work is conducted the failing masonry/concrete beam should be replaced, or supported with a new beam and columns. The masonry wall above it imposes significant dead load on the very deteriorated masonry/concrete beam. Once the masonry/concrete beam is supported, begin working on the roof joists by replacing or installing sister joists. Repair the roof, skylights, and parapet to stop leaks. Once the leaks are stopped, the contractor can make necessary repairs to the floors and walls.

3a. Additional items to consider when renovating the front half of the building:

- Lead paint and asbestos abatement procedures need to be followed.
- Drying out the remaining wood members to minimize mold growth.
- Possible concrete wall repairs to mitigate moisture infiltration on exterior walls.



Observation and Assessment: Jared Nichols, P.E. of Allgeier, Martin and Associates, Inc. performed the observation and structural assessment for the purpose described herein and this assessment shall be used in accordance with the signed agreement between Allgeier, Martin and Associates, Inc. and the Owner. No other use of this structural assessment is authorized and this assessment is intended for the sole use of the Owner (City).

Jared Nichols, P.E.
Allgeier, Martin and Associates Inc.