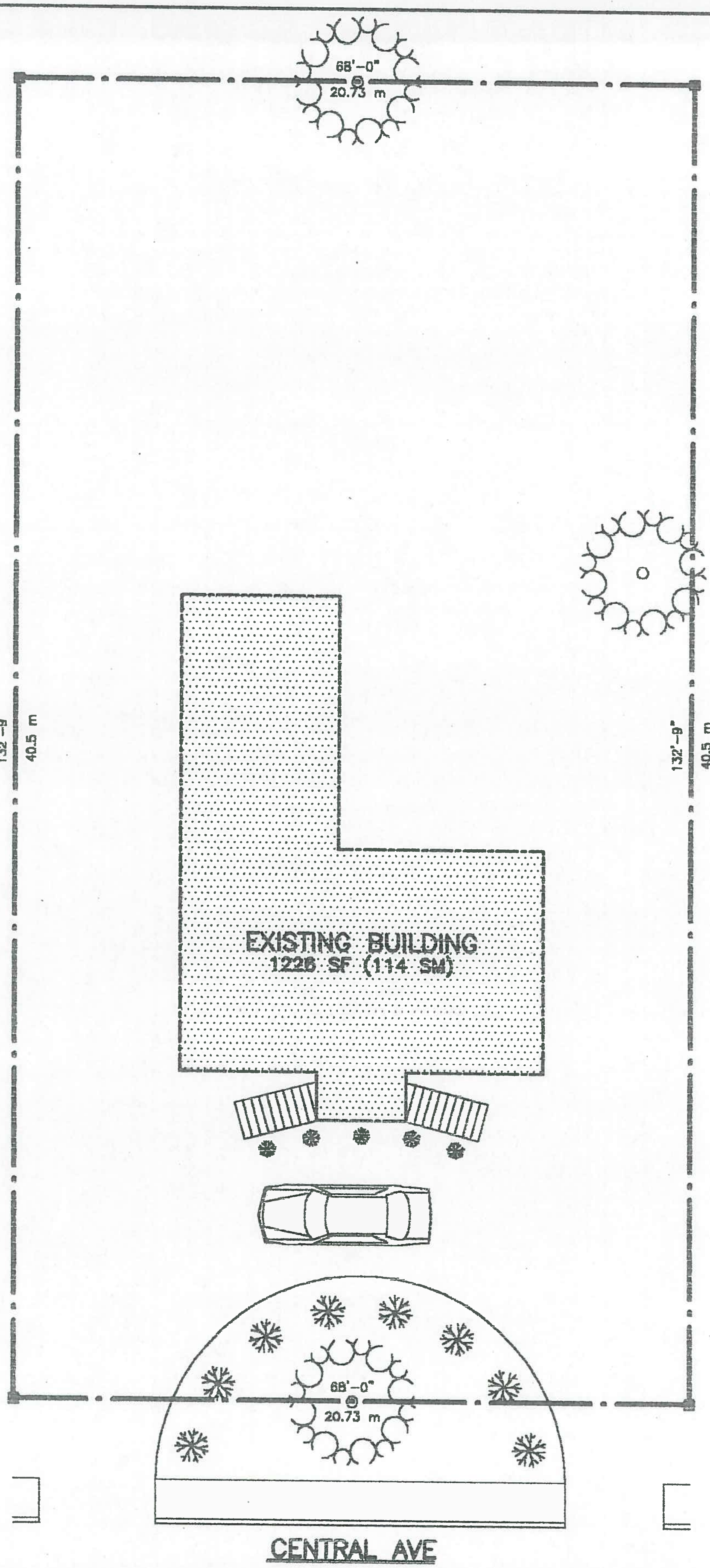
172 Central Ave

Subject Property

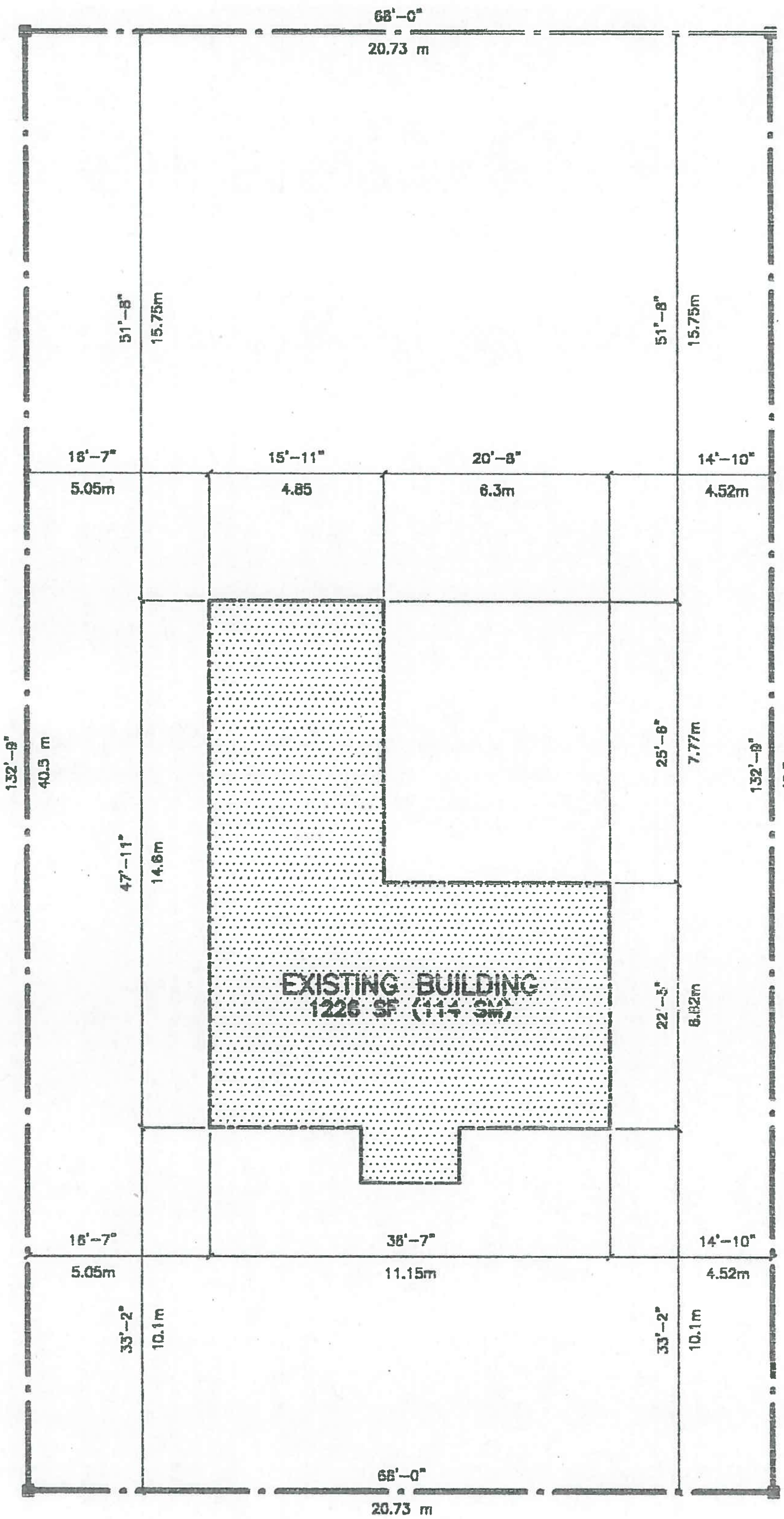
Built 1883

"Italianate"

Level 1

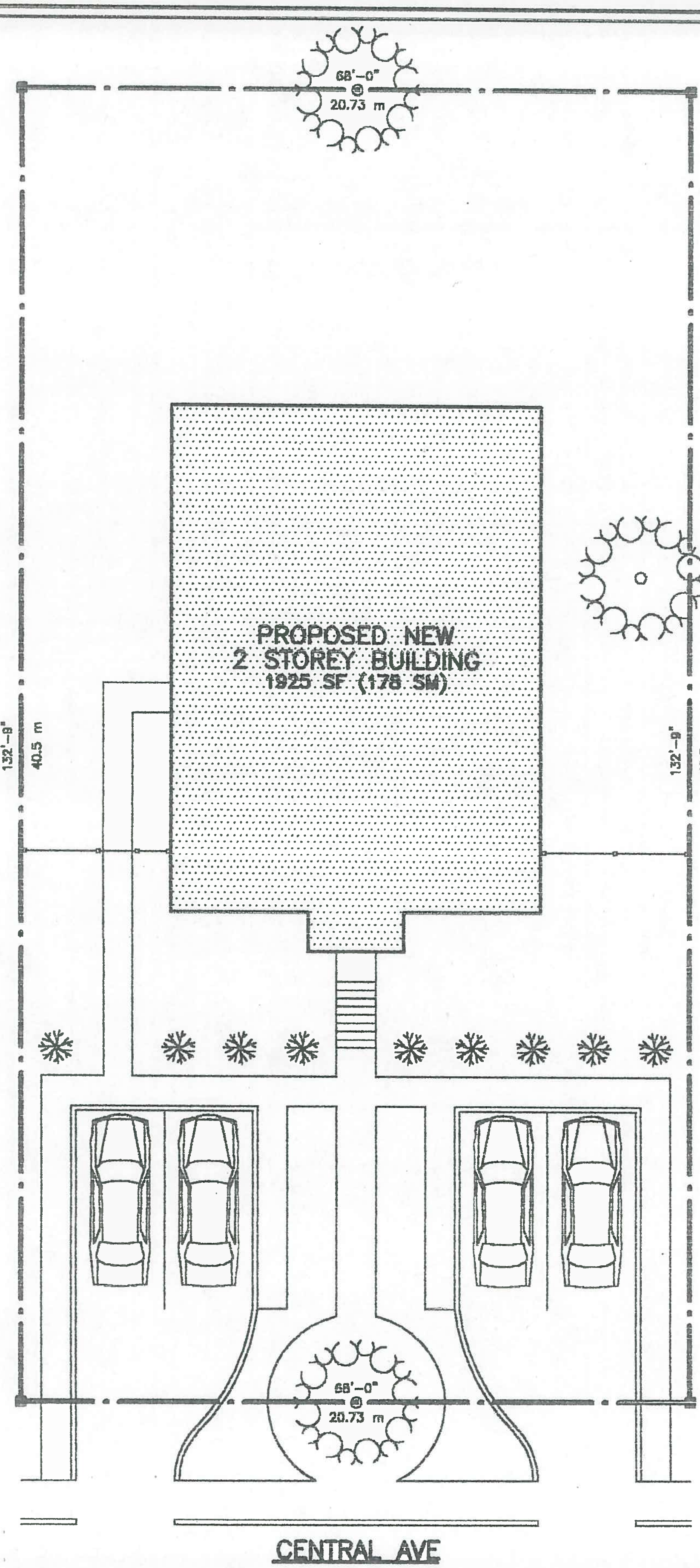


EXISTING SITE PLAN

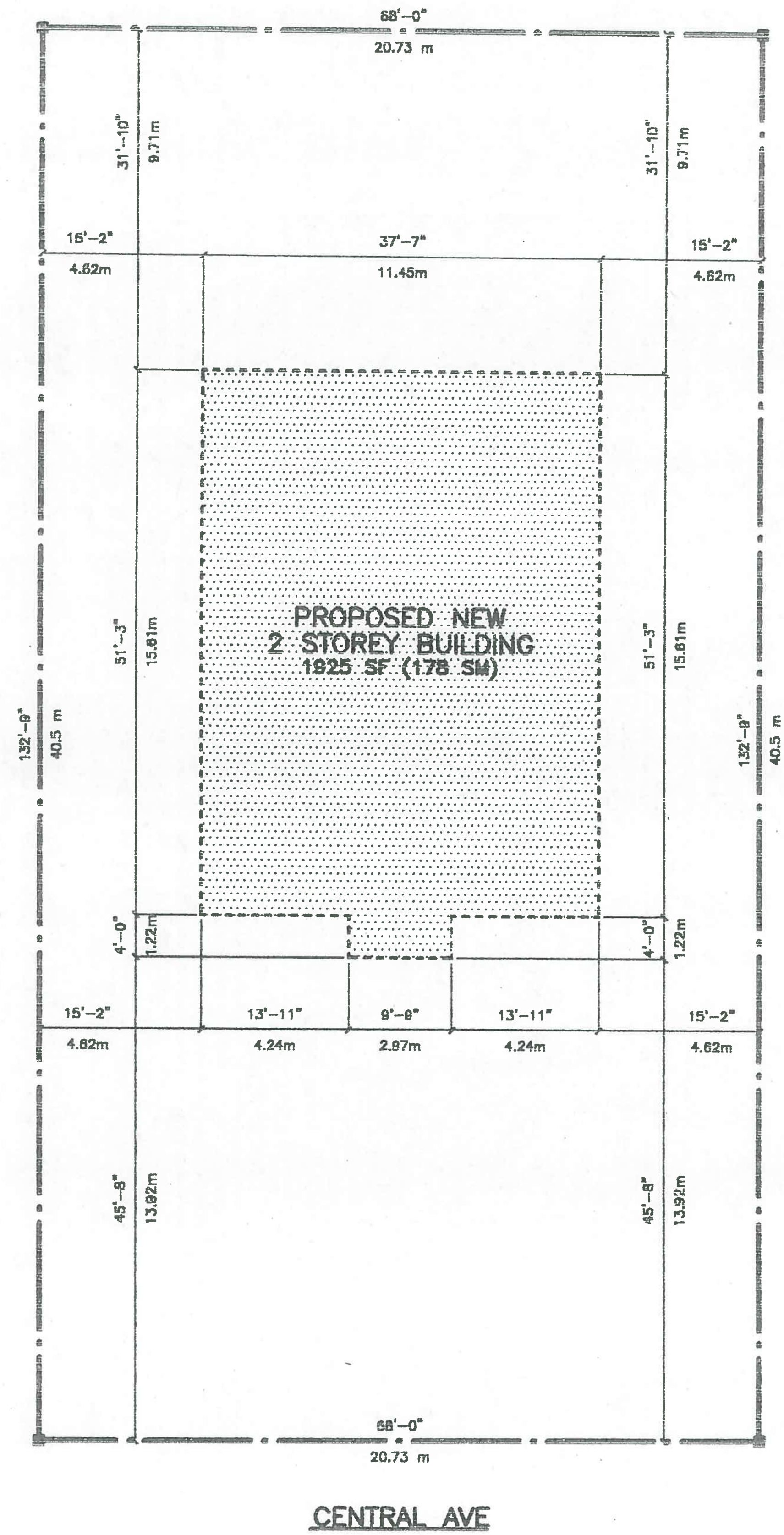


CENTRAL AVE

EXISTING SITE PLAN



PROPOSED SITE PLAN



PROPOSED SITE PLAN

Santarelli Engineering Services
50 Samnah Crescent, Ingersoll, Ontario N5C 3J7 Tel: (519) 451-5530 Fax: (519) 425-5001

May 25, 2018

To: Gus Mitsis
172 Central Avenue,
London, Ontario,

Re: Structural Review
Private Residence at 172 Central Avenue
Our file No. 18-15-0142

Dear Sir:

Santarelli Engineering has completed a preliminary review of the existing residence at 172 Central Avenue, London, Ontario. The purpose of our visit was to visually assess the existing building structural

The following report was compiled based on information gathered by visual assessment and limited mechanical testing of wood framing at the time of our review.

Overview

The existing 2 storey century home consists of rubble foundations, 2 wythes of clay bricks at the perimeter and with interior wood floor framing. The brick wythes are separated by a 2" cavity with the interior wood framing bearing on the interior wythe of brick.

The existing floors are framed using a mixture of conventional wood framing with timber joists at the rear and non-conventional cantilevered timber joists at the front. The connections predominantly friction fit.

At the time of the review, the supporting structure including floor joists, roof rafter and load bearing walls were exposed. Sample penetrations were made in the existing brick for review.

Only portions of the foundation visible from the basement at the time of the review were examined.

Site Observations:

Exterior

Stair accessing basement; The concrete retaining walls framing around the exterior basement stairs appeared to be in relatively good condition. The top of the retaining wall was noted to be at grade level Due to the noted grade, water will flow over the retaining wall and down the stairs into the basement. Overtime, improper drainage and grading will result damage to the wall, stair and building foundation.

Gas meter; A gas meter is located adjacent to a basement window while also under the front entrance patio. By today's code requirements, this location is unacceptable and the meter is to be relocated.

Basement windows; Throughout the building, basement windows were at grade level. No window wells are installed. Water stains on the foundation walls in the basement and rotting of window frames was

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observed. In this circumstance, window wells are to be provided or adjustments are to be made to the exterior grade.

Front Entrance; The exterior stair and patio accessing the front entrance is constructed from conventional wood framing. Wood posts were placed on grade without proper foundations.

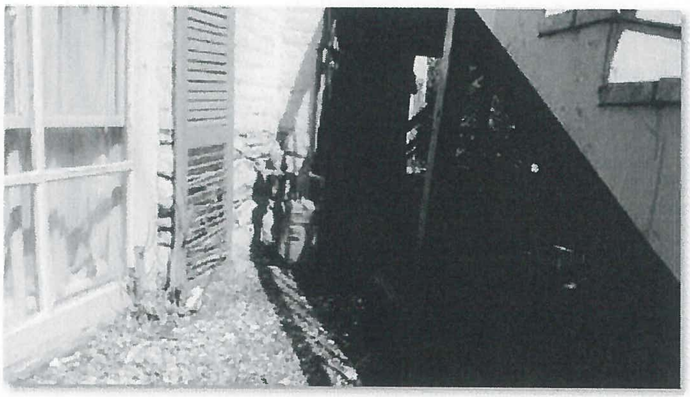

Image 1: West side of exterior wall at main entrance.
(Image shows window at grade; Gas Meter Location, Entrance patio framing.)

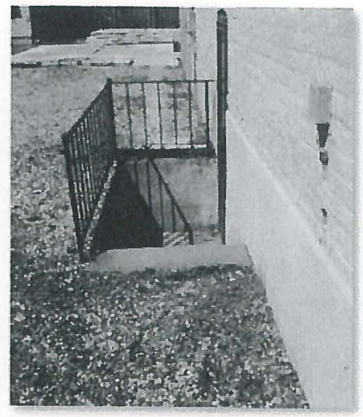

Image 2: Basement Stair at Grade
(West Side of House)

Exterior Brick: The exterior brick Wythe appeared to be non-load bearing. Penetrations in the brick at floor joist locations showed the interior structural framing is supported by the interior Wythe of brick only. The two brick walls were tied together using clay bricks headers. The spacing of the headers was not determined at the time of the review.

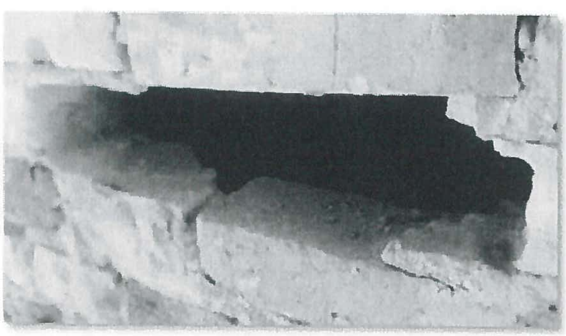

Image 3: Penetration in Exterior Brick Wall

Image 4: Penetration in Exterior Brick Wall at base.

Cracks in the exterior brick were observed at many location including most window and door opening. The cracking was predominantly within the mortar joints however, where windows were stacked between the main floor and second floor, cracks were seen to pass through several bricks. At the rear of the house, cracks in the brick extended from the foundation up to the eave.

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A bow in the exterior brick could be seen along the east wall at the second floor elevation. Cracking in the brick has been highlighted in the images below for clarity.


Image 5: Rear Brick Wall

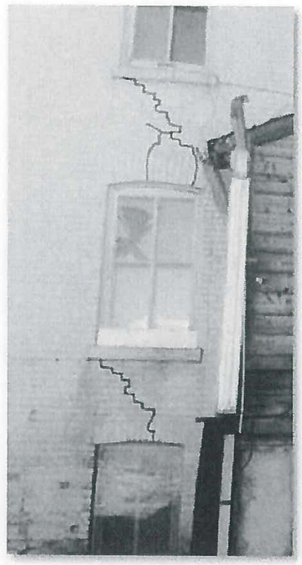
Image 6: Rear Brick Wall

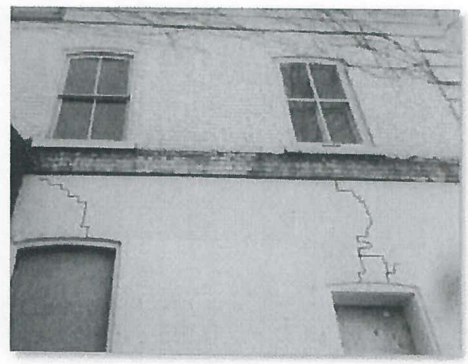
Image 7: Rear Brick wall

Rear Addition; At the rear of the residence, a small wood framed addition is installed. Portions of a stud wall supporting the addition, with wood floor joists and wood paneling. Along the north end, the wood framing is exposed to the environment. Rotting and damage to the wood structure was observed including warping of the supporting stud wall.

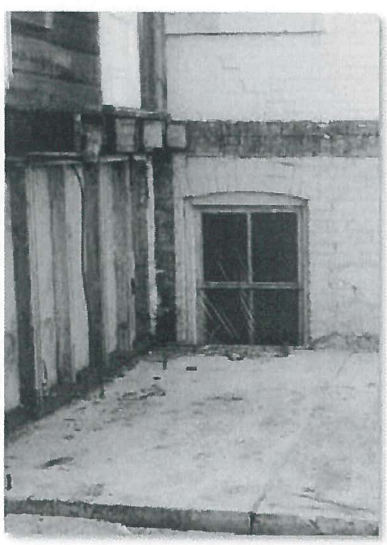
Image 8: Exposed wood framing
And Window at grade. (At Rear)


Image 9: Exposed wood framing
(at Rear)

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Basement

The existing foundations; are constructed using rubble and mortar. Portions of the existing basement concrete slab were removed against the foundation wall in order to determine if footings below the wall were present. No footings appeared to be present at these locations.

Main Floor Framing; the framing supporting the main floor above consisted of timber joists bearing on perimeter foundation walls and interior load bearing brick walls. Throughout the basement, joists and supporting beams were observed to be cut, charred, cracked and in some location had supporting elements removed, compromising the integrity of the floor system in areas and requiring replacement.

For instance, a beam supporting the floor below the main entrance bears on a single wyse of brick, eccentrically placed. Where this beam spans over an opening in the basement, the beam has been cut short of the bearing point, resulting joists not being supported by the beam, and the beam cantilevering from the single whyth of brick. Load bearing walls supporting the second floor are supported by this beam and wall in the basement.

Near the basement stair, another wood beam was cut resulting in an existing joists being unsupported.

Image 10: Basement Beam near stair cut.
Floor joist has no support

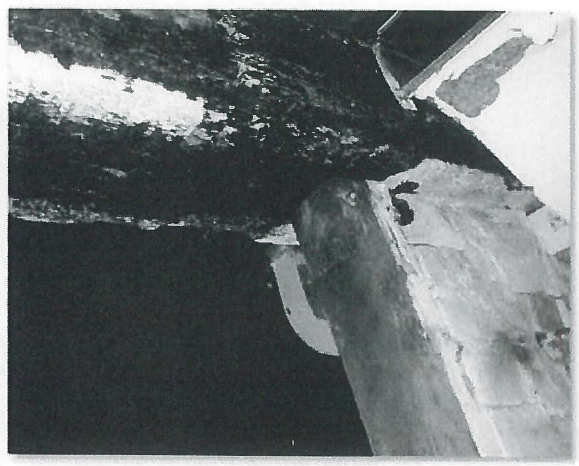

Image 11: Charred beam eccentrically placed
On single Wythe brick below.

Image 12: Joist near stair cut.
Floor joist has no support

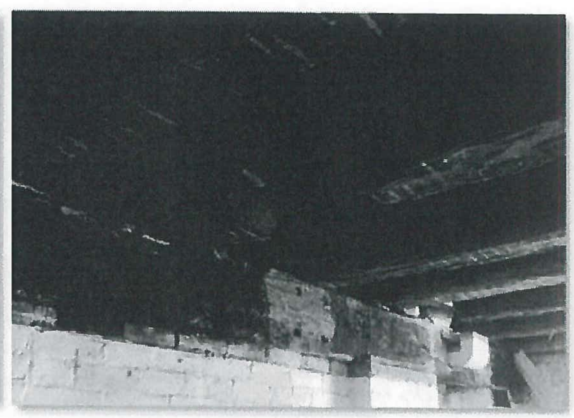

Image 13: Joist below main entrance cut.
Floor joist has no support

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Water: At the perimeter, water stains on the foundation wall were observed. Window framing at grade has water damage and requires replacement.

Main Floor

Floor framing; The wood framing supporting the second floor consists of two styles of framing. At the rear of the residence, timber joist spanning between exterior brick walls was used. At the front of the house, a non-conventional double cantilever system was used. The components are friction fit, no wood dowels were observed. The bearing walls on the main floor were offset of the brick walls below.

Throughout the second floor framing, several floor joists had longitudinal cracks, in some cases exceeding 1" in width. Joists throughout were seen to be cut, damaged, rotted, charred and in some location with minimal joist depth at bearing points. Spaces between friction joints have developed as the building settles. The current state of the framing requires repair or replacement. Rotting of wood joists were confirmed by drill testing and are not suitable to support the floor loading.

Stud Framing; Stud and headers within interior bearing walls at the front of the house were installed on their flats. At some location, headers and top plate were missing. The stud framing was offset of supporting beams and load bearing wall below. Reworking of the stud framing is required with installation of proper headers to support the floor framing above.

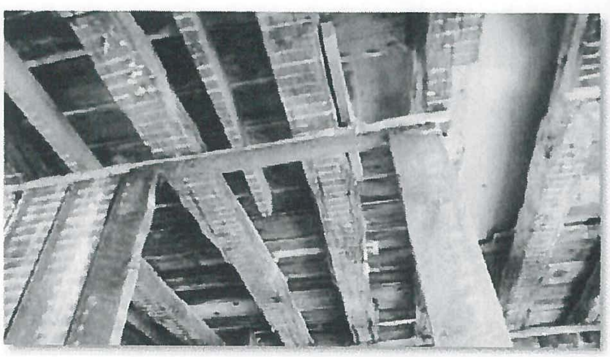
Image 14: Stud and Header framing of load bearing wall
Near main entrance.


Image 15: Connection of Double Cantilever Joists
At front of house

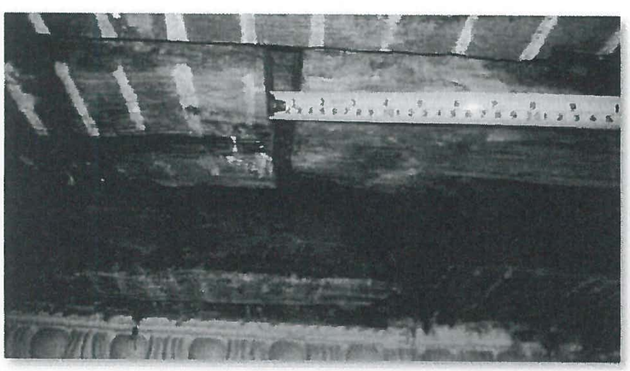
Image 16: Connection of Double Cantilever Joists


Image 17: Cut joist and stud top plate.

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Image 18: Longitudinal Crack in wood joist

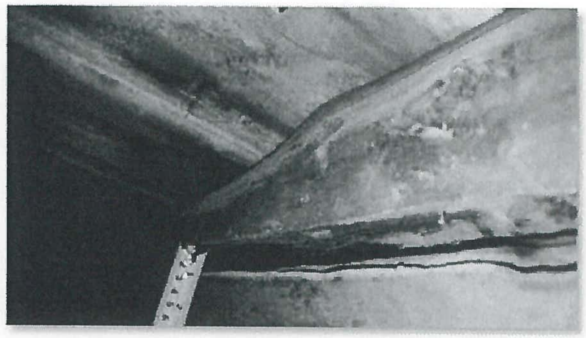

Image 19: Longitudinal Crack in wood joist

Image 20: Cut joist at rear of house.

Image 21: Charred and cut joist at rear of house.

Image 22: Minimal bearing on Brick Wall

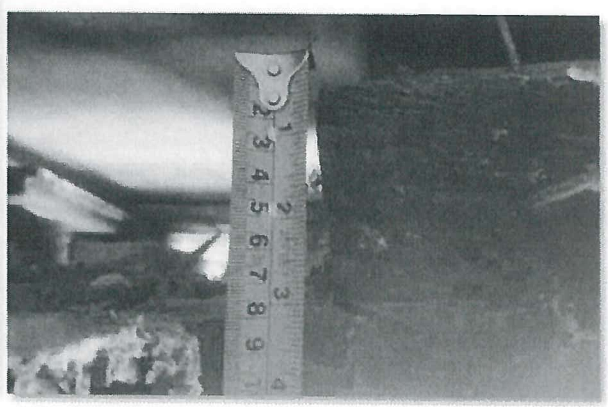

Image 23: Cut beam at rear of house. (Typical of several locations)

Wood lintels and sill plates. Wood framing inside the brick walls which include wood lintels and sills have been damaged due to moisture. A random sampling of wood joists, lintels and sills were tested for moisture damage using a specialized drill that records the resistance to penetration of a drill bit and records the results. The results showed that the integrity of the wood framing at the exterior of the building has been reduced. This item is consistent throughout the house. The wood lintels require replacement

Perimeter Brick Wythe. The existing brick walls consist of two wythe of brick separated and air gap and the floor joist bear solely on the interior wythe. Based on the joist spans and floor loading, the single wythe of brick is overloaded. Cracks and bowing the interior was observed. Additional support of the floor joists is required.

Image 24: Joist framing on brick Wall.
Joist are cut and charred.

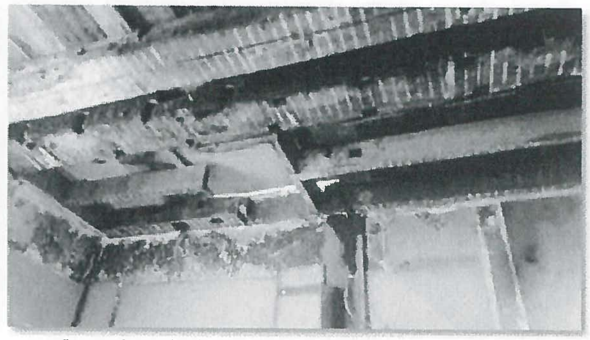

Image 25: Joist framing on brick Wall.
Joist are cut and charred.

Image 26: Cracked Brick wall at Window

Image 27: Cut floor joists and minimal bearing at brick wall

<u>Second Floor & Roof Framing.</u>

The existing roof; The roof is framed using wood rafters with wood decking. No collar ties were present. Ceiling joists were framed using timber joists. In some areas, ceiling joists could easily be removed.

Interior Brick Wythe and Window framing; Brick framing is installed as prescribed previously. Cracking of the plaster and brick wall at the corner of windows was observed. Further investigation determined that wood lintels over windows are damaged due to moisture and a bow in the east brick wall was observed.

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Image 28: Cracking at Window


Image 29: Cracking at Window


Image 30: Cracking at Window


Image 31: Typical Ceiling Joist Framing.

Based on the existing framing and issues discovered, reinforcing of existing components will require a case by case review and repair detail at each location. Replacement of the floor framing and other components noted in the report, in many areas, would be more practical and cost effective than repairing the current conditions. If deficiencies are not corrected, the issues noted will continue to deteriorate.

The existing brick walls will required shoring, repair and re-framing likely by installing new interior wood wall framing on new footings in order to support the floor joists. The proposed work will need to be completed in sections. It is our understanding discussions have begun with local building authorities regarding this property and the scope of proposed plans for this building. When a direction on the project is decided, please let us know.

The above-mentioned work/deficiencies may not be limited to the items listed above. The review was based on a visual examination of the exposed areas only. Any additional areas that may require repair exposed or observed during construction/repair is to be brought to Santarelli Engineering's attention for review.

Yours truly,
Santarelli Engineering Services

Walter Santarelli M.Eng. P.Eng
President

LICENSED PROFESSIONAL ENGINEER
W.G. SANTARELLI
PROVINCE OF ONTARIO

300 Dufferin Avenue
P.O Box 5035
LONDON, ON
N6A 4L9

London CANADA

BCIN - 18458

Unsafe Building – Order to Make Safe

Pursuant to Subsection 15.9-(4) of the *Building Code Act*, 1992

Date Order issued: June 19, 2018

ORDER NUMBER
US 1174169

Application/Permit Number: No Permit

Address to which Order applies:

172 Central Avenue
LONDON ON N6A 1M7

Order issued to:

1. Peter Christopher Mitsis
   845 Talisman Crescent
   LONDON ON N6K 0B7

2. Constantinos Mitsis
   845 Talisman Crescent
   LONDON ON N6K 0B7

An unsafe condition, as defined in subsection 15.9-(2) of the *Building Code Act*, 1992 is found to exist at the above noted location by reason of the following:

Item	Reasons why the building is unsafe and remedial steps to be taken
The residential building located 172 Central Ave. contains conditions that could be hazardous to the health and safety of persons in the normal use of the building:	
1)	The structural integrity of the building is compromised, including but not limited to the wood floors, wood studs, wood lintels, single brick veneer support of the floor joists, and roof ceiling joists (as listed in the engineers report provided by Santarelli Engineering Services, dated May 25, 2018).
Remedial Action:	
1)	Apply for and obtain a building permit to repair the items outlined above, and in the report provided by Santarelli engineering services dated May 25, 2018
NOTE: Scaled and complete drawings are required in order to obtain any building permit.	

You are hereby ordered, under the terms of the subsection 15.9-(4) of the *Building Code Act*, 1992 to take the remedial steps heretofore required to make the building safe on or before **August 18, 2018**.

Caution:

Failure to correct this unsafe condition by the time specified in this Order may result in the issuance of a further Order prohibiting the use or occupancy of the building identified in this Order, and/or legal action which upon conviction by a court of competent jurisdiction, can result in a fine for first offence not to exceed $50,000 for an individual and $100,000 for a Corporation or for a subsequent offence maximum penalties of not more than $100,000 and $200,000 for an individual or Corporation respectively.

Order issued by:

Name Michael Romashyna

Signature ______________________

BCIN 37734

Telephone no. (519) 670-0399

Melchers Construction Limited

GENERAL CONTRACTOR

22662 KOMOKA RD, KOMOKA, ON NOL 1RO
www.melchersconstruction.com

Office: 519-473-4149 Fax: 519-473-8371

Ted Melchers Cell: 519-617-2028
Ted@melchersconstruction.com

Chris Melchers Cell: 519-617-2029
Chris@melchersconstruction.com

Dan Schinkelshoek Cell: 519-661-7811
Danschink@melchersconstruction.com

June 28, 2018

Peter & Gus Mitsis

RE: 172 Central Ave Site Inspection

I was asked to attend a site meeting at 172 Central Ave to assess the condition of the existing structure and top determine if it was feasible to renovate the structure to bring it up to current code requirements.

I found that the structure was in very poor condition structurally. The interior of the structure was stripped of plaster and finishes so that the structural components were exposed.

It was my contention that the renovation would be very expensive ($450 - $500 /sf) whereas demolition and reconstruction would be much more practical. As a consideration, the exterior façade could be replicated to retain the character of the existing building.

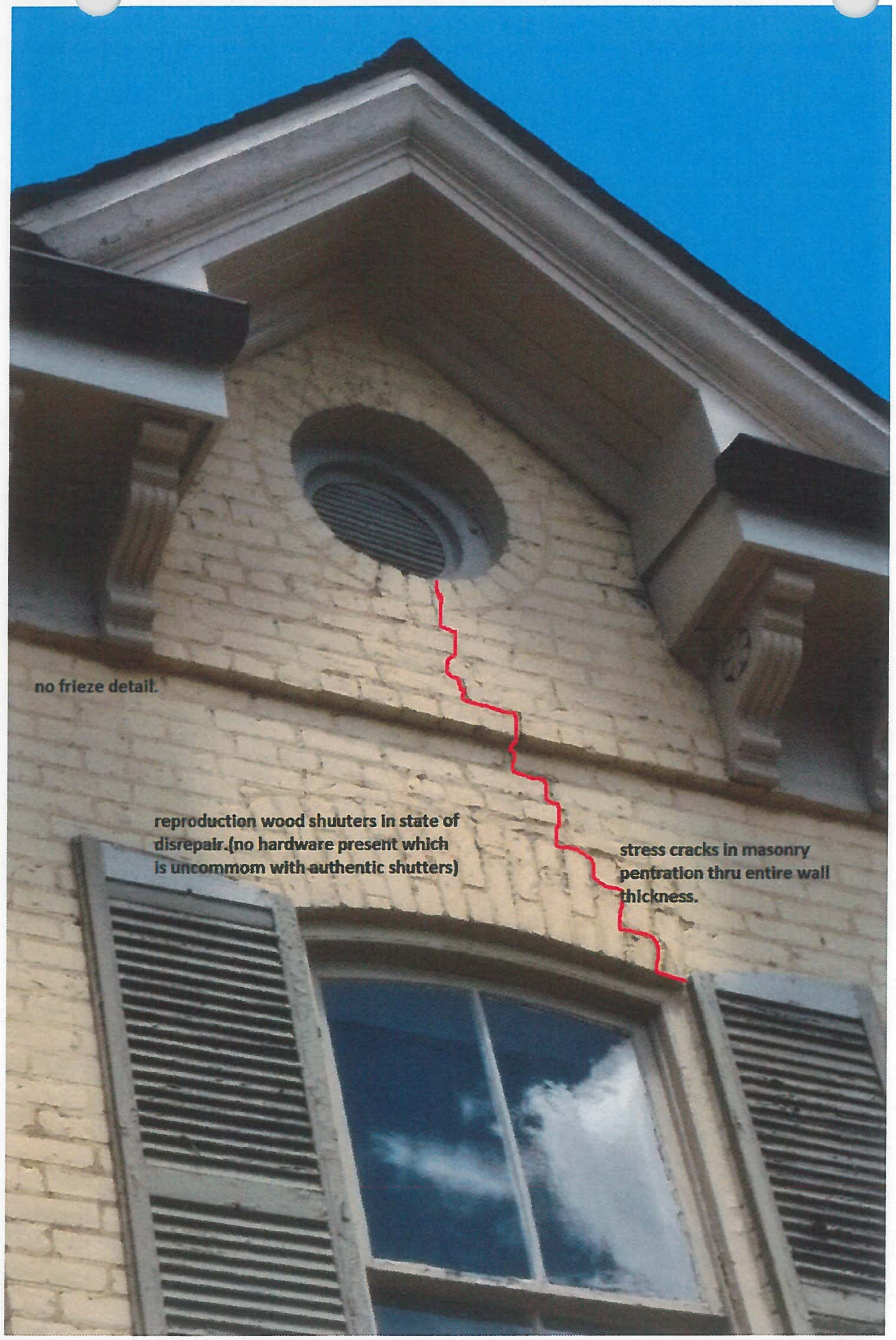
Yours truly,

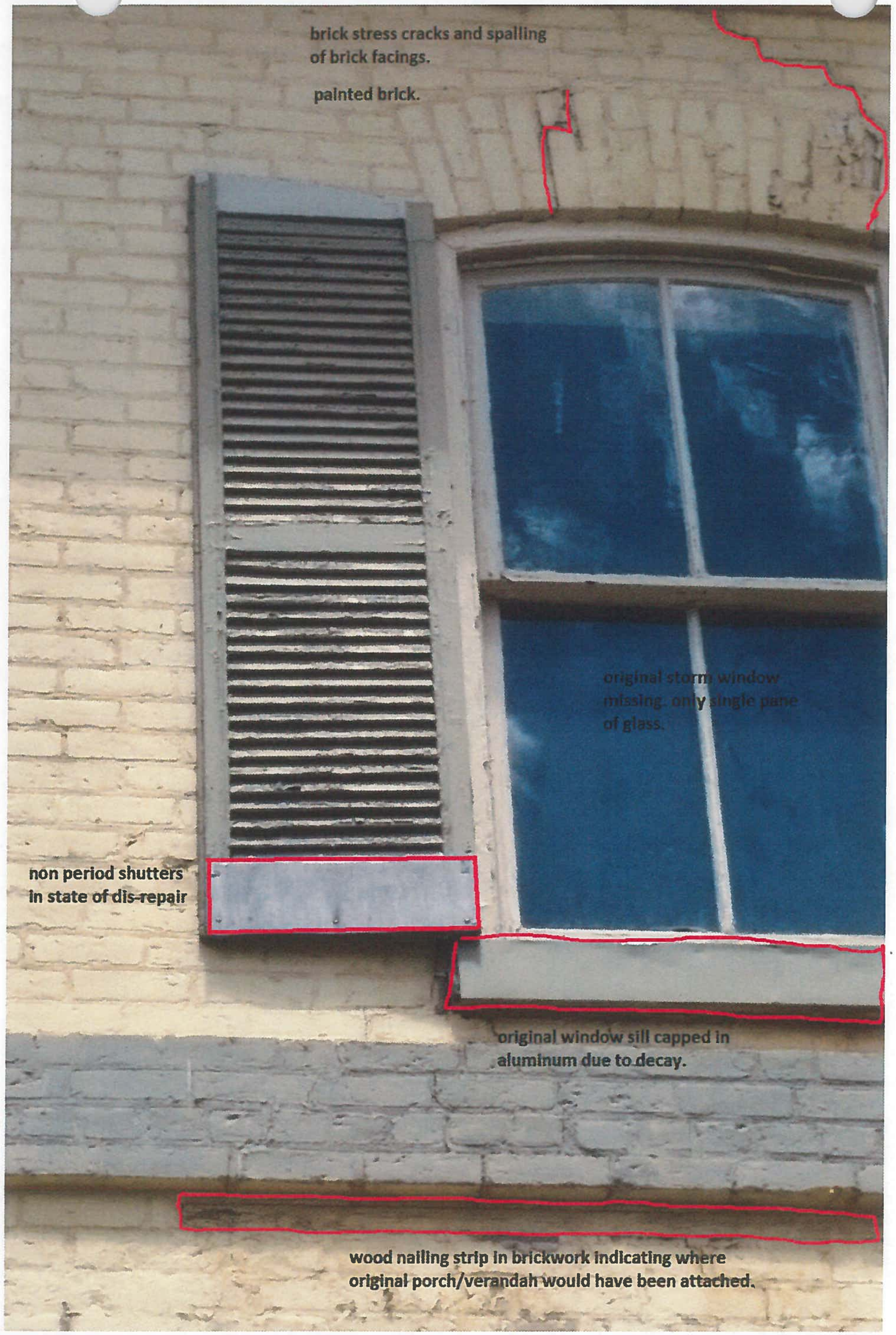
MELCHERS CONSTRUCTION LIMITED

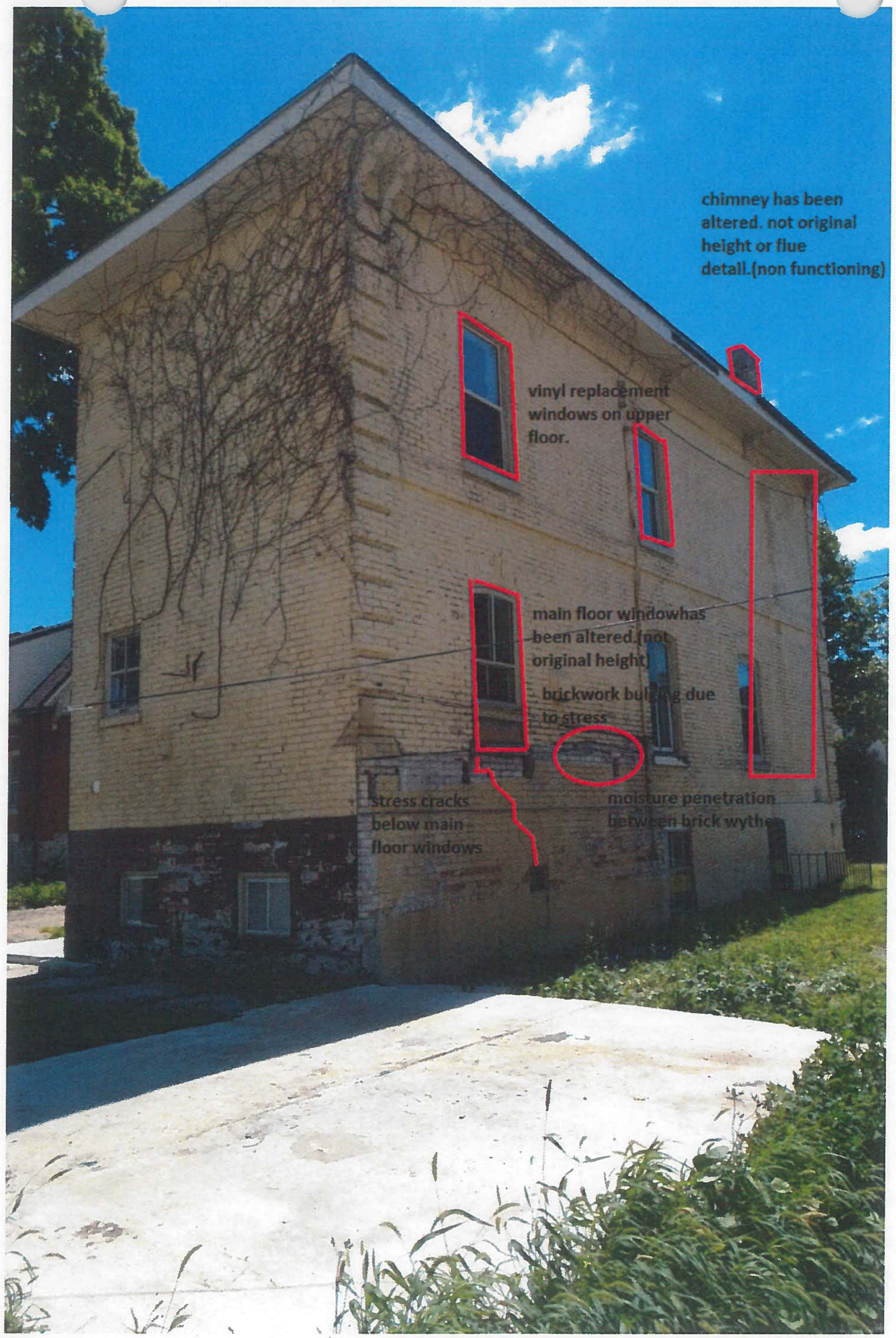
PER:

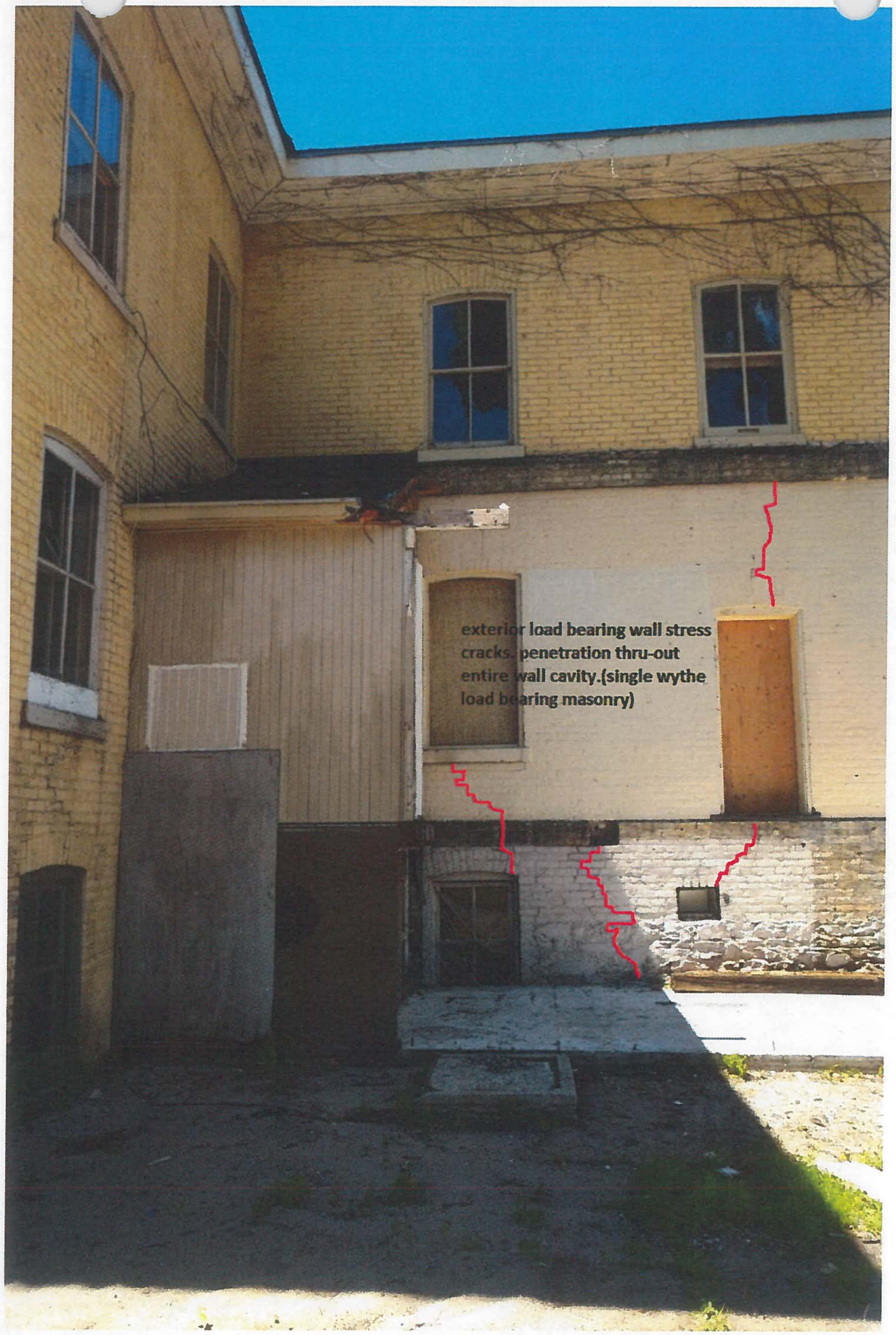
Ted Melchers

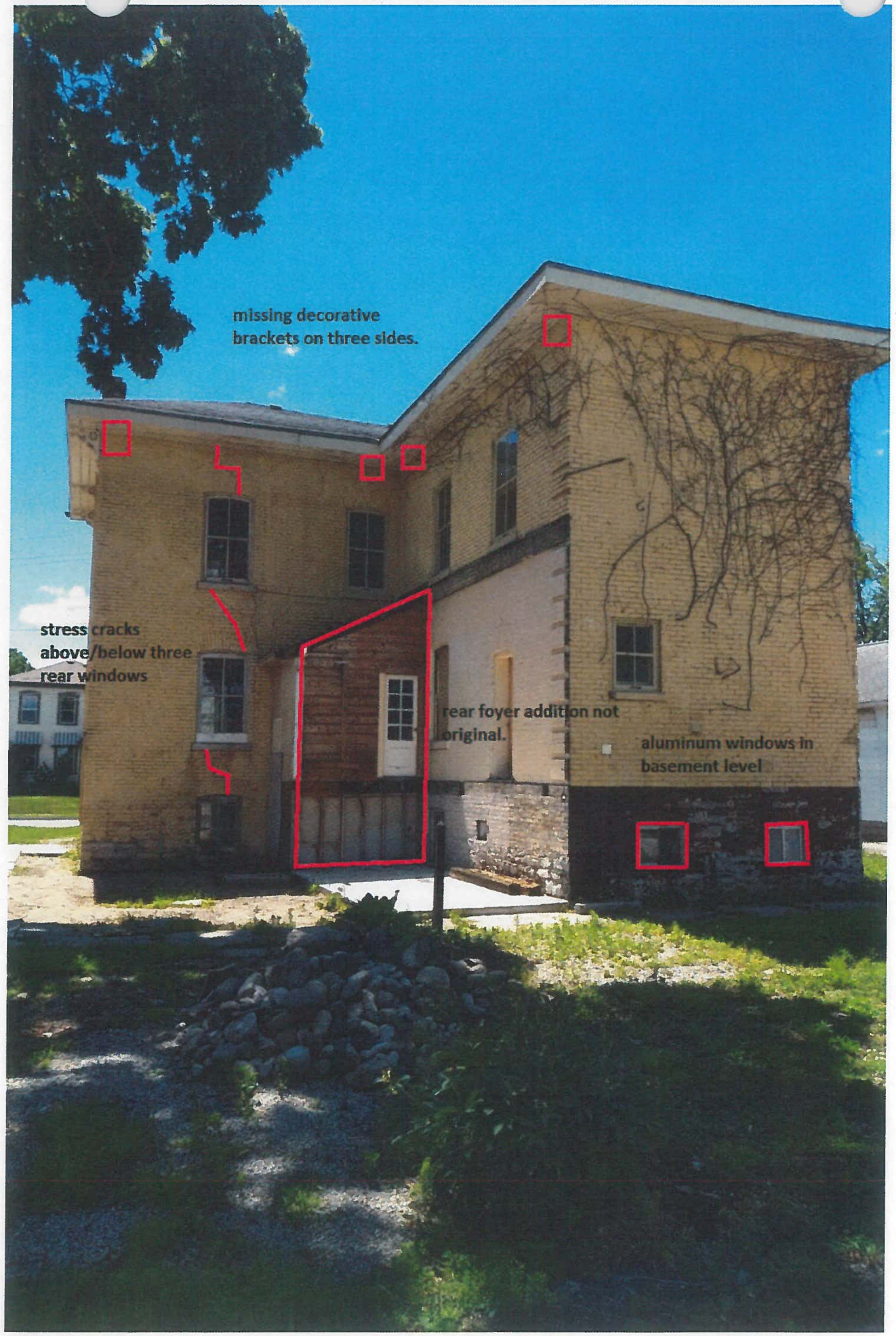

masonry stress cracks
missing wood storm
windows on 2nd storey
outline of wood nailing strip
inbedded in brickwork indicating
original porch/verandah.
poor condition of brick
facings and mortar joints
original door
replaced with
1950-60's door.
main entry staircase and
railing not original

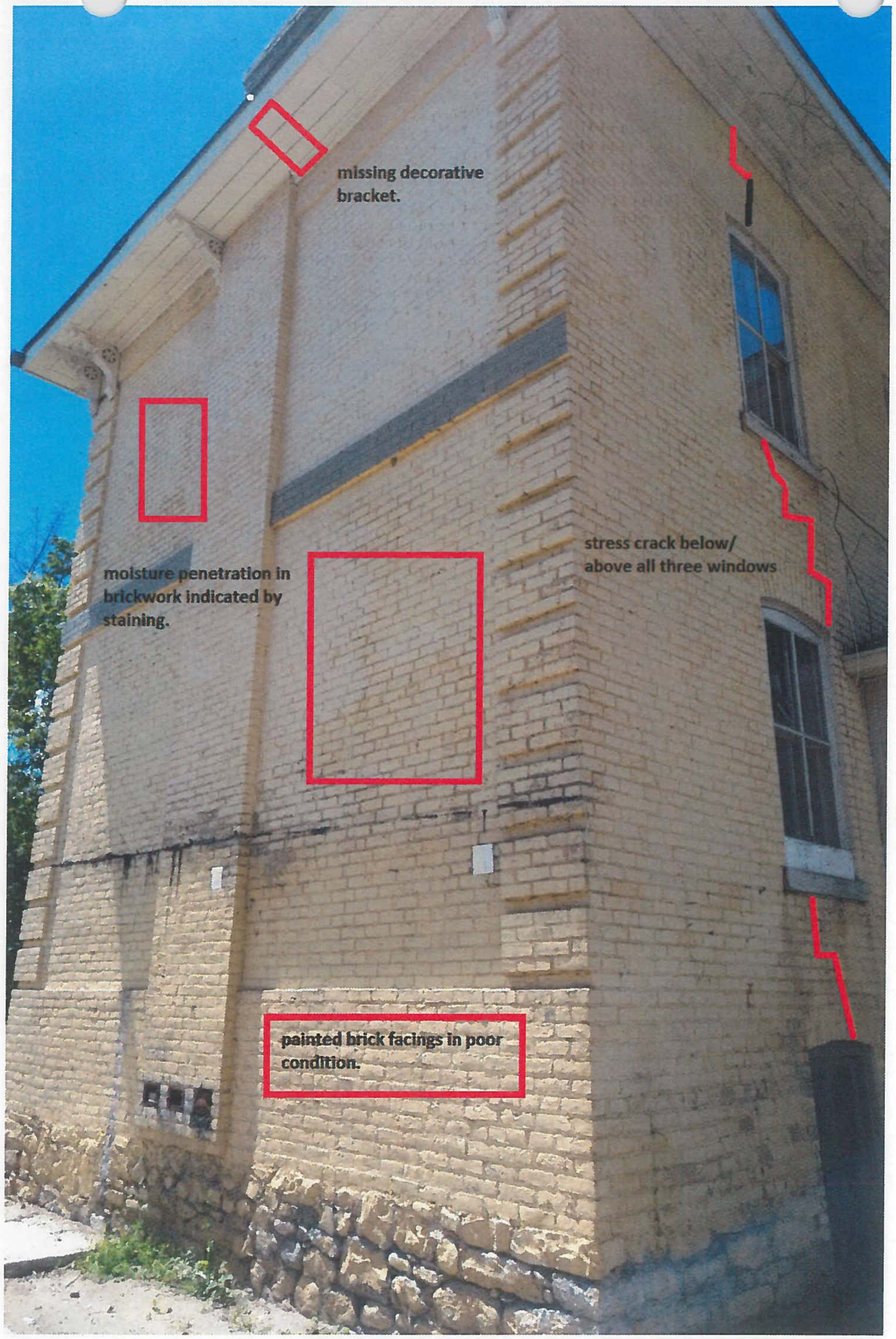

no frieze detail.
reproduction wood shuuters in state of disrepair.(no hardware present which is uncommom with authentic shutters)
stress cracks in masonry pentration thru entire wall thickness.


brick stress cracks and spalling
of brick facings.
painted brick.
original storm window
missing. only single pane
of glass.
non period shutters
in state of dis-repair
original window sill capped in
aluminum due to decay.
wood nailing strip in brickwork indicating where
original porch/verandah would have been attached.

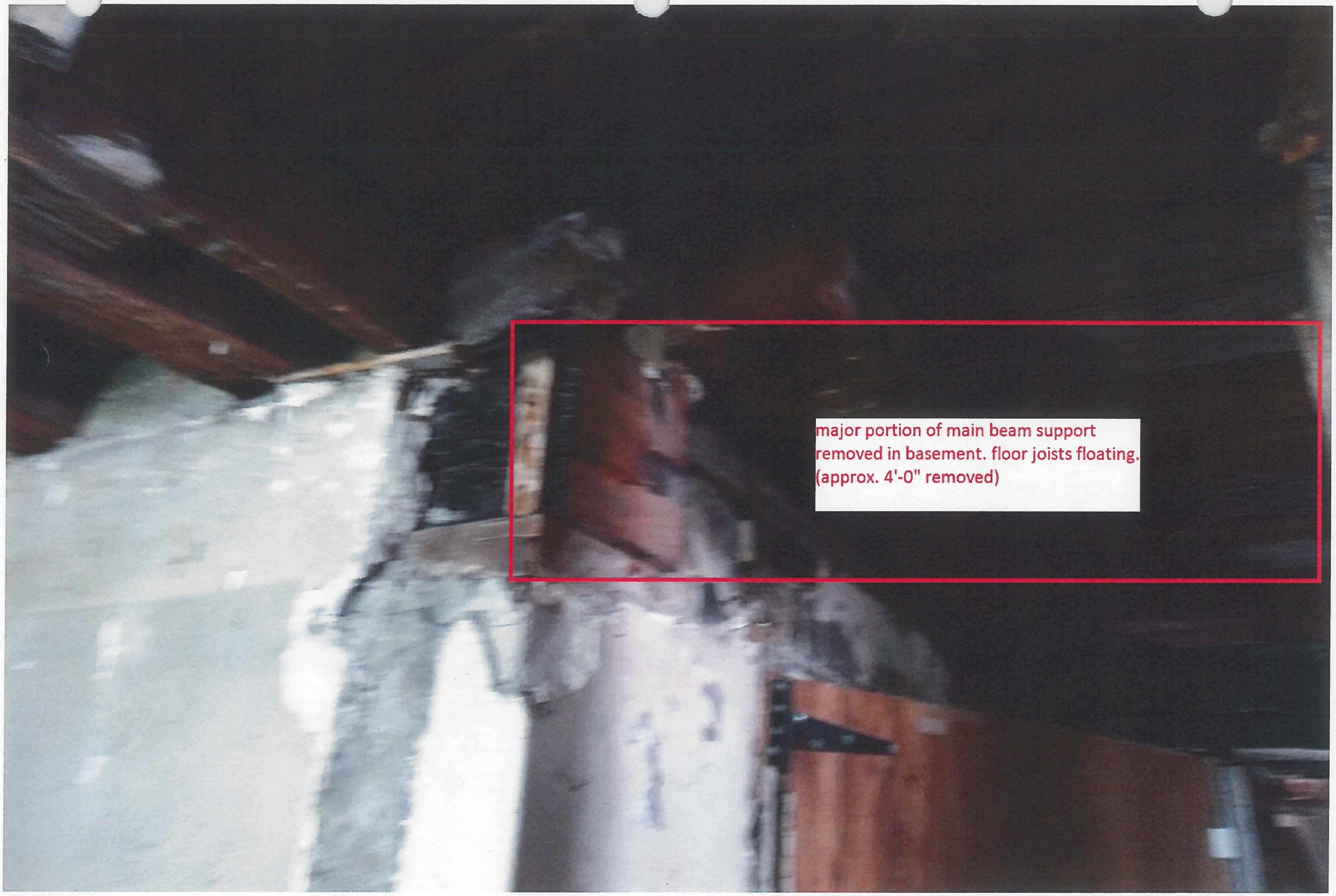

chimney has been altered. not original height or flue detail.(non functioning)
vinyl replacement windows on upper floor.
main floor windowhas been altered.(not original height)
brickwork bul g due to stress
moisture penetration between brick wythe
stress cracks below main floor windows

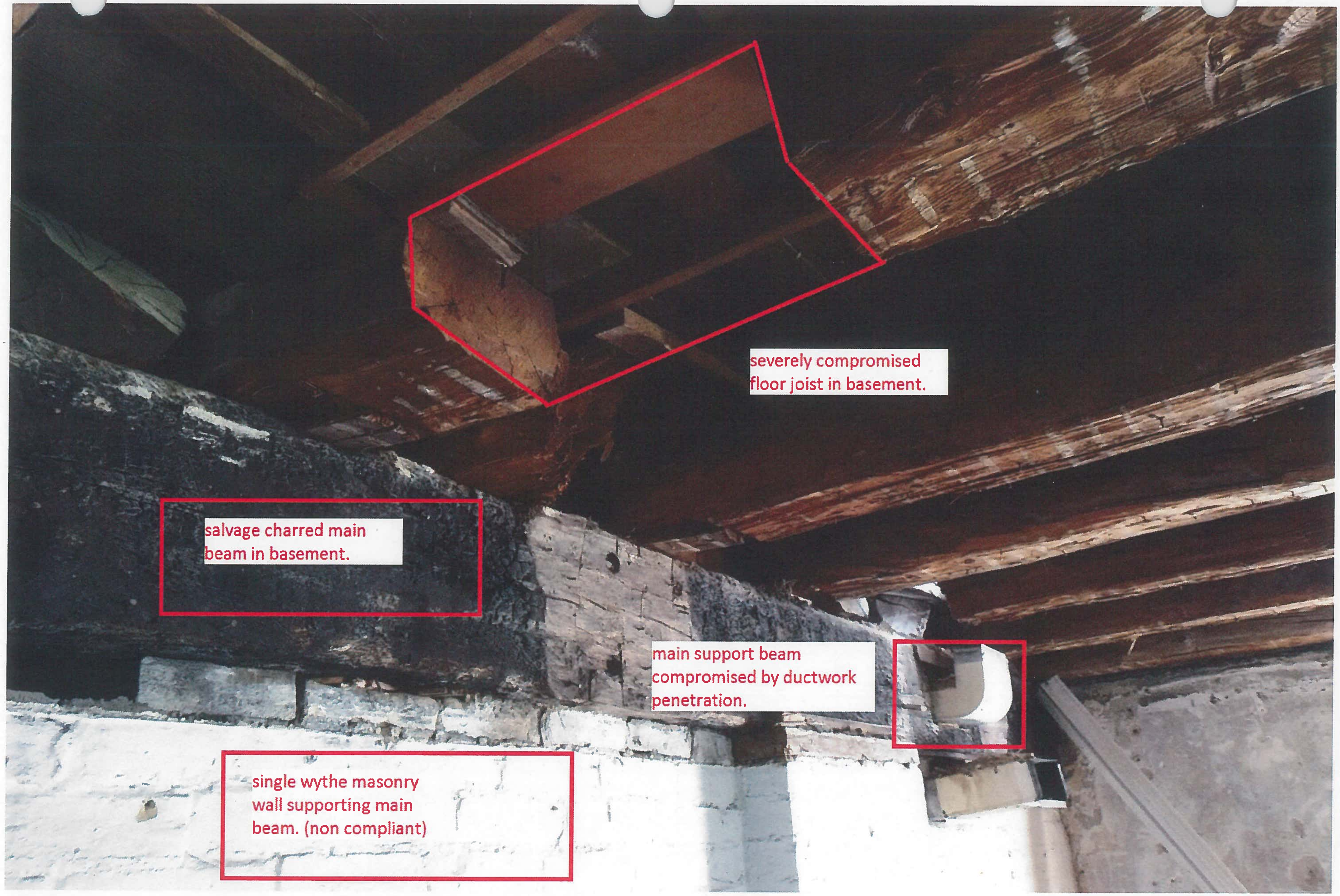

exterior load bearing wall stress
cracks. penetration thru-out
entire wall cavity.(single wythe
load bearing masonry)

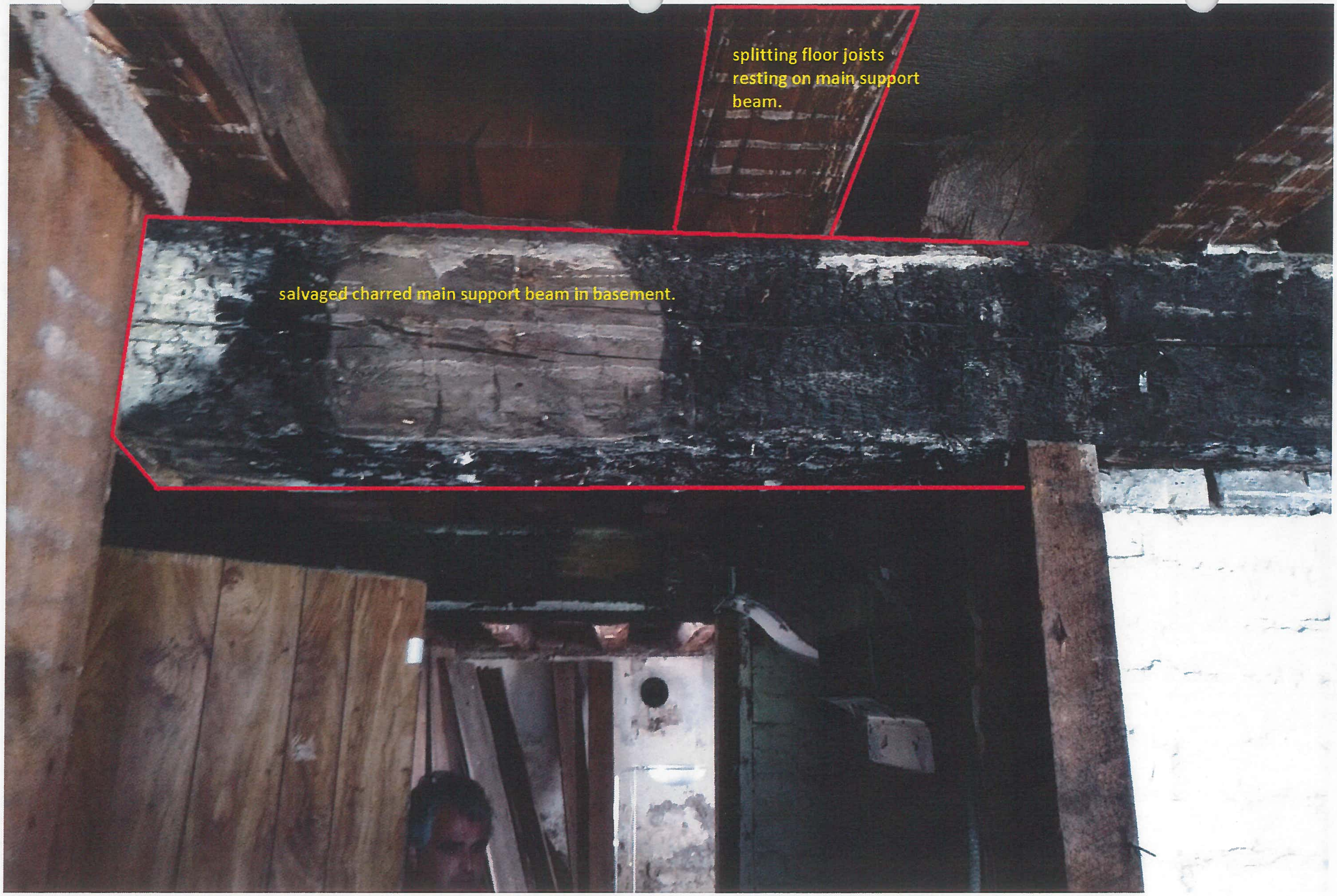

missing decorative
brackets on three sides.
stress cracks
above/below three
rear windows
rear foyer addition not
original.
aluminum windows in
basement level


missing decorative bracket.
moisture penetration in brickwork indicated by staining.
stress crack below/ above all three windows
painted brick facings in poor condition.

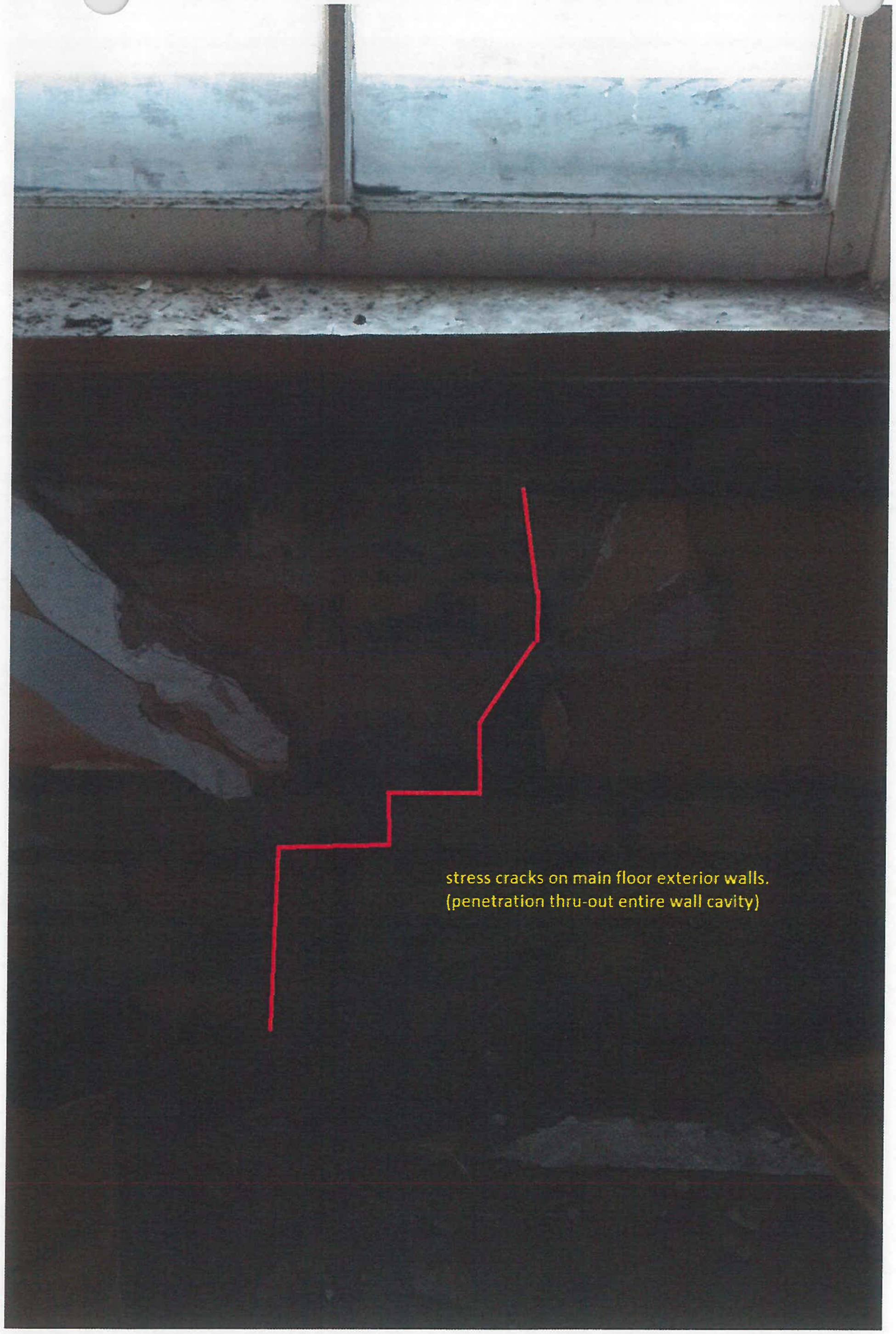
typical rubble foundation with no footing. not suitable for additional loading.

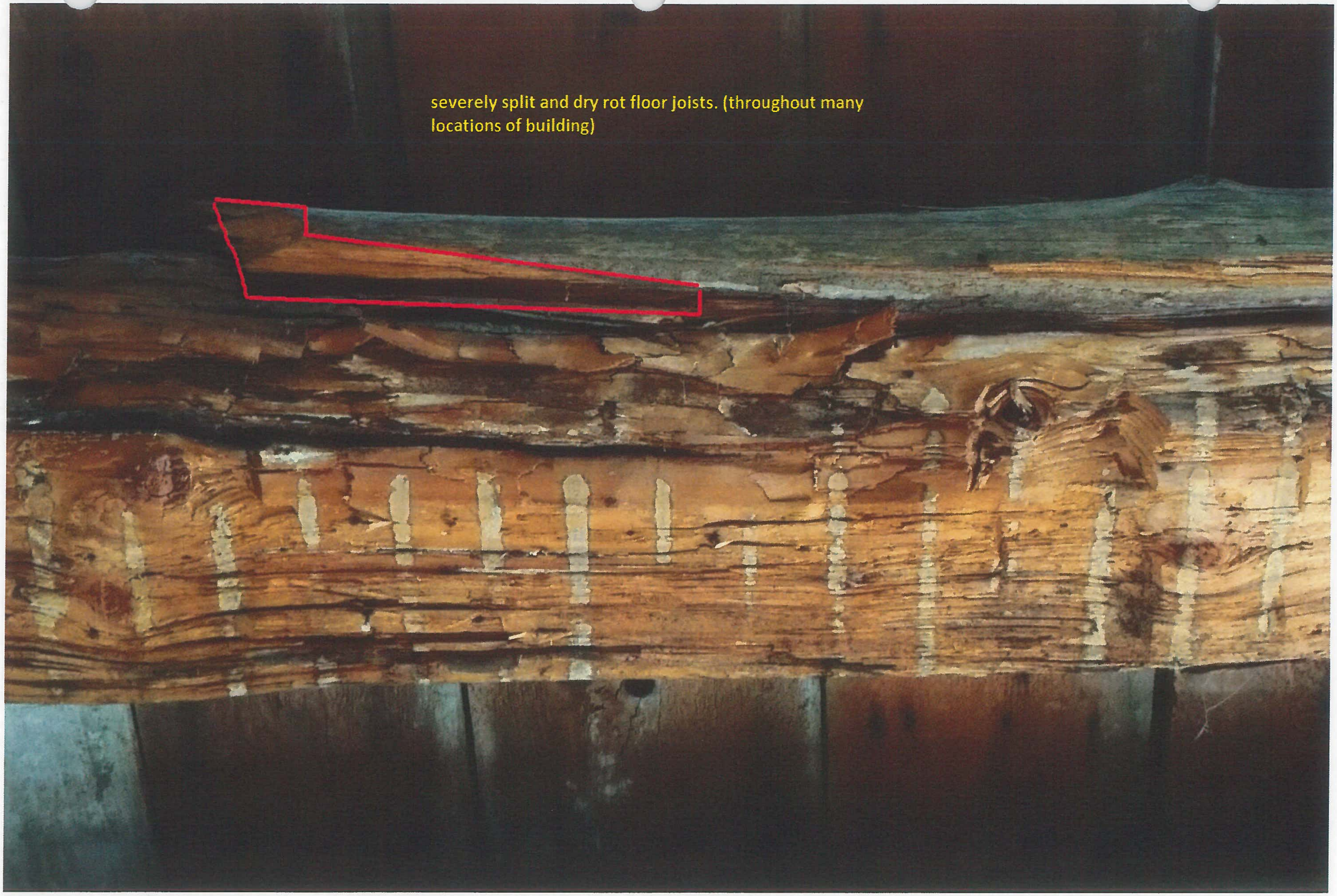

major portion of main beam support
removed in basement. floor joists floating.
(approx. 4'-0" removed)


severely compromised
floor joist in basement.
salvage charred main
beam in basement.
main support beam
compromised by ductwork
penetration.
single wythe masonry
wall supporting main
beam. (non compliant)


splitting floor joists resting on main support beam.
salvaged charred main support beam in basement.

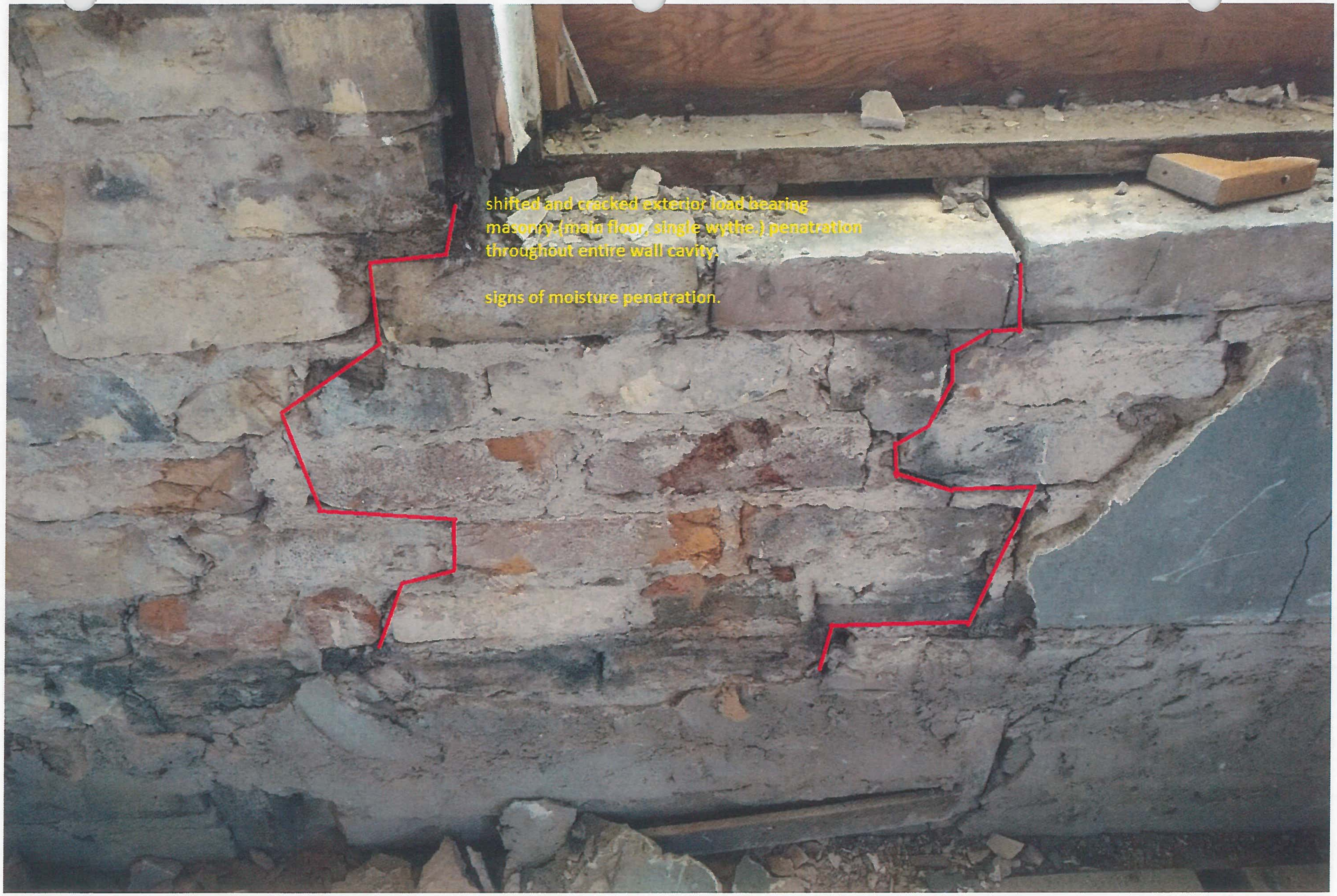

exterior wall. (double
wythe brick with 2"
cavity)

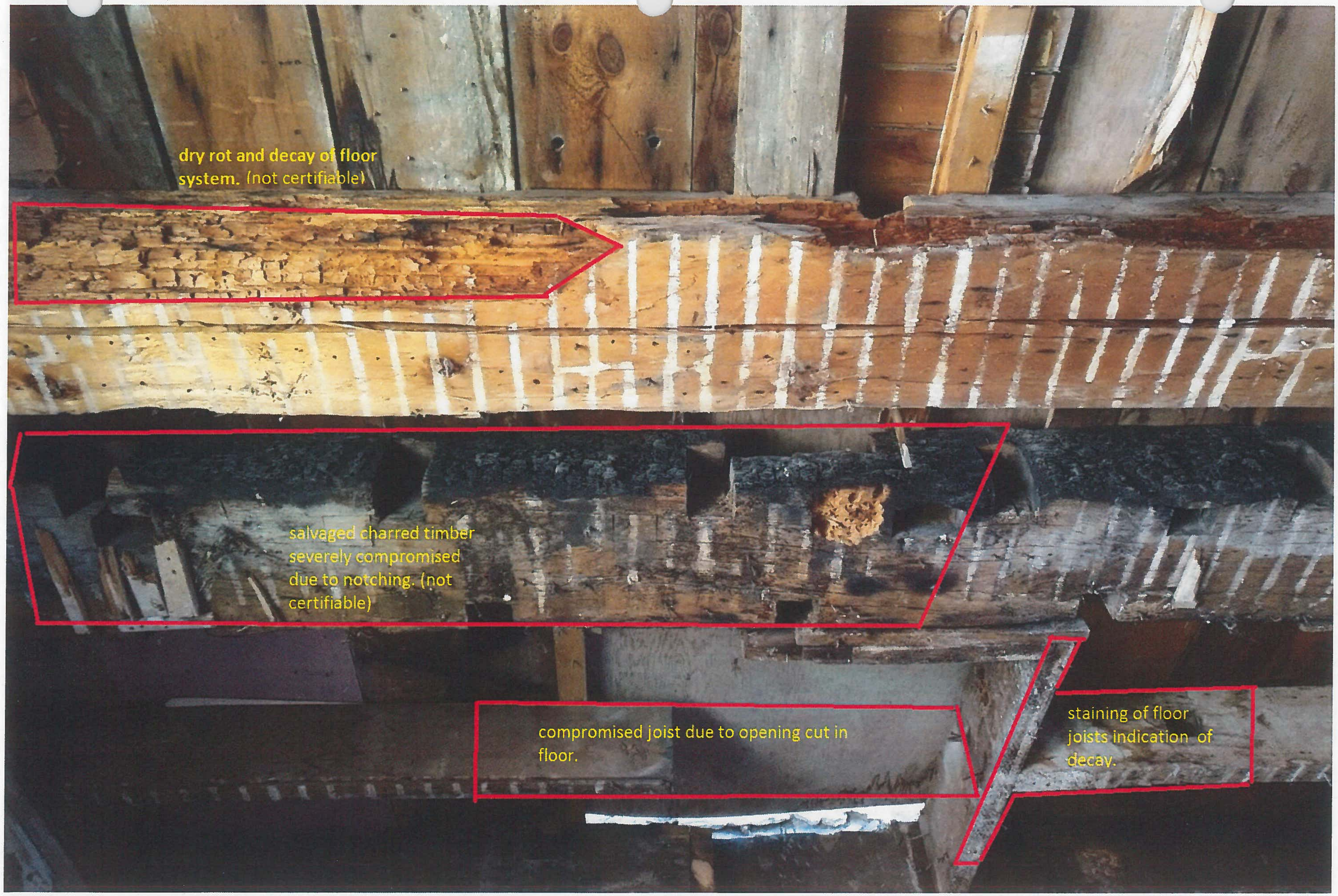

stress cracks on main floor exterior walls.
(penetration thru-out entire wall cavity)

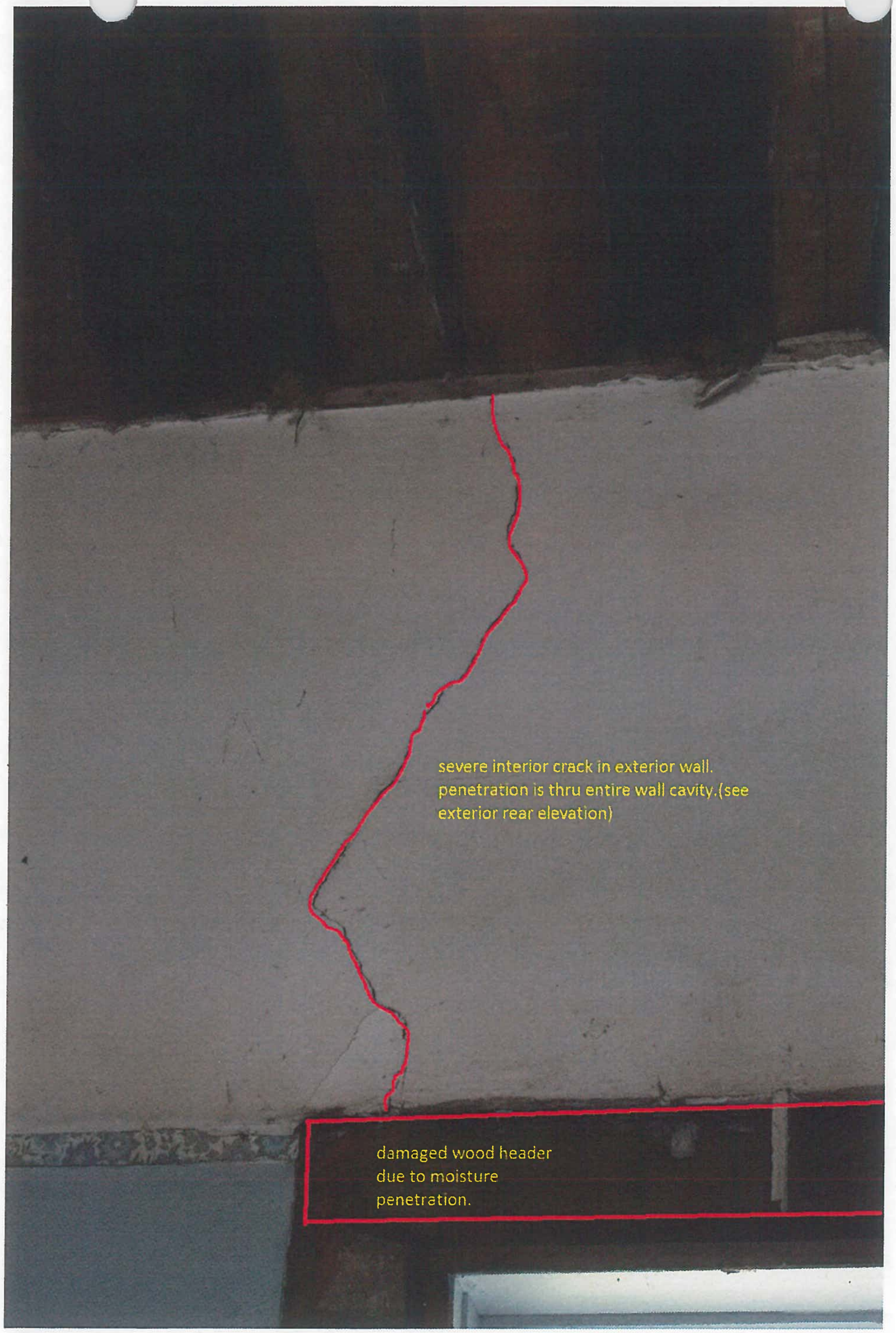

severely split and dry rot floor joists. (throughout many
locations of building)

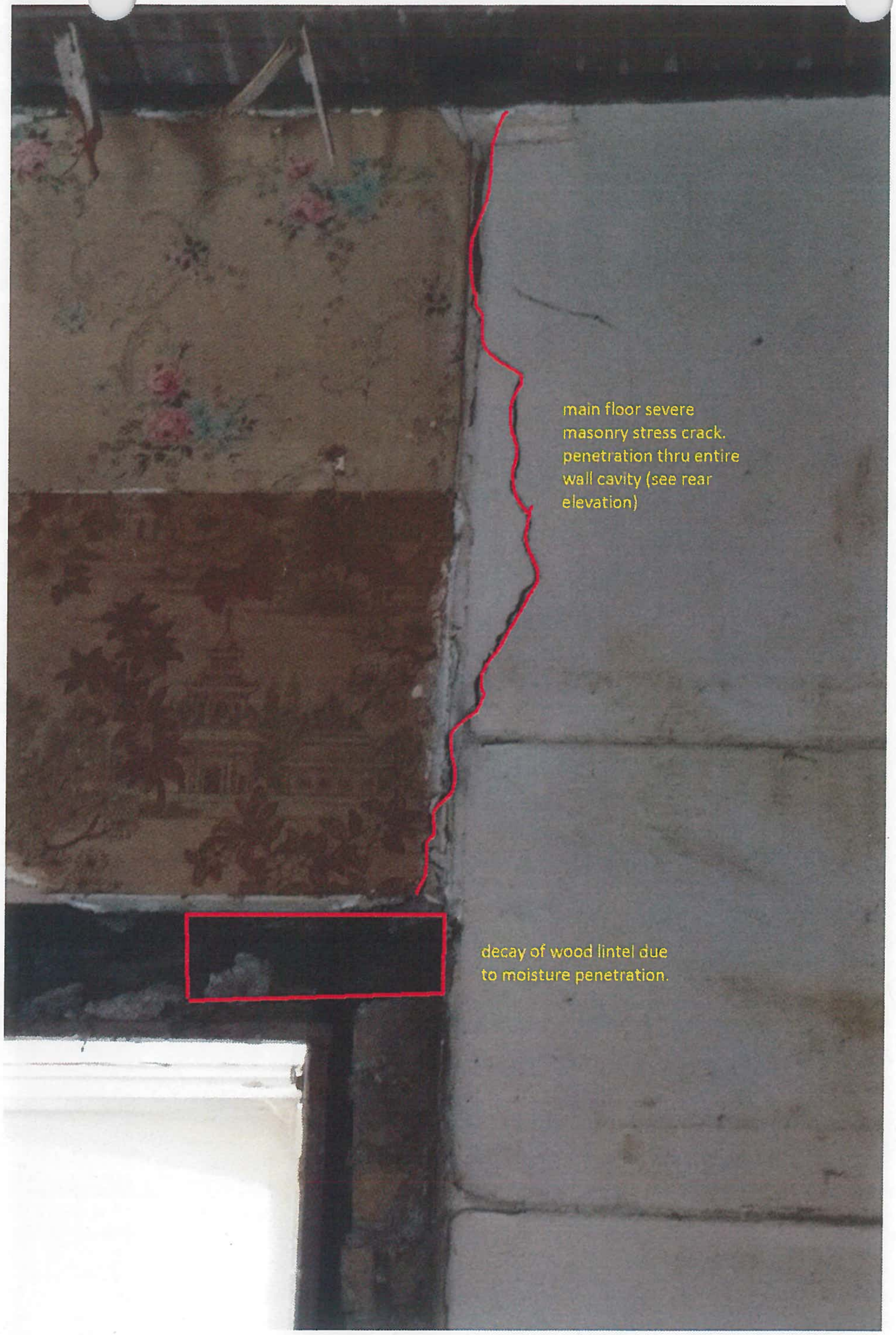

cantilevered floor system separating
and causing outward thrust on
exterior load bearing single wythe
walls.
configuration of load bearing wall
members not in proper orientation.
(load bearing strength is
compromised)


timbers above staircase floating.(original supports have been altered)
headroom height in stairwell 6'-0".(non compliant.) salvaged staircase not custom built for house.
interior view of rear vestibule. (not original)

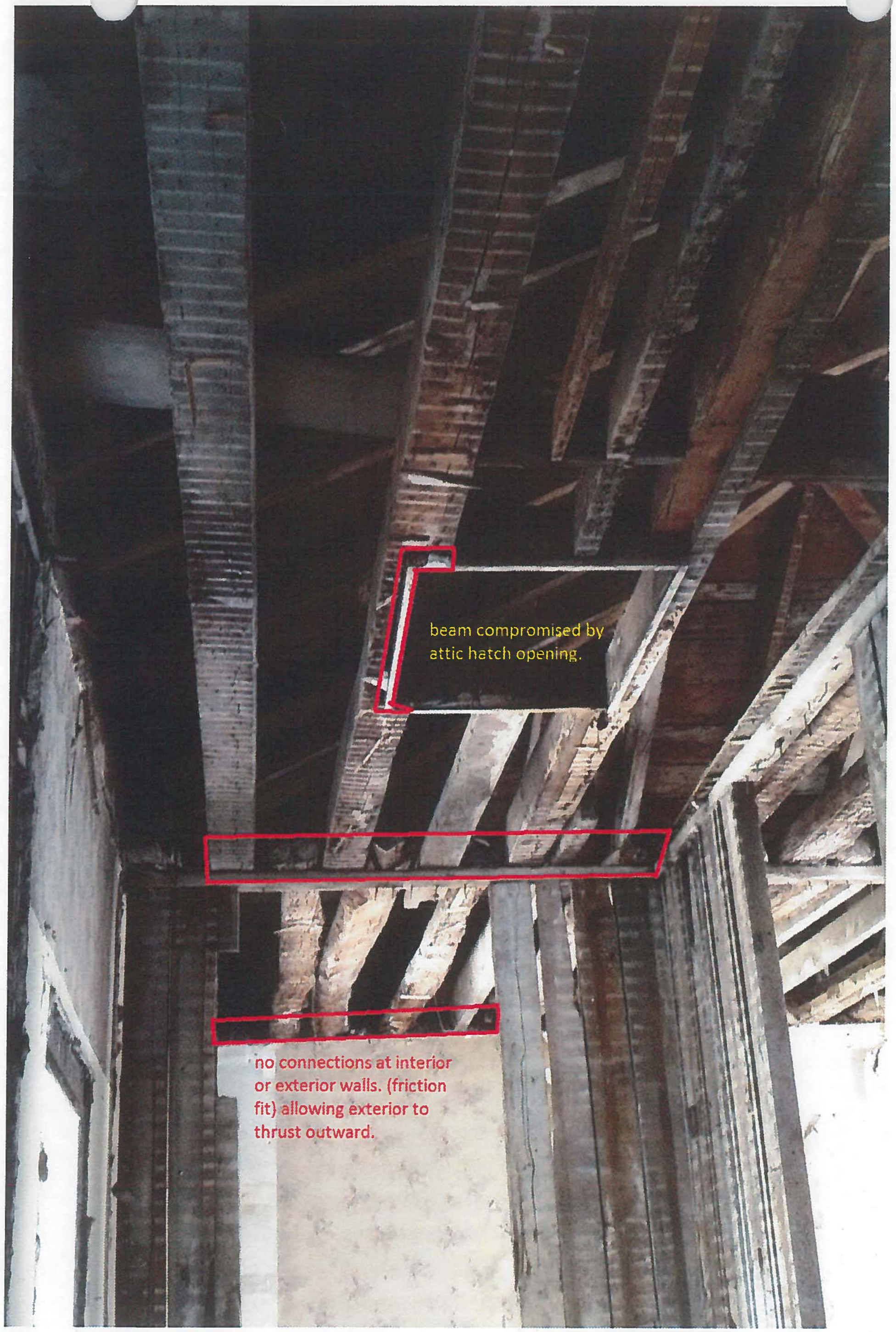

shifted and cracked exterior load bearing
masonry.{main floor, single wythe.} penatration
throughout entire wall cavity.
signs of moisture penatration.


dry rot and decay of floor system. (not certifiable)
salvaged charred timber severely compromised due to notching. (not certifiable)
compromised joist due to opening cut in floor.
staining of floor joists indication of decay.


severe interior crack in exterior wall.
penetration is thru entire wall cavity.(see
exterior rear elevation)
damaged wood header
due to moisture
penetration.



main floor severe
masonry stress crack.
penetration thru entire
wall cavity (see rear
elevation)
decay of wood lintel due
to moisture penetration.

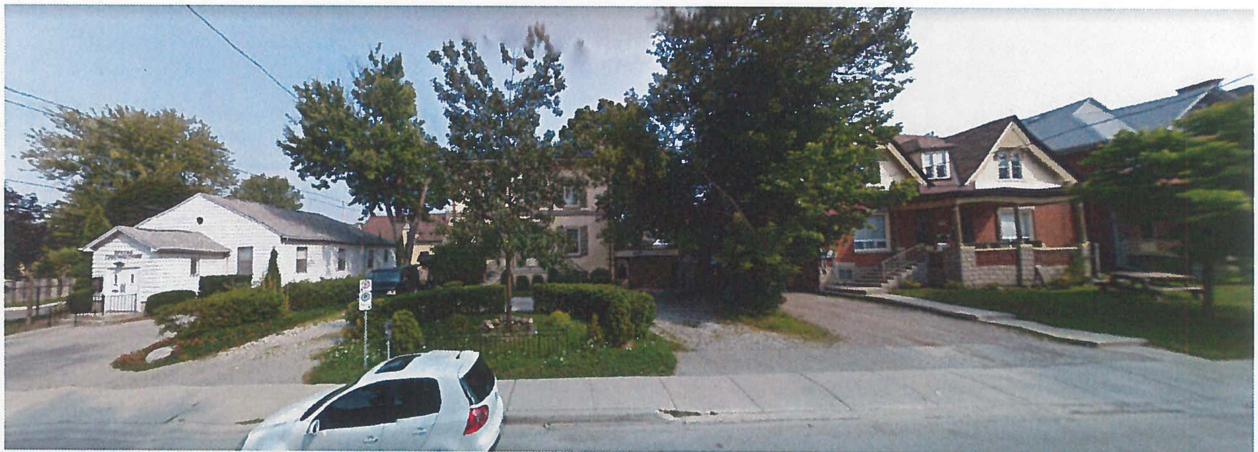

beam compromised by attic hatch opening.
no connections at interior or exterior walls. (friction fit) allowing exterior to thrust outward.

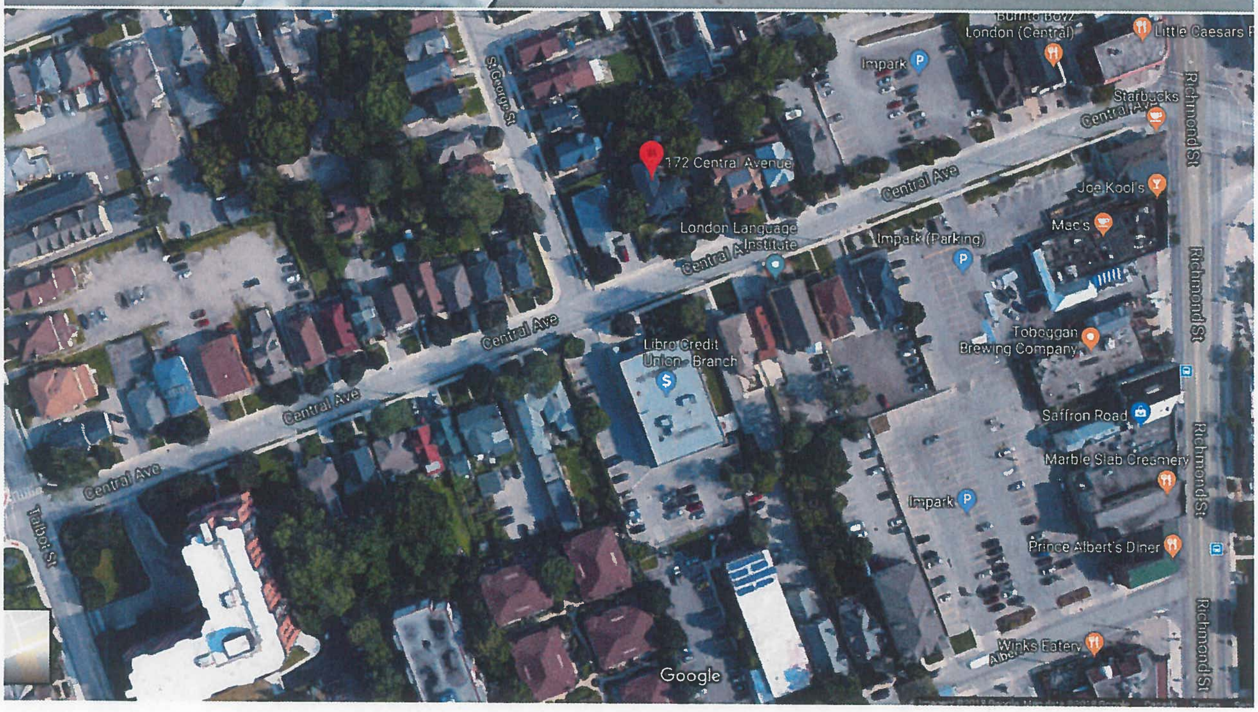
separation of second floor cantilevered
floor joists. (resulting in exterior
cracked masonry)


splitting of second floor joist. (typical)


dry rot and decay of
ceiling system (2nd floor)
portion of second floor
load bearing wall has
been removed. additional
load is being applied to
adjacent members.


"friction fit" ceiling joists randomly configured with no connection to interior or exterior walls. (2nd floor)
load bearing wall members orientated in wrong direction.(load bearing capacity reduced)





Burrito Boyz London (Central)
Little Caesars
Impark
Starbucks
Central Ave
172 Central Avenue
Joe Kool's
London Language Institute
Impark (Parking)
Mac's
Central Ave
Richmond St
Libro Credit Union - Branch
Toboggan Brewing Company
Saffron Road
Marble Slab Creamery
Central Ave
Talbot St
Impark
Prince Albert's Diner
Winks Eatery
Google


Libro
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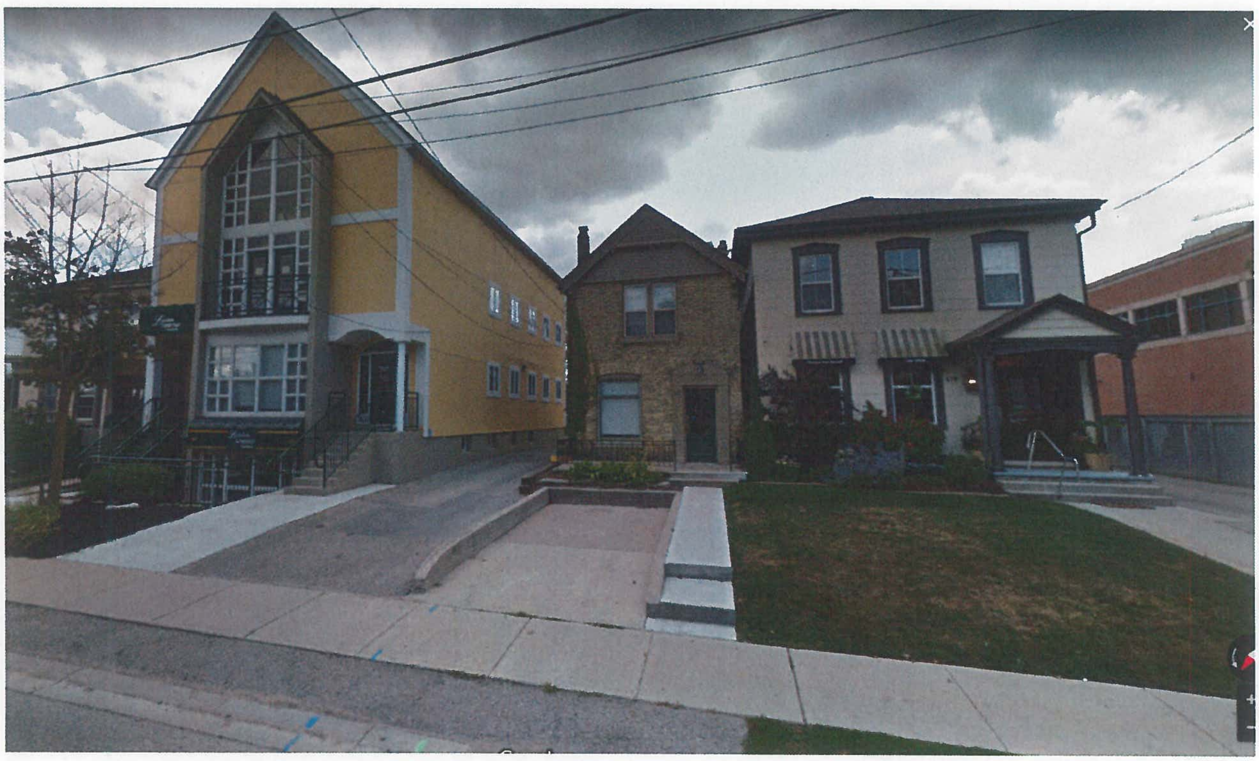

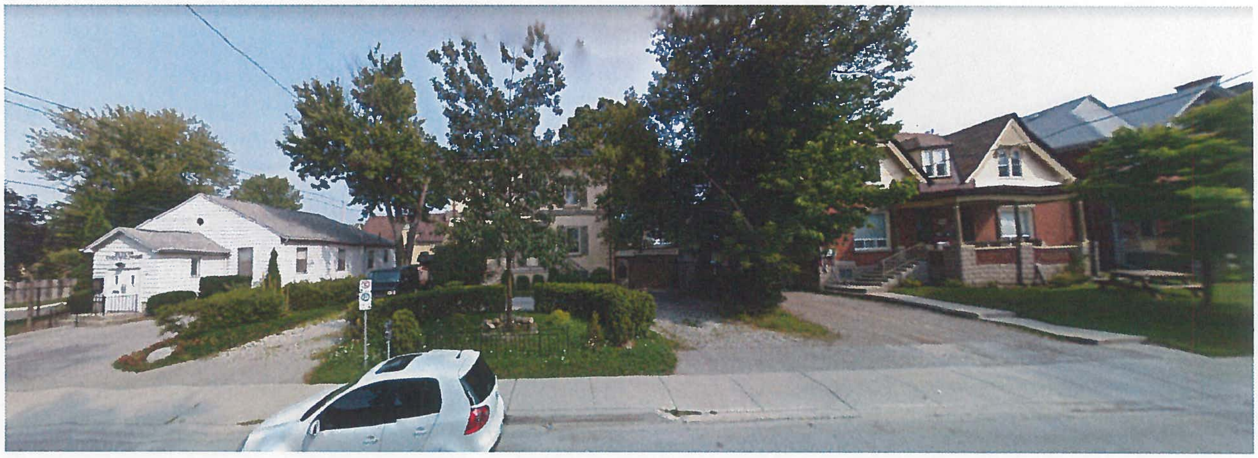


Google


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Shoes
Shoes
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ROUTE