

TOWN OF BRIMFIELD

COMMONWEALTH OF MASSACHUSETTS
INSPECTOR OF BUILDINGS
23 Main Street
Brimfield, Ma 01010

(413) 245-4100 x 5

(413) 245-4107 FAX

Email: building@brimfieldma.org

Selectboard of Brimfield
23 Main St.,
Brimfield, MA 01010

9-13-23

At the request of the Selectboard, I have reviewed all documents in the Building Department file pertaining to the Town of Brimfield Annex Building and its structural condition.

These documents include:

1. Structural Condition Review produced by Szewczak Associates dated 4-2-2012.
2. Structural Review produced by Johnson Structural Engineers; Inc dated 8-3-2016.
3. Structural Inspection review produced by Johnson Structural Engineers; Inc dated 5-18-2023.
4. Structural Scope of Work produced by Johnson Structural Engineers; Inc dated 6-2-2023.
5. Letter from Bob Corry produced by Peter Hamm dated 8-20-2023.
6. Letter from Harold Leaming, Code Consultant, dated 9-9-2023.

There are many structural concerns in documents #1, #2 and #3 and without getting into a complete detailed review of each item, I will make general statements below.

Much of the 1st floor structural issues stated in the documents #1 and #2 have been mitigated at this time. While some of the work may not be up to the standards of a Structural Engineer in their application, it is my opinion that the work is sufficient to support the main building of the 1st floor.

The second floor is given attention in documents #1, #2 and #3, with #1 stating "At one location, where second floor framing was exposed, significant distress was observed". The area does not seem to be identified in the report and if repairs were made, it was not documented. Outside of exterior viewing of floor sloping and not being level, no evidence is provided showing structural compromising in documents #2 or #3.

While the roof system is noticed as having structural issues in documents #2 and #3, nothing is noted in #1. I have inspected the roof structure in both the attic area of the main structure and the cathedral ceiling in the "storage" areas and did not observe any additional separation or structural failure, as originally noted in either document #2 or #3.

The wall located on the north side of the main building has been noted as being "out of plumb" by 4 or 5 inches in document #3. This was not noted in #1 and #2 does not give details outside of "there is a large bow in the front exterior wall" so a comparison cannot be made. I cannot see any evidence of resent movement in any of the structure.

Based on the review of documents #5 and #6, it is my opinion the structural work detailed in #4 is not required at this time for continued use of the structure.

I have personally inspected every door in the Annex and have found only 2 that seem to have issues with operation. I attribute that to summer air moisture issue, causing slight structure swelling.

I have not noticed any windows that appear to be under structural stress or damaged.

There have been no reports of creaking or other noise associated with structural compromising.

I have inspected all the walls in the structure and did not notice any recent movement cracks or damage.

I have discussed the building in detail with Paul Burke, Brimfield Building Maintenance Supervisor, and he states he has not noticed any structural movement in the 4 years he's been on the job.

Normally, the average snowfall per year in Massachusetts is 44 inches. Over the past 15 years, we've had much more than that:

2004-2005: 86.6 inches


2010-2011: 81.0 inches

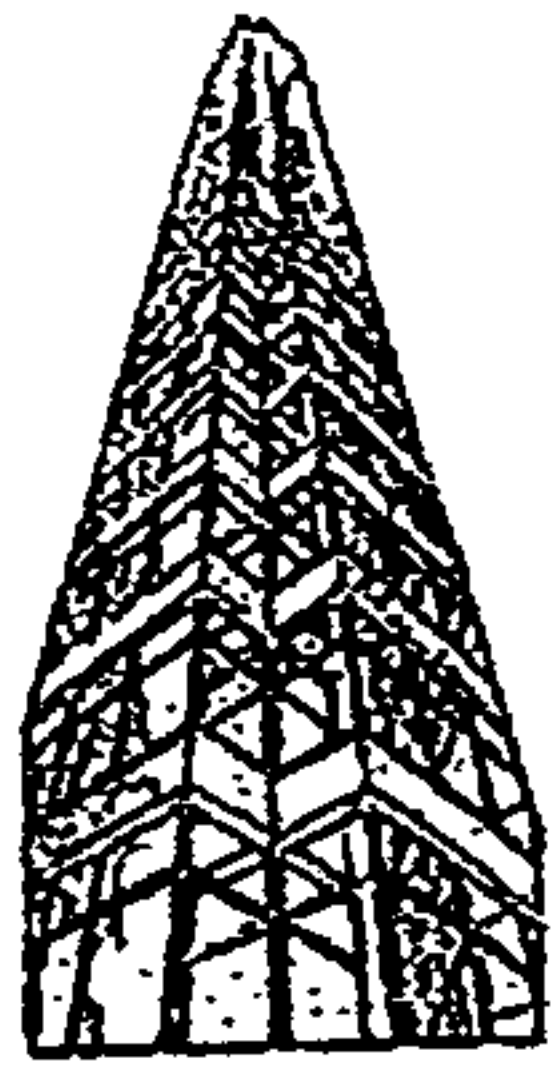
2014-2015: 110.6 inches

It is my opinion, if the structure was in peril of major structural issues or collapse, it would have happened already based on the past snow load.

That is not to say the building does not need upgrades, it does, but in my opinion, there is no immediate danger to the occupants and the use should be allowed to continue.

Bill Cantell


Building Commissioner/Town of Brimfield



/

SZEWCAK ASSOCIATES
CONSULTING ENGINEERS

Richard M. Szevczak, P.E.
Alan R. Chandler, P.E.
Peter G. Ceella, P.E.
Jason W. Kilty, P.E.

April 2, 2012

Town of Brimfield
23 Main Street
Brimfield, MA 01010

Attn: Ms. Carol DelNegro

Re: Structural Condition Survey
Town Hall Annex
Brimfield, Massachusetts

Dear Carol:

As requested, Szevczak Associates has completed a site visit to the existing Town Hall Annex Building located at 23 Main Street, in Brimfield, Massachusetts. The intent of our visit was to conduct a limited condition survey of the existing structural systems.

Based on our observations and subsequent analysis, we would like to offer the following comments:

1. The existing building consists of several connected segments. Closest to Main Street is a wood-framed, two story structure (also known as the Benjamin Salisbury House), constructed in 1819, with a full basement for the front portion running parallel to Main Street, and with a crawl space for the wing perpendicular to the front of the building. There is a one story, wood-framed addition on the parking lot side of the building with a steel and concrete framed handicapped ramp. A one story, wood framed structure connects the main building with a barn to the rear of the site.
2. There is significant evidence of distress in the First and Second Floor Framing in the original, 1819 building. The floors are out of level, and the stairway is sloped and distorted. In addition, some bulging of the central bearing wall in parallel to the stairs indicates distress in the stud framing. Although the stone foundation walls and sill and in good condition, significant dry-rot has taken place throughout the floor framing above the basement and the crawl space. At some point in the past, temporary shoring jacks were installed in an attempt to support the floors settling due the observed deterioration, but this attempt at remedial action has been ineffective. In addition, significant deterioration was observed in the timber girders supporting the bearing walls above, and no temporary or permanent shoring has been installed at these locations.
3. At one location, where the Second Floor Framing was exposed, significant distress was observed in the wood floor joist to girder connections due to the First Floor settlements, and at several locations, the floor decking has separated from the joists. In other areas, it should be noted that due to the presence of the existing plaster ceilings and walls, it was not possible to make direct visual observation of these members.

4. The sloped roof framing was in good condition with no observable evidence of distress or deterioration.
5. The one story addition on the parking lot side of the building was in good condition with no observable evidence of distress or deterioration.
6. The one story connector between the main building and the barn is in very poor condition. It appears that the foundations do not extend to the minimum frost depth of four (4'-0") feet below grade, and significant rot has occurred in the sill plate at the top of the foundation wall. In addition, the wall siding is in poor condition with evident cracking and joint separation.
7. The pole barn structure at the rear of the building is in very poor condition. The loose laid stone foundation has suffered significant deterioration and is crumbling away. The wood sills at the top of the foundation walls have also experienced significant rot due to water exposure, as has the First Floor Framing.

Our recommendations for the continued use and repair of the existing building are as follows:

- a. The barn has very limited structural integrity, and no occupied use of this building should be permitted. It is our recommendation that the barn be demolished as soon as possible.
- b. Given the condition of the foundations for the one story connector between the barn and the main building, it is our recommendation that this structure also be demolished. Continued use as storage is permissible in the interim, if the condition of the structure is regularly monitored.
- c. Repairs to the main building would be quite extensive, most likely requiring the evacuation and gutting of the entire space. In order to complete these repairs, the Roof and Second Floor Framing would need to be shored while the First Floor Framing is completely removed and reconstructed. The finishes would need to be removed from the central bearing wall parallel to the stairs in order to complete any repairs to the damage studs. In addition, the ceiling would need to be removed from the underside of the Second Floor in order to expose the framing, so that any additional repairs of deteriorated members or reinforcing of connections can be completed. Note also that jacking the floors back to level will most likely result in secondary damage to the finishes, doors, and windows, requiring repair or reconstruction of these items. It is our professional opinion that the probably construction cost to structurally repair the main building will be approximately Seven Hundred and Fifty Thousand (\$750,000) Dollars.

If you have any questions, or would like any additional information, please contact us at your earliest convenience.

Very truly yours,

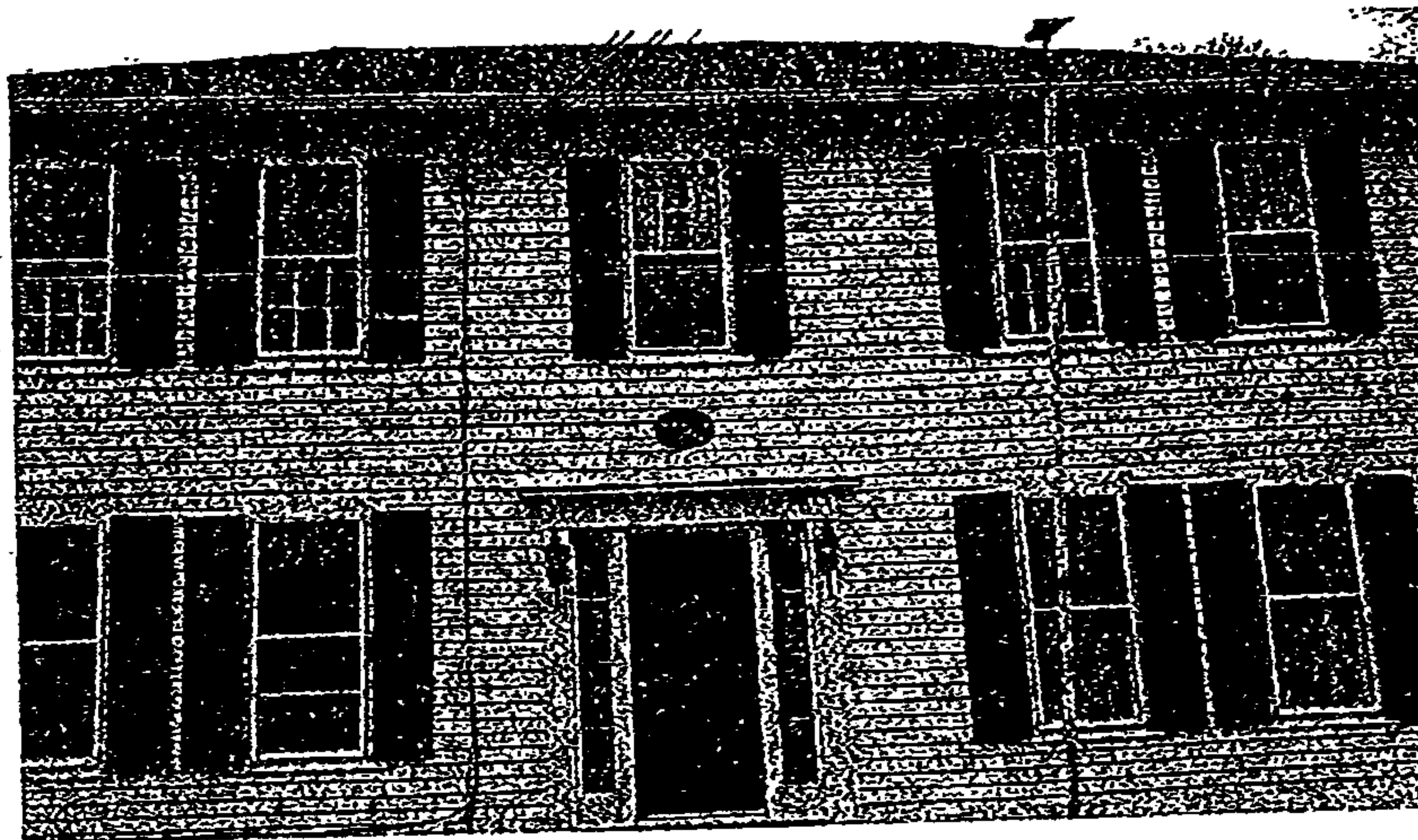
**SZEWCZAK ASSOCIATES
CONSULTING ENGINEERS**



Peter G. Celella, P.E.
PGC:dhs

with Enclosures; Appendix A

Appendix "A"



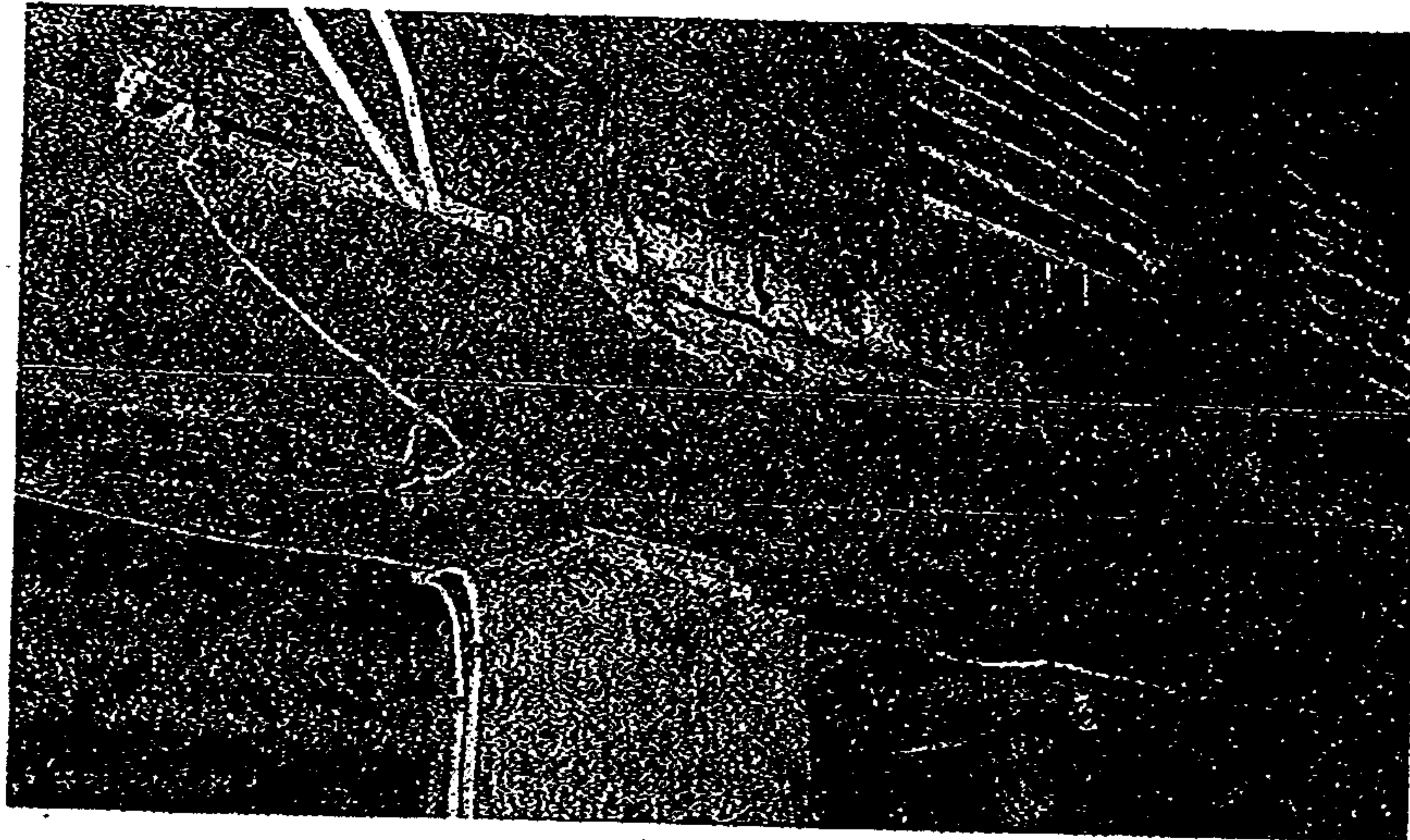
North Elevation - Main Building



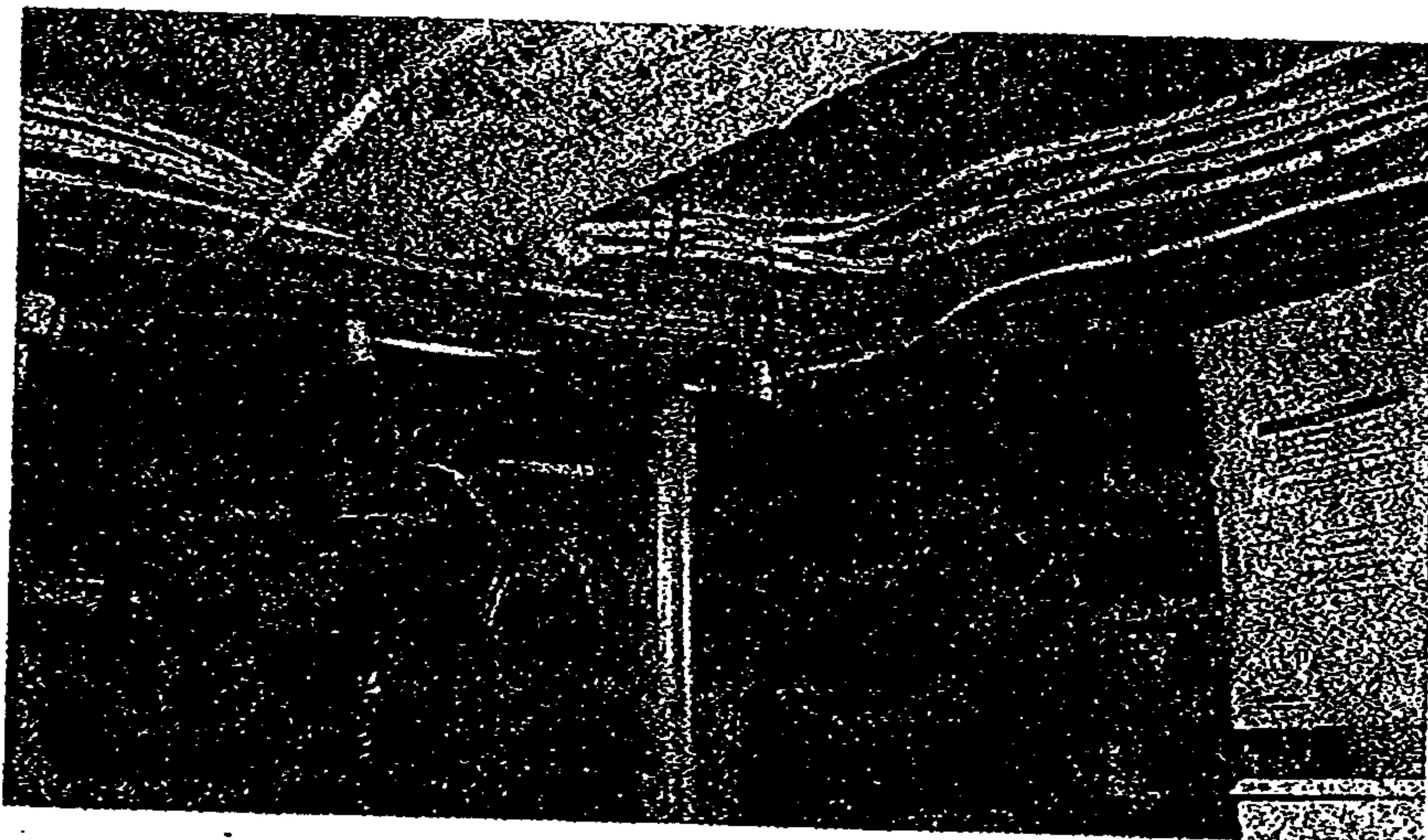
West Elevation - Main Building



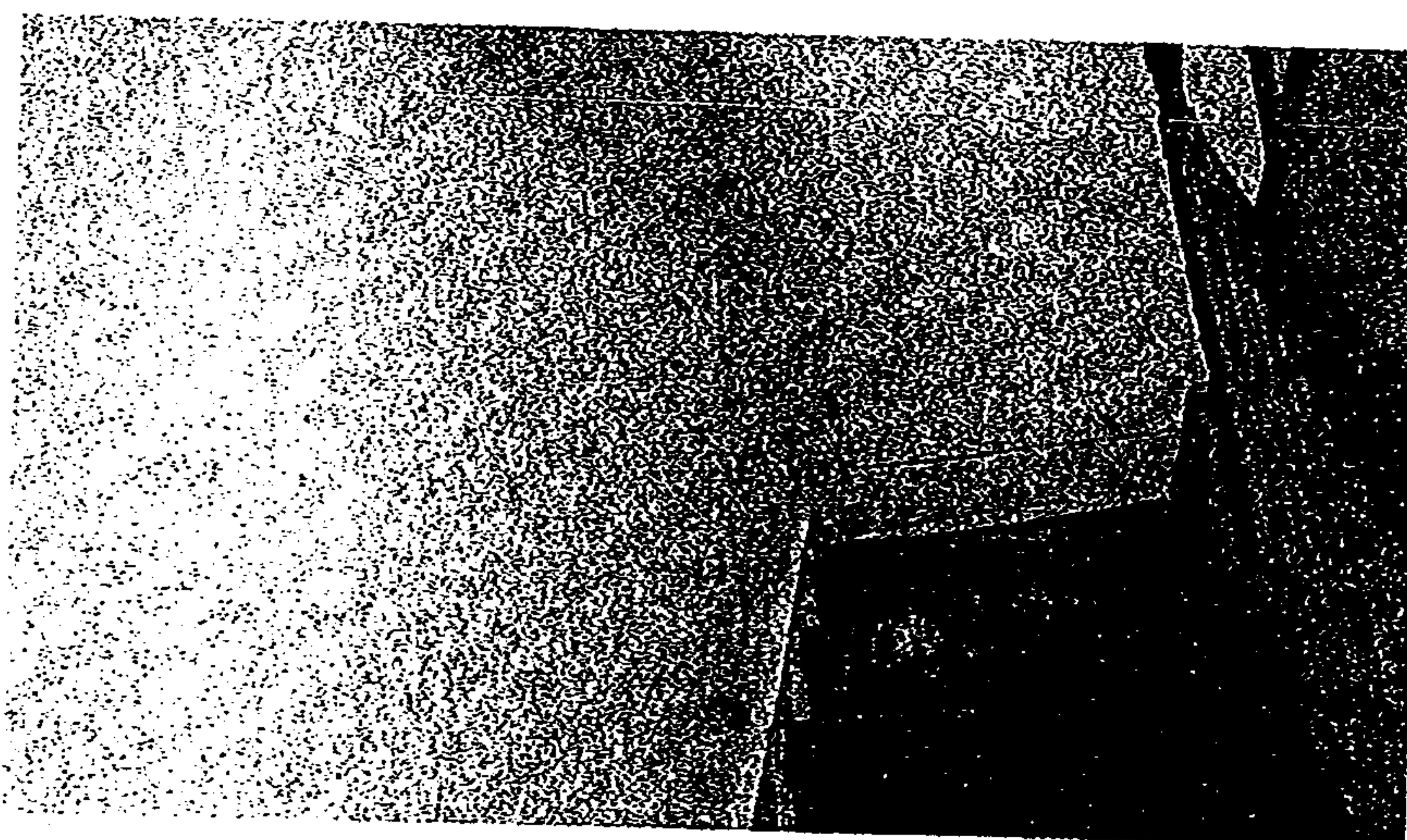
East Façade - Main Building



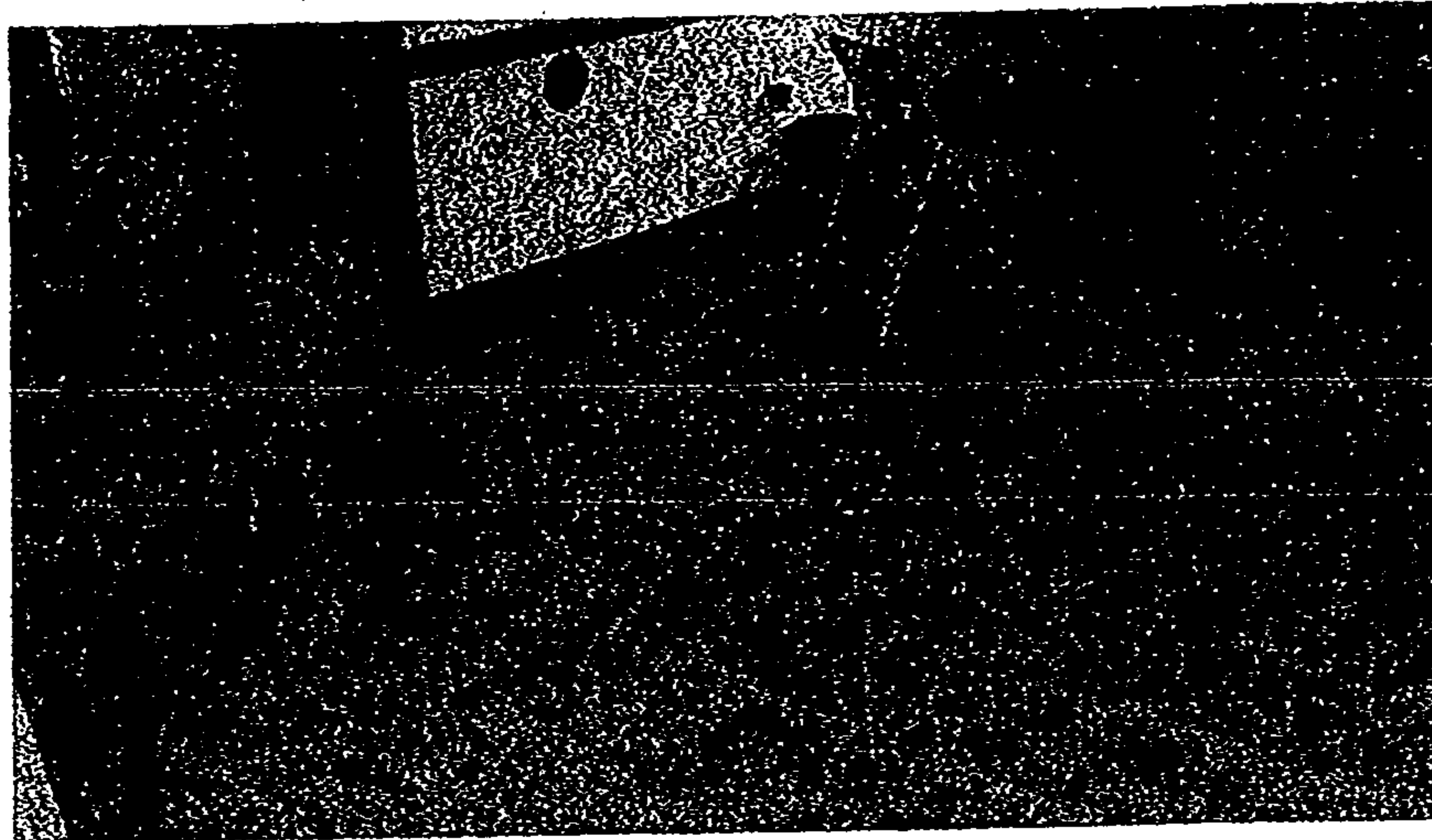
Dry Rot in Floor Girder



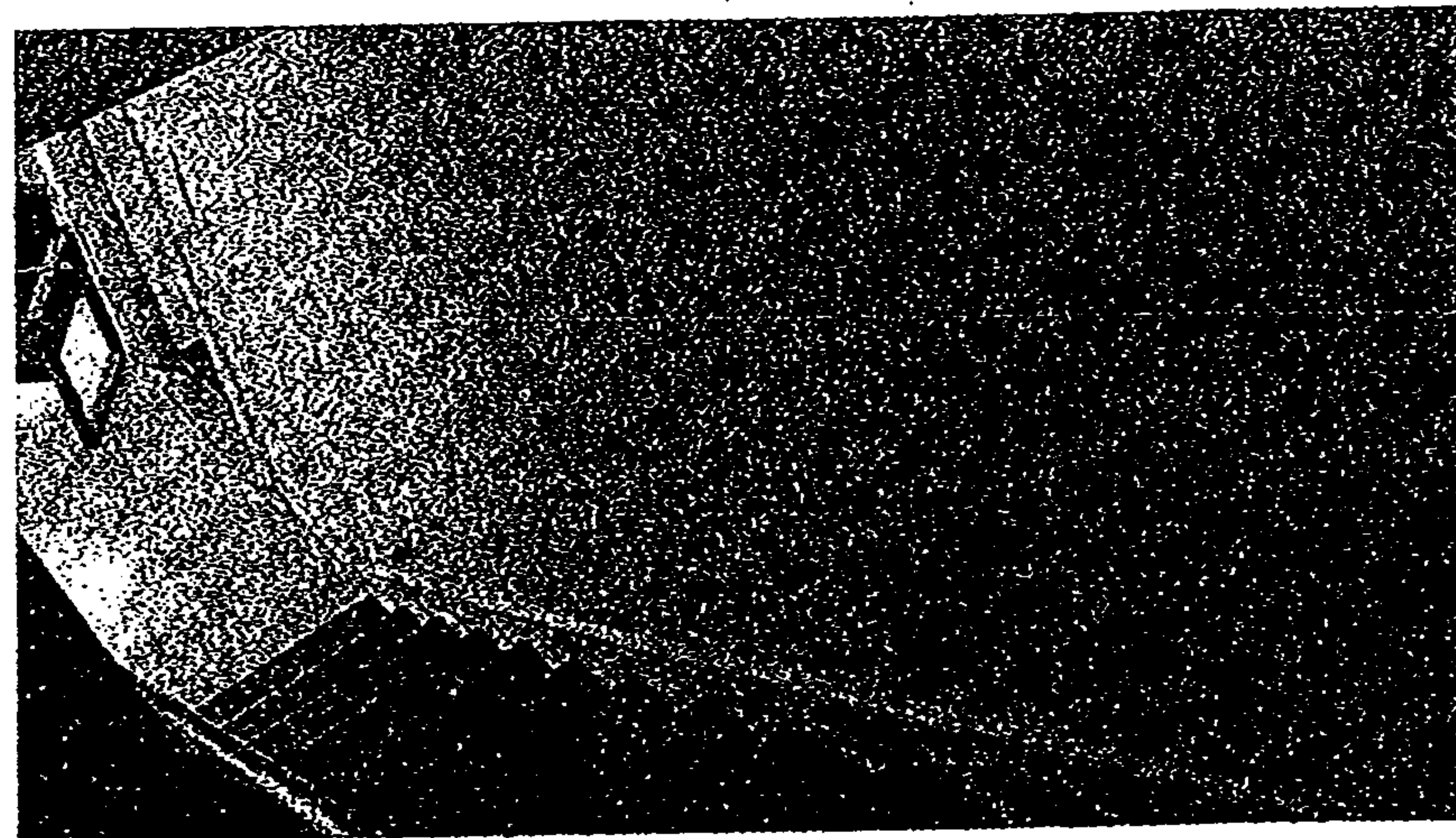
Dry Rot in Joists and Shoring Jacks



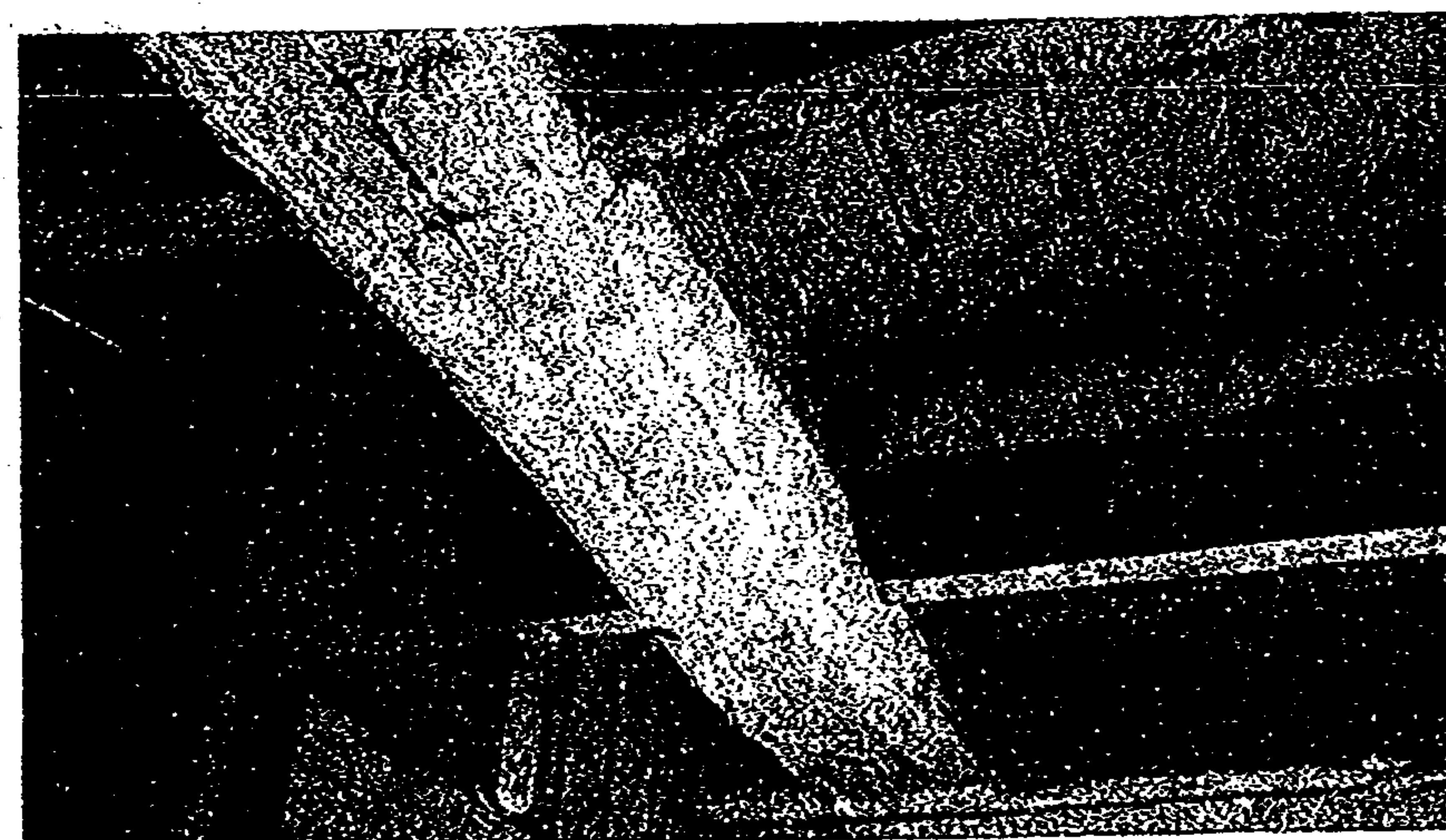
Distressed Stair Framing



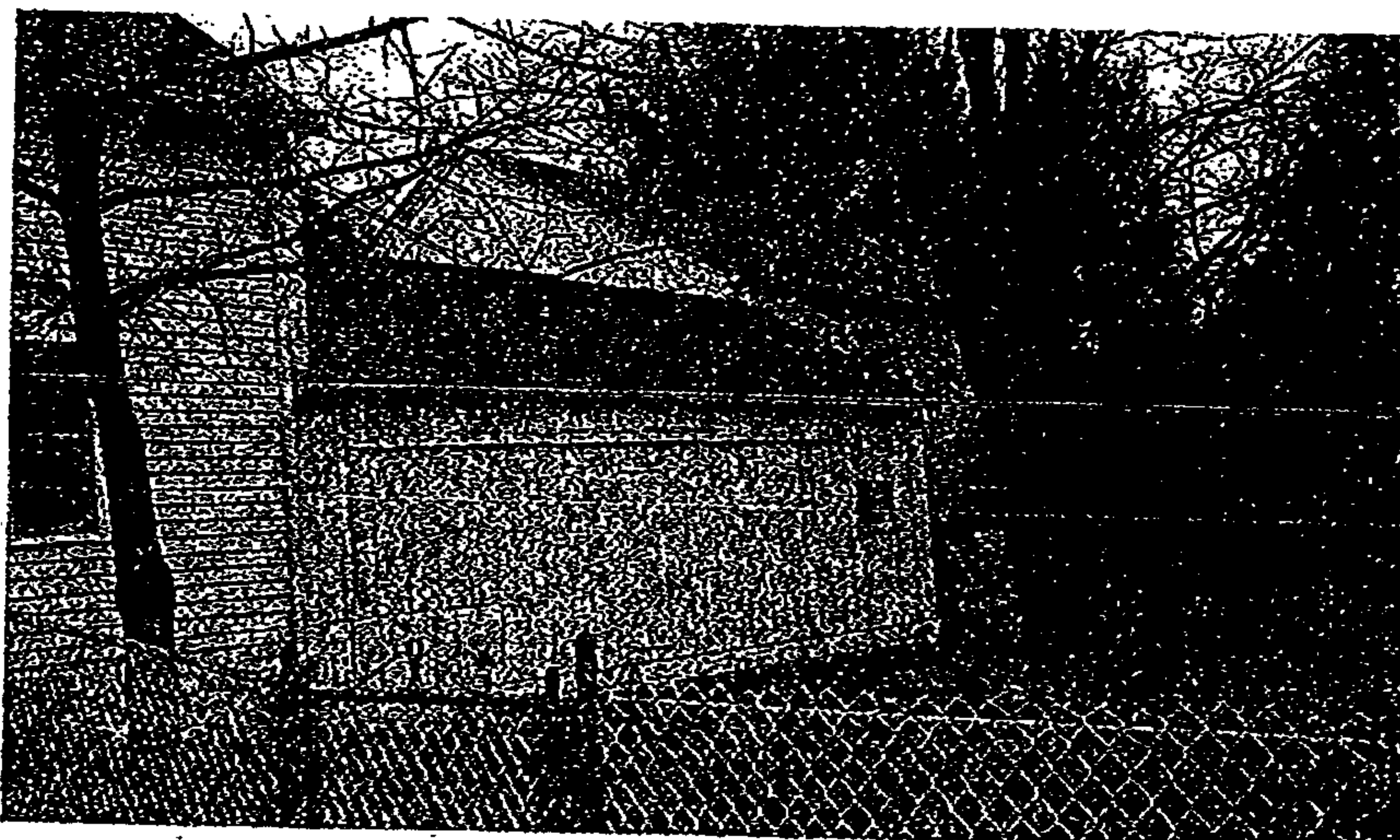
Typical Distress Second Floor Framing



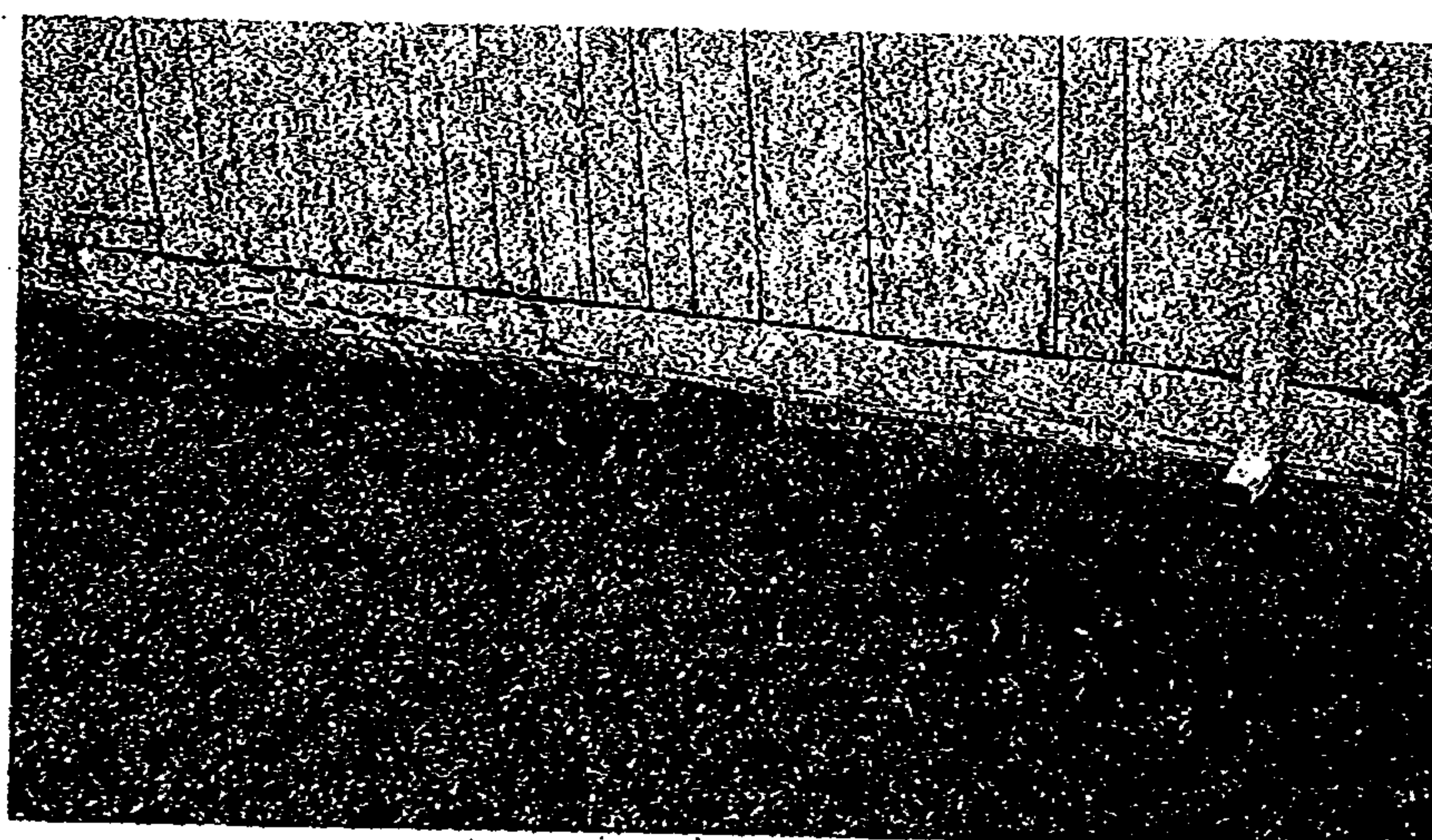
Distress in Central Bearing Wall



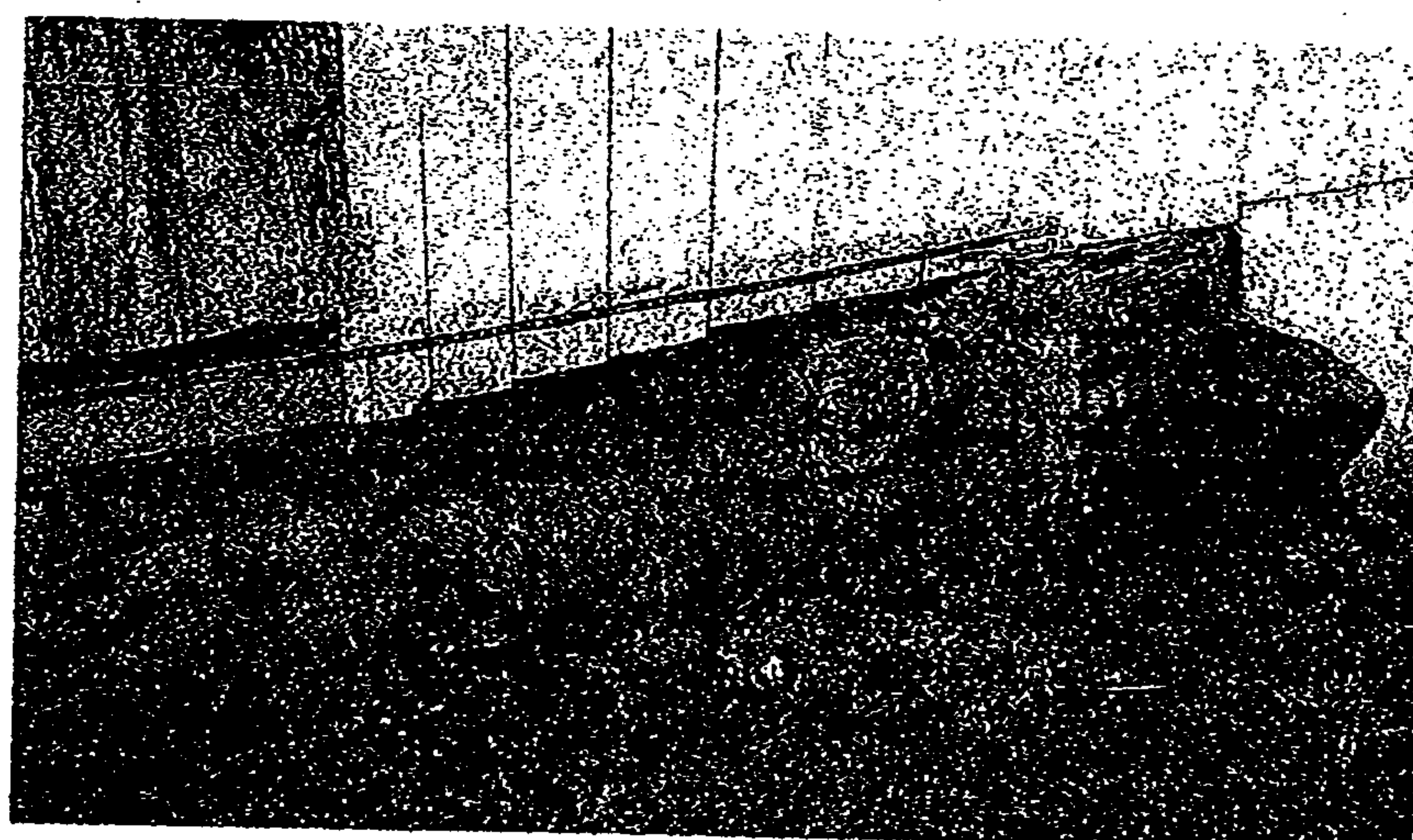
2nd Floor Connection Distress



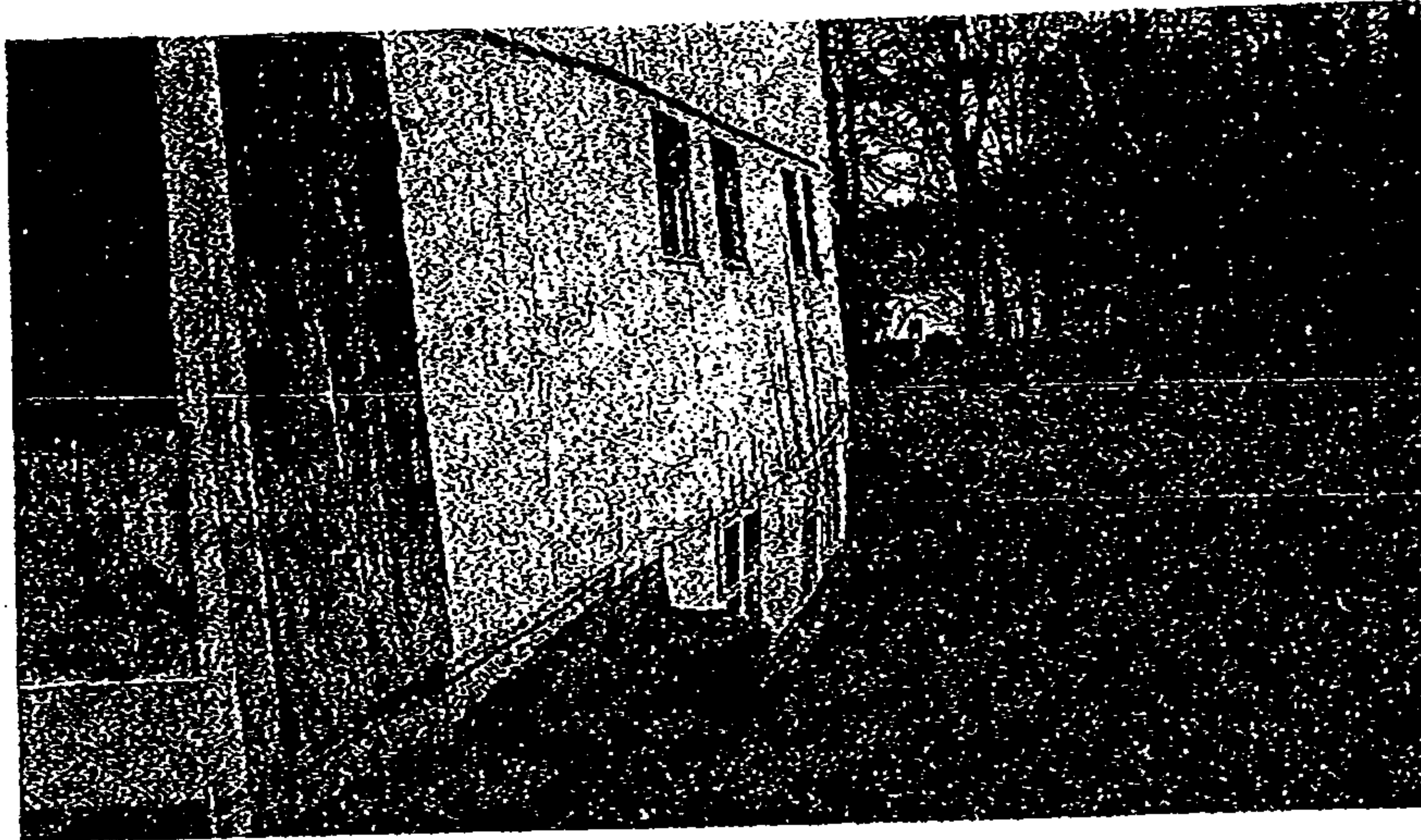
Connector Façade



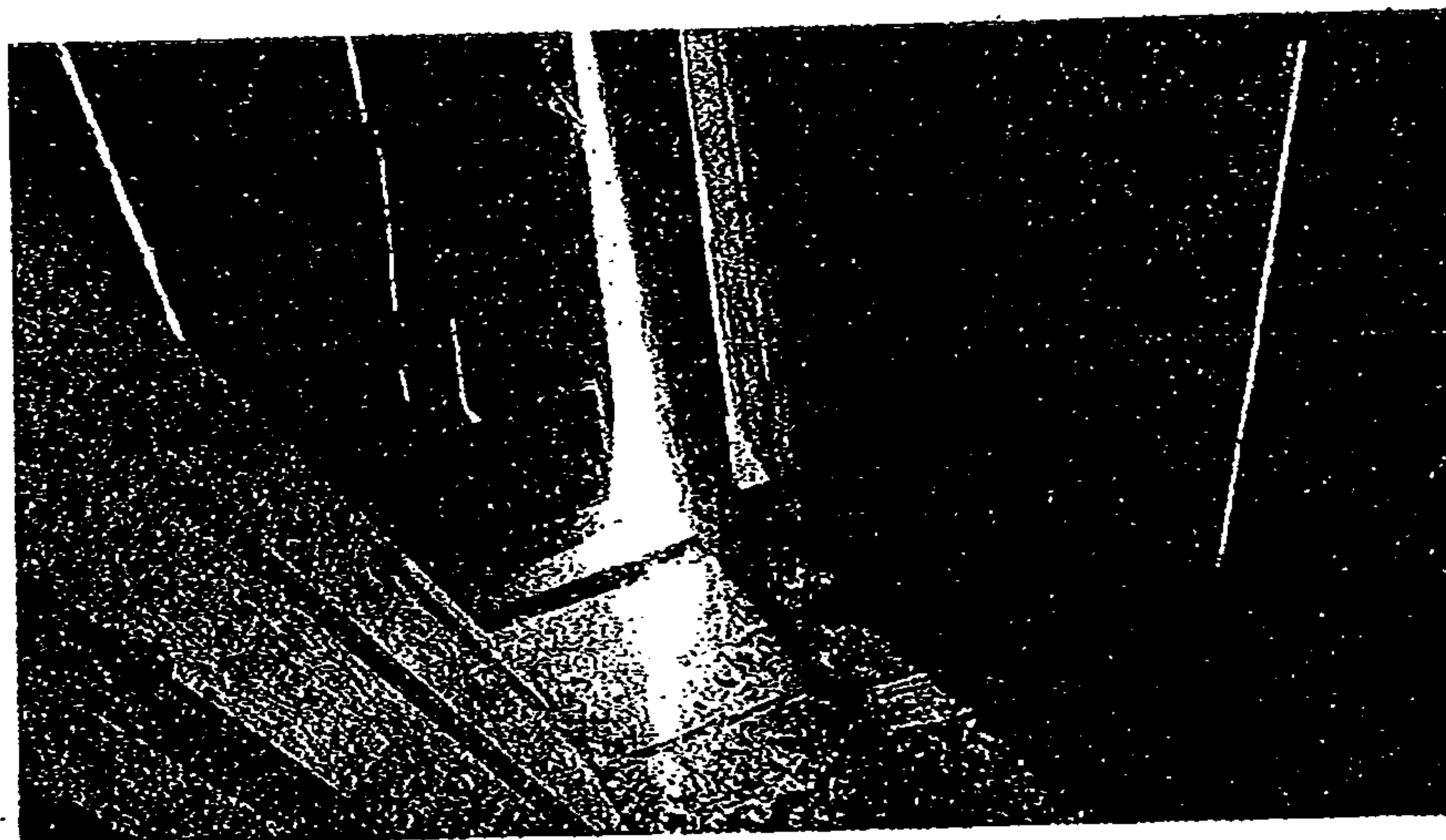
Deteriorated Connector Foundations and Sill



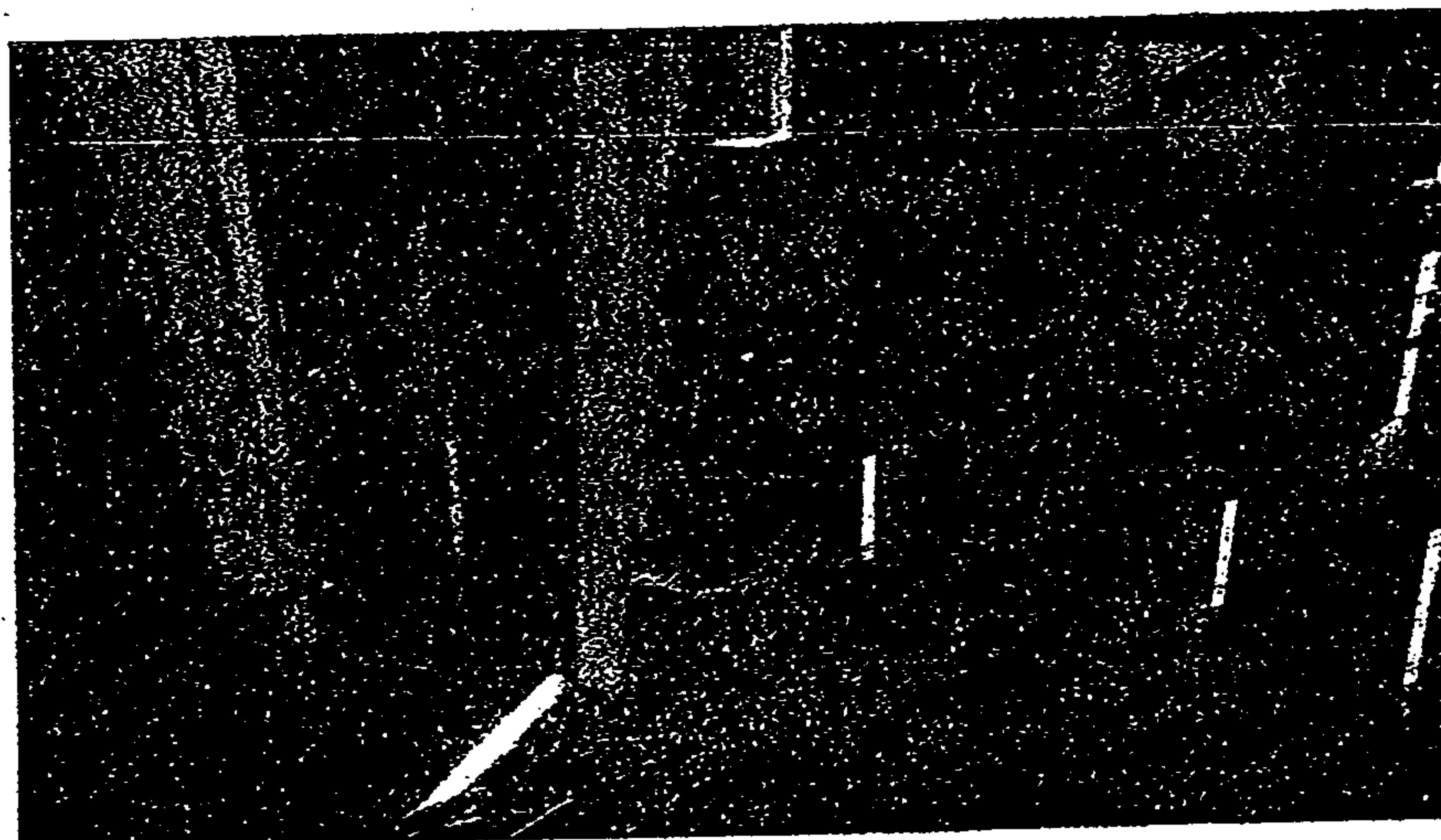
Crumbling Barn Foundation



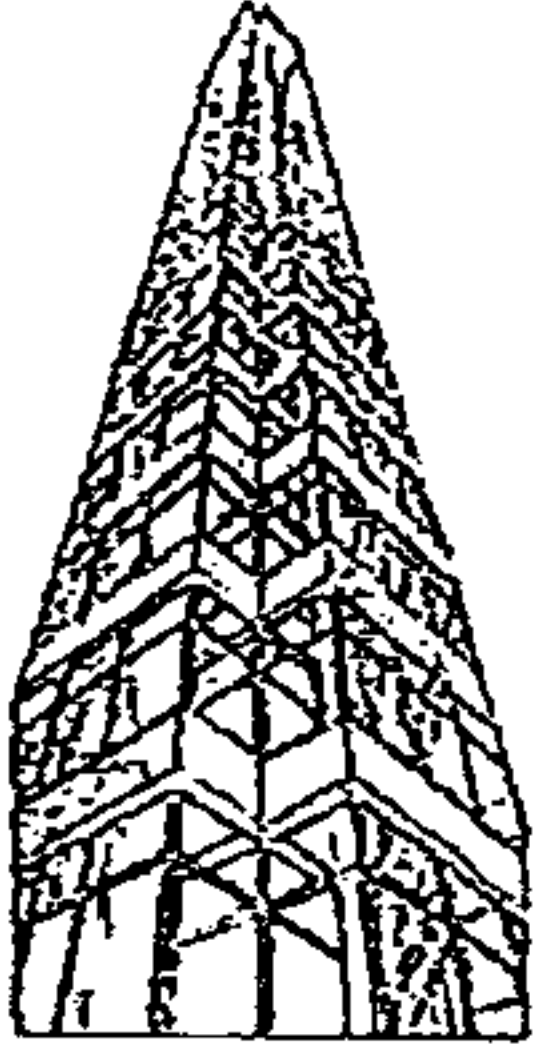
Barn Wall Deformation



Deteriorated barn Sills



Deteriorated Barn Sills and Sheathing



SZEWCAK ASSOCIATES
CONSULTING ENGINEERS

RECEIVED MAY 03 2012
10:22 AM
CMD

dmf

Richard M. Szevczak, P.E.
Alan R. Chandler, P.E.
Peter G. Celella, P.E.
Jason W. Kilty, P.E.

April 30, 2012

Town of Brimfield
23 Main Street
Brimfield, MA 01010

Attn: Ms. Carol DelNegro

Re: Structural Condition Survey
Existing Town Hall
Brimfield, Massachusetts

Dear Carol:

As requested, Szevczak Associates has completed a limited condition survey of the structural systems for the Existing Town Hall Building located at 23 Main Street in Brimfield, Massachusetts. Our survey has been based on observations of the accessible portions of the building that were visible during a site visit conducted by our office on April 27, 2012. Based upon our review and subsequent analysis, we would like to offer the following comments:

1. The existing building, which was constructed in the later portion of the 19th Century, is a two story structure with a full basement and a walk-up attic. The main meeting hall room is a two story high space over the majority of the footprint, with interstitial floor space area off to one side. The main structure of the building consists of post-and-beam timber framing with wood roof trusses spanning the width of the building.
2. The existing exterior foundation walls consist of solid brick masonry for the upper portion bearing on rough laid stone for the lower portion. The existing basement floor consists of a cast-in-place concrete slab on grade. The basement is connected to the first floor by an interior stairway and a 500 pound capacity personal lift, while the second floor is connected to the first floor by an interior stairway, and a steel-framed, exterior fire escape.

2

JSE JOHNSON STRUCTURAL ENGINEERING, INC.

101 Huntoon Memorial Highway (Rt. 56), Rochdale, MA 01542 (508) 892-4884 Fax (508) 892-0477

August 3, 2016

Jones Whitsett Architects
308 Main Street
Greenfield, MA 01301
Attn: Kristian Whitsett

Re: Structural Review
Town Hall Annex
Brimfield, MA

Dear Mr. Whitsett:

Travis Alexander of Johnson Structural Engineering performed a site visit on July 18, 2016 at the Town Hall Annex located at 23 Main Street in Brimfield, Massachusetts. The purpose of the site visit was to review the existing building structure, and to comment the building's condition. The following report summarizes what was observed during the site visit.

The original building is approximately 21'-0" by 40'-0", and is a two-story structure with a full basement. It appears that multiple additions were constructed. The first addition is approximately 29'-0" by 32'-0", and is a two-story structure with a crawl space below. The second addition is approximately 16'-0" by 32'-0", and is a two-story structure with a crawl space below. In the rear of the building, there is a one-story connector between the building and the barn structure. Attached is a markup indicating the original building and the various additions. The markups are marked on the existing floor plans that were originally prepared by Drummey Rosane Anderson, Inc. and dated April 17, 2013.

The following list summarizes the issues that were discovered during the site visit. Please reference the attached markups for the locations of the rooms referenced in the list.

1. The roof for the original building is a wood framed hip roof structure. The roof rafters are 4" by 4" members that are spaced at approximately 2'-6" on center. The roof rafter and hip beam connections to the ridge beam are mortise and tenon joints (see photograph #1). The hip beams have large cracks at the tenon ends. At each end of the roof, the wood planking is severely cracked around the existing roof vent openings (see photograph #2).
2. The wood framed roof above the "Storage #2" room is comprised of 2-3/4" by 8" (assumed) rafters spaced at approximately 2'-1 1/2" on center. The rafters span from a 6" deep wood beam along the exterior walls to a single ridge member. The ridge member appears to be scabbed together with multiples wood pieces (see photographs #3 through #5). The 6" deep wood beam along the exterior walls has rotated (see photograph #6). The exterior walls in the "Storage #2" room are approximately 2" out of plumb (see photograph #6.1). The beam rotation and the

- wall being out of plumb is most likely due to the outward thrust of the roof rafters due to the lack of a true ridge beam.
3. It is unknown whether the ceiling framing in the "Kitchen" room is a decorative finish or whether it is the framing for the attic above. Access to the attic space was not accessible. The framing is comprised of 2" by 7" wood joists spaced at 2'-0" on center that are supported by 8" wide by 7" deep wood beams. There is a noticeable downward slope in the framing to the center beam line. The joist to beam connections are mortise and tenon joints, and are pulling apart (see photograph #7). The mortise and tenon beam to beam connections are also pulling apart (see photograph #8). Some of the joists are irregular along their top surface and provide minimal support for the planking (see photograph #9).
 4. The second floor in the "Storage #1" room is severely sloped (see photograph #10, which shows the varying gap width between two adjacent filing cabinets due to the floor slope). There is a high point in the second floor along the two exterior walls and along an assumed center beam. The low points are at the approximate middle of the "Storage #1" room and next to the wall between the "Storage #1" room and the "Toilet & Shower #2" room. The second floor structure was not accessible due to a hard ceiling. However, the exposed timber columns in "Storage #1" have large vertical cracks (see photograph #10.1 and #10.2).
 5. The second floor in the "Treasurer" office is severely sloped (see photograph #11, which shows the varying gap between the bottom of the desk and the flooring). The floor slopes downward from the exterior wall to the interior corridor wall. The second floor structure was not accessible due to a hard ceiling.
 6. The second floor in the "Conservation" office is severely sloped. The floor slopes downward from the exterior wall to the interior corridor wall, and also slopes downward from the masonry fireplace hearth to the interior of the room (see photograph #12). It appears that the masonry hearth has cracked due to the floor slope (see photograph #13).
 7. The main stairs between the first and second floors have a noticeable pitch towards the hallway wall.
 8. There is a sign posted on the door limiting the number of people in the "Meeting Room" (see photograph #14). The perimeter first floor beam below the exterior door in the "Meeting Room" is rotted (see photograph #14.1).
 9. The first floor corridor is severely sloped downward at the front door (see photograph #15).
 10. The first floor corridor in front of the Assessor's Office is sloped (see photograph #16). When accessed through an opening to the crawl space in the basement, the existing floor framing in this area is comprised of 1-1/2" by 6" joists spaced at approximately 1'-8" on center. A structural analysis was performed, which indicates the floor joists have minimal live load capacity (approximately 30 pounds per square foot).
 11. The first floor in the "Board of Health" room slopes downward from exterior wall to the interior corridor wall (see photograph #17, which shows the varying gap width between two adjacent filing cabinets due to the floor slope). The first floor framing below at this location was not accessible at the time of the site visit.

12. The roof structure at the "Storage" room is comprised of 3" by 3-3/4" rafters spaced at 2'-0" on center. The rafters span from a single ridge member to an 8" by 8" perimeter wood beam along the exterior wall facing the library and a four-ply 2x8 wood beam along the exterior wall facing the parking lot. No collar ties were observed. The ceiling joists are comprised of 2x8 members spaced at 2'-0" on center that span approximately 15'-8" between the beams. A structural analysis was performed, which indicates that the existing roof rafters do not comply with the current design snow load including drifted snow.
13. The barn is in severe disrepair and should not be accessed.
14. The first floor framing for the original building is comprised of round logs of various sizes that are supported by 7-1/2" wide by 6-3/4" deep wood beams. The first floor framing is severely cracked (see photograph #18). Based on how the upper floors sloped in the original building, it is likely that the first floor corridor walls, which align with the two main first floor beams lines, are bearing walls for the second floor framing. A structural analysis was not performed on the round logs due to their irregular shape (the top of the logs were plained flat to support the floor planking).
15. Temporary screw type shoring jacks were previously installed throughout to support the first floor framing (see photograph #18.1). Some of the shoring jacks were installed along the length of various joists and beams, and some were installed below beam connections. The shoring jacks bear on cinder blocks and stones (see photograph #19). Note that temporary screw type shoring jacks are not meant to be used as permanent supports.
16. Wood shims were previously installed between an existing wood beam to wood column connection (see photograph #20). The wood column is partially sitting on a concrete slab and a portion of the column is unsupported (see photograph #21). The concrete slab has cracked around where the post bears on the slab.
17. Portions of the field stone foundation below the "Storage" room is missing (see photograph #22).
18. The chimney is deteriorating (see photograph #23).
19. There is a large bow in the front exterior wall adjacent to the front door (see photograph #24 and #25).

Substantial structural repairs and reinforcing will be required to address the issues noted above. Due to the extent and severity of the issues, it is our professional opinion that a decision be made in the near future whether to proceed with repairing and reinforcing the existing structure or looking for a new facility.

If you have any questions regarding this report, please do not hesitate to call.

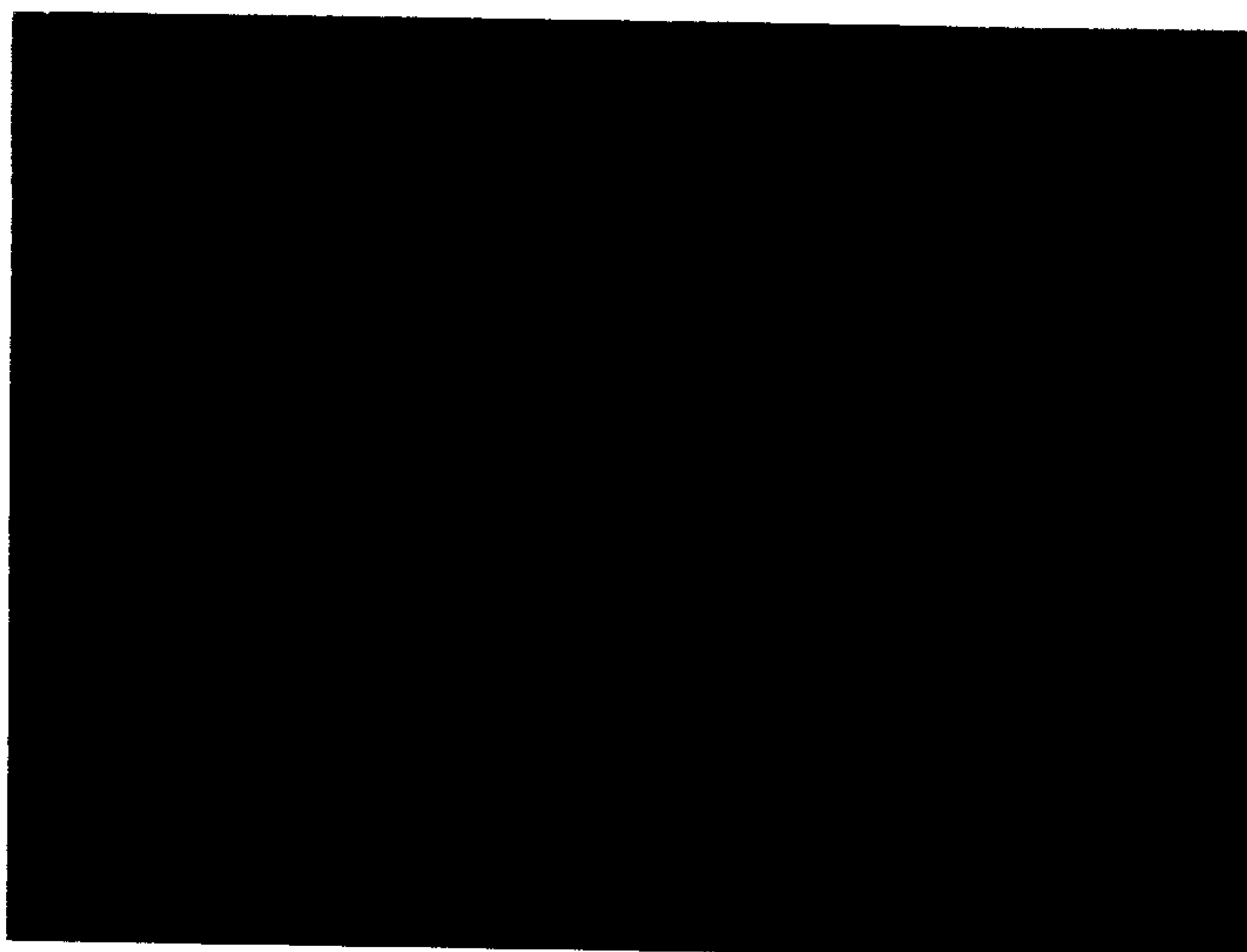
Sincerely Yours,
Johnson Structural Engineering, Inc.

Robert A. Johnson, P.E.

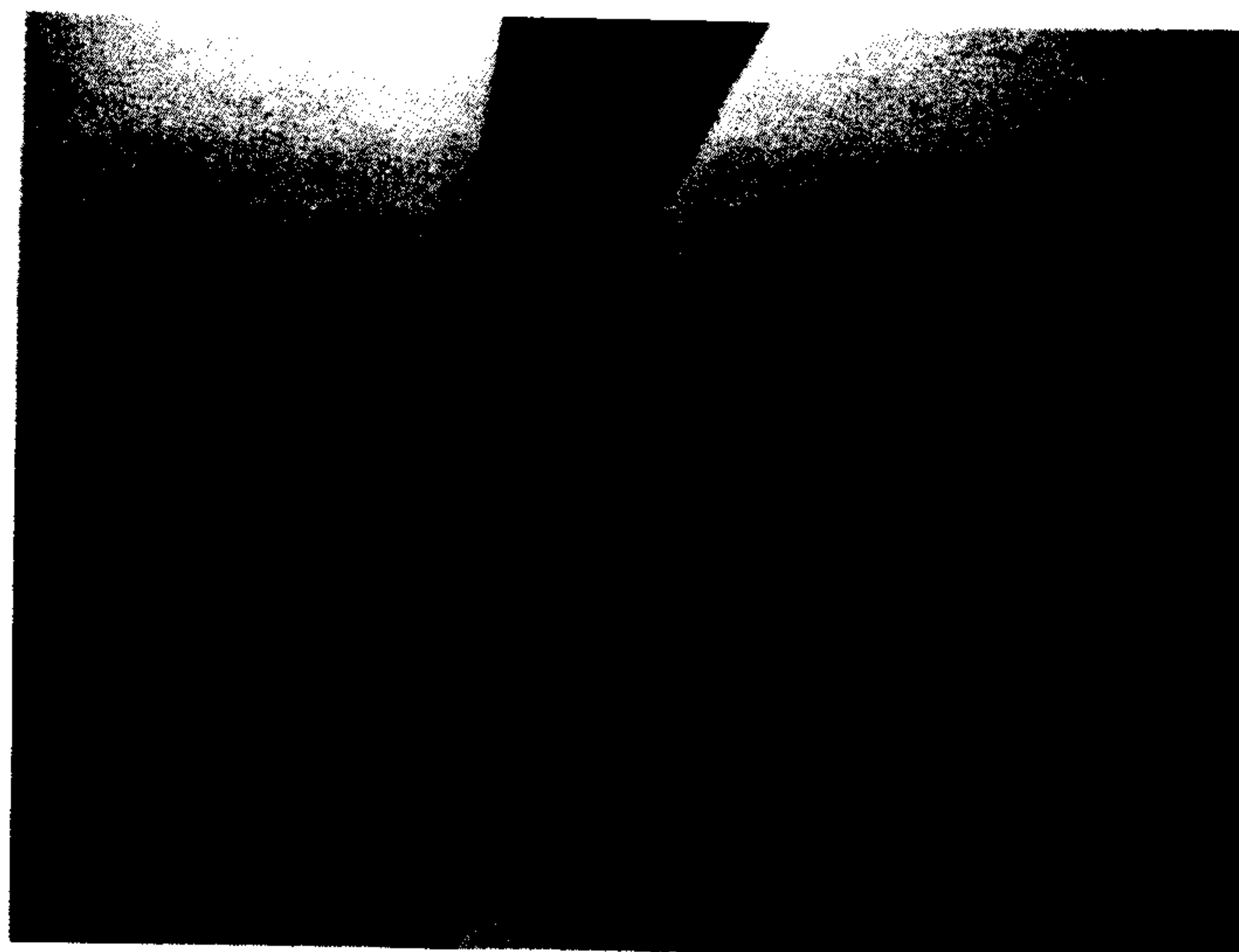
Robert A. Johnson, P.E.
President



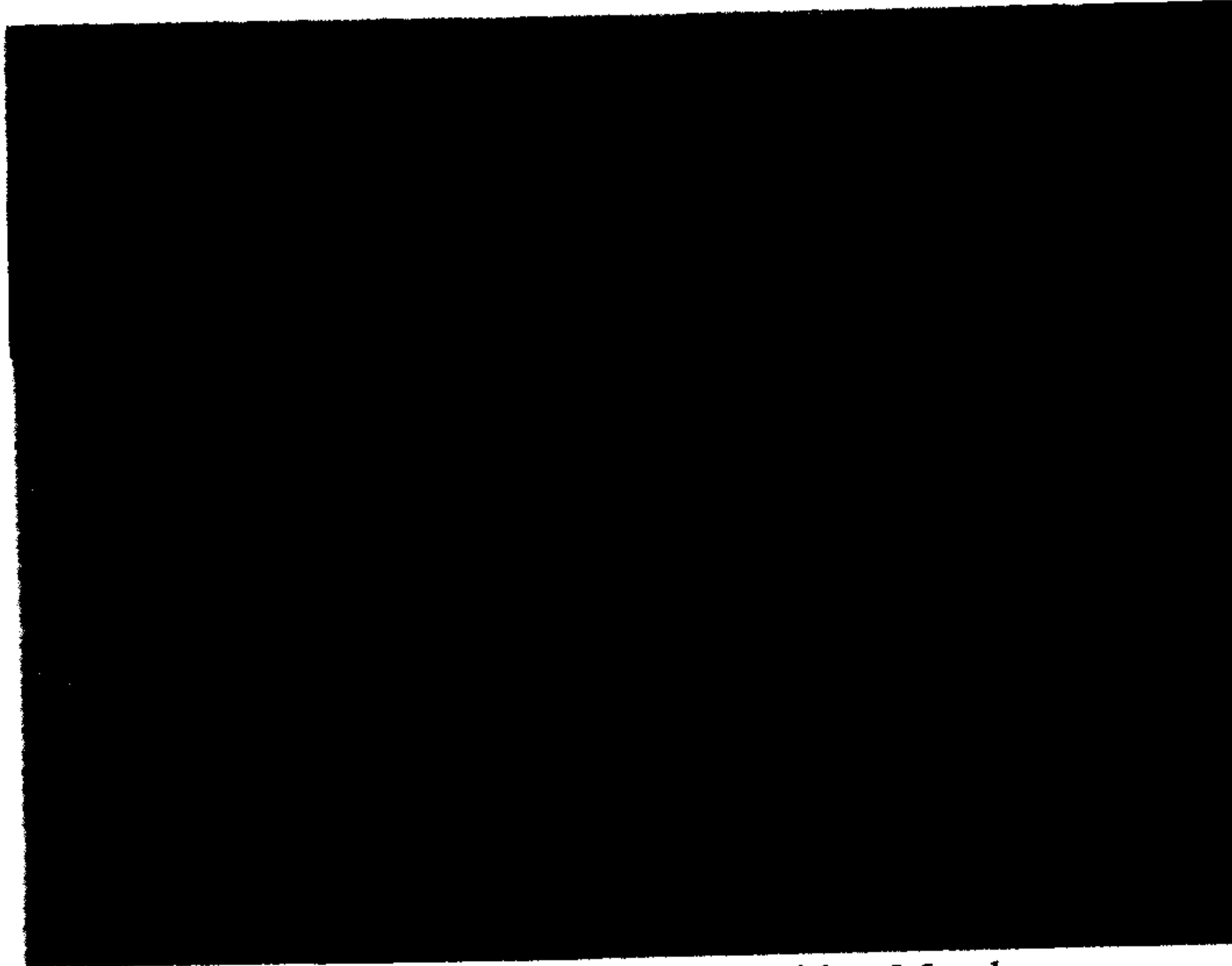
Photograph #1 – Existing Roof Framing (Original Building)



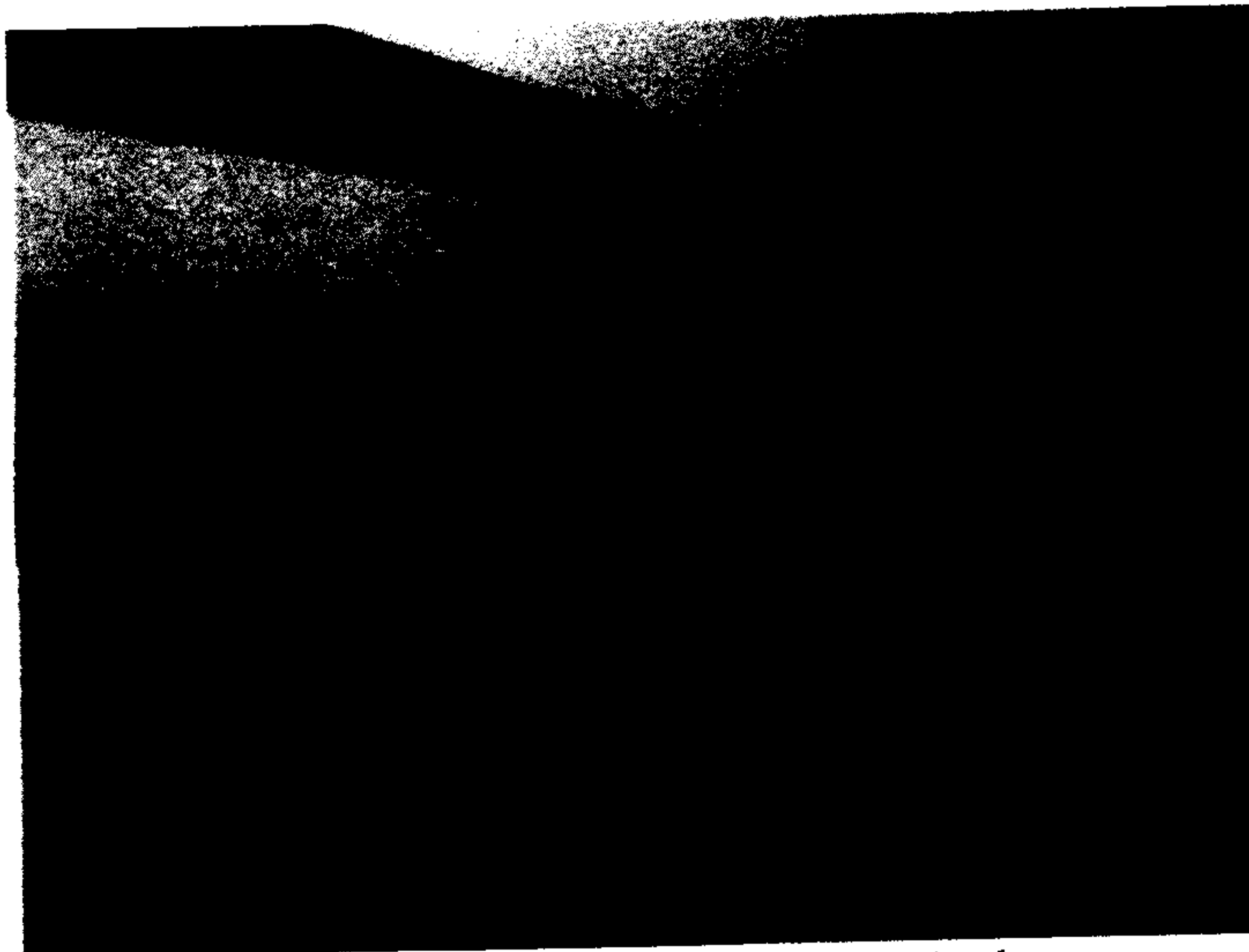
Photograph #2 – Cracked Roof Sheathing



Photograph #3 – “Storage” Ridge Member



Photograph #4 – “Storage” Ridge Member



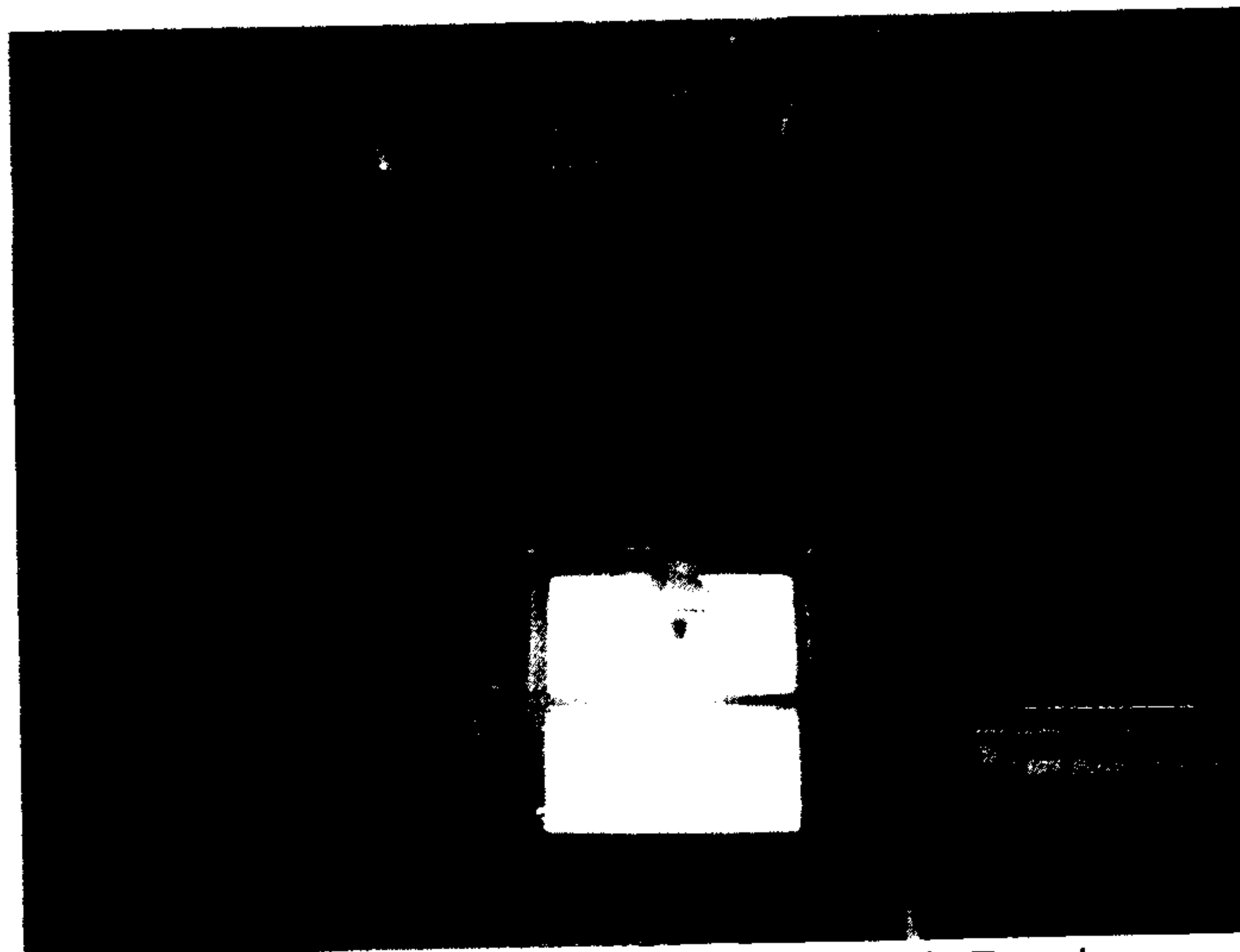
Photograph #5 – “Storage” Ridge Member



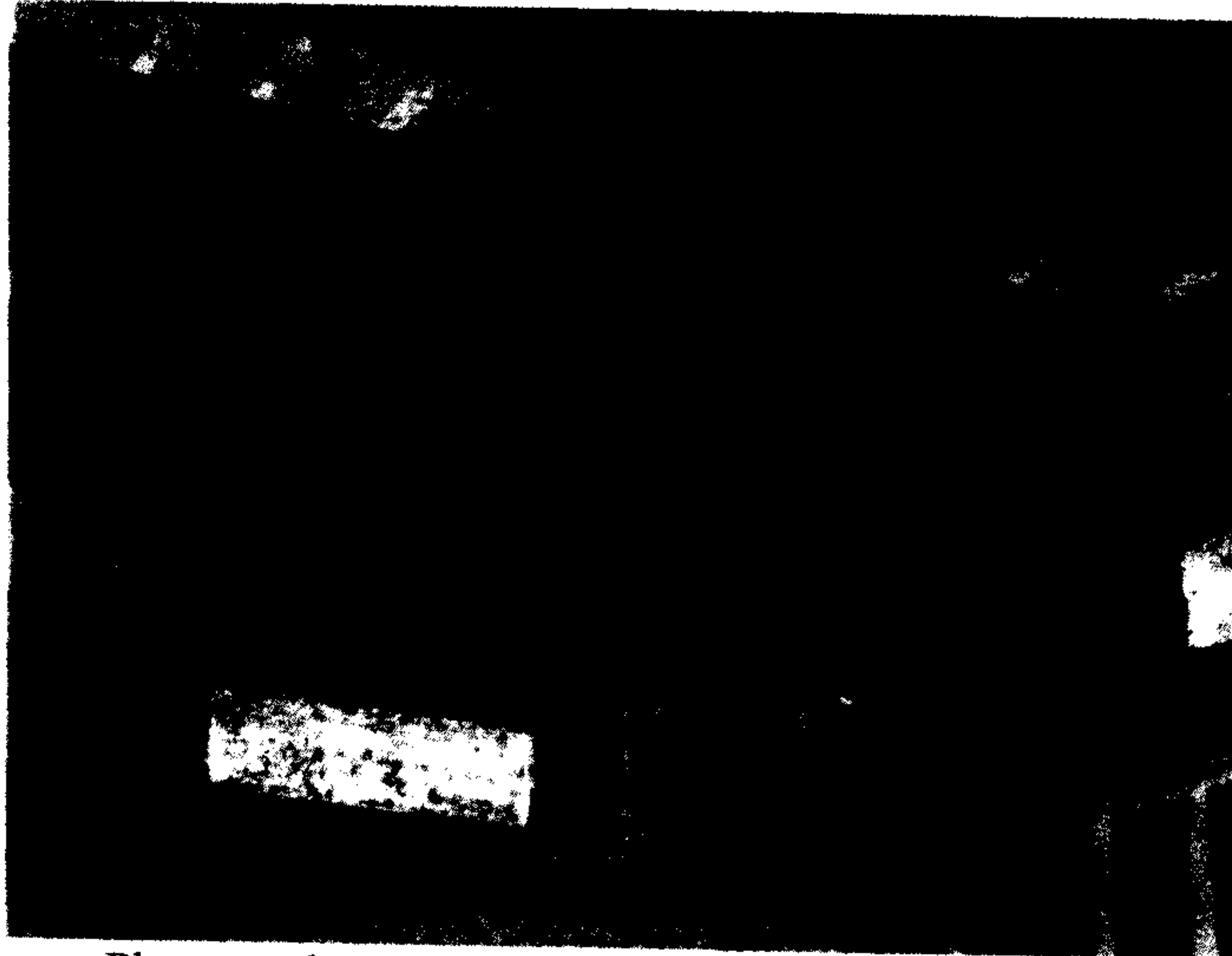
Photograph #6 – “Storage” Perimeter Roof Beam



Photograph #6.1 – Exterior Bowed Wall at “Storage 1”



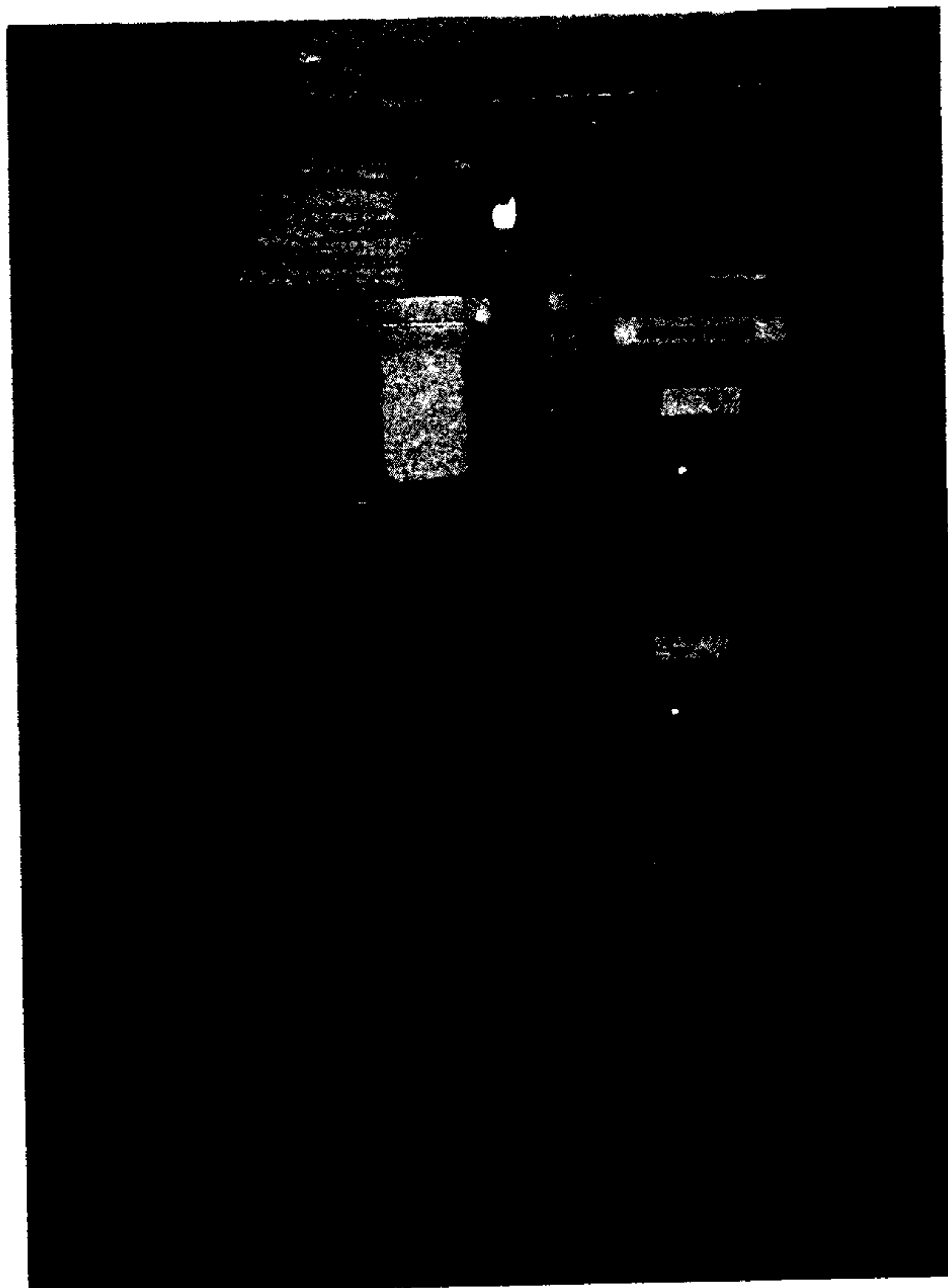
Photograph #7 – “Kitchen” Ceiling/Attic Framing



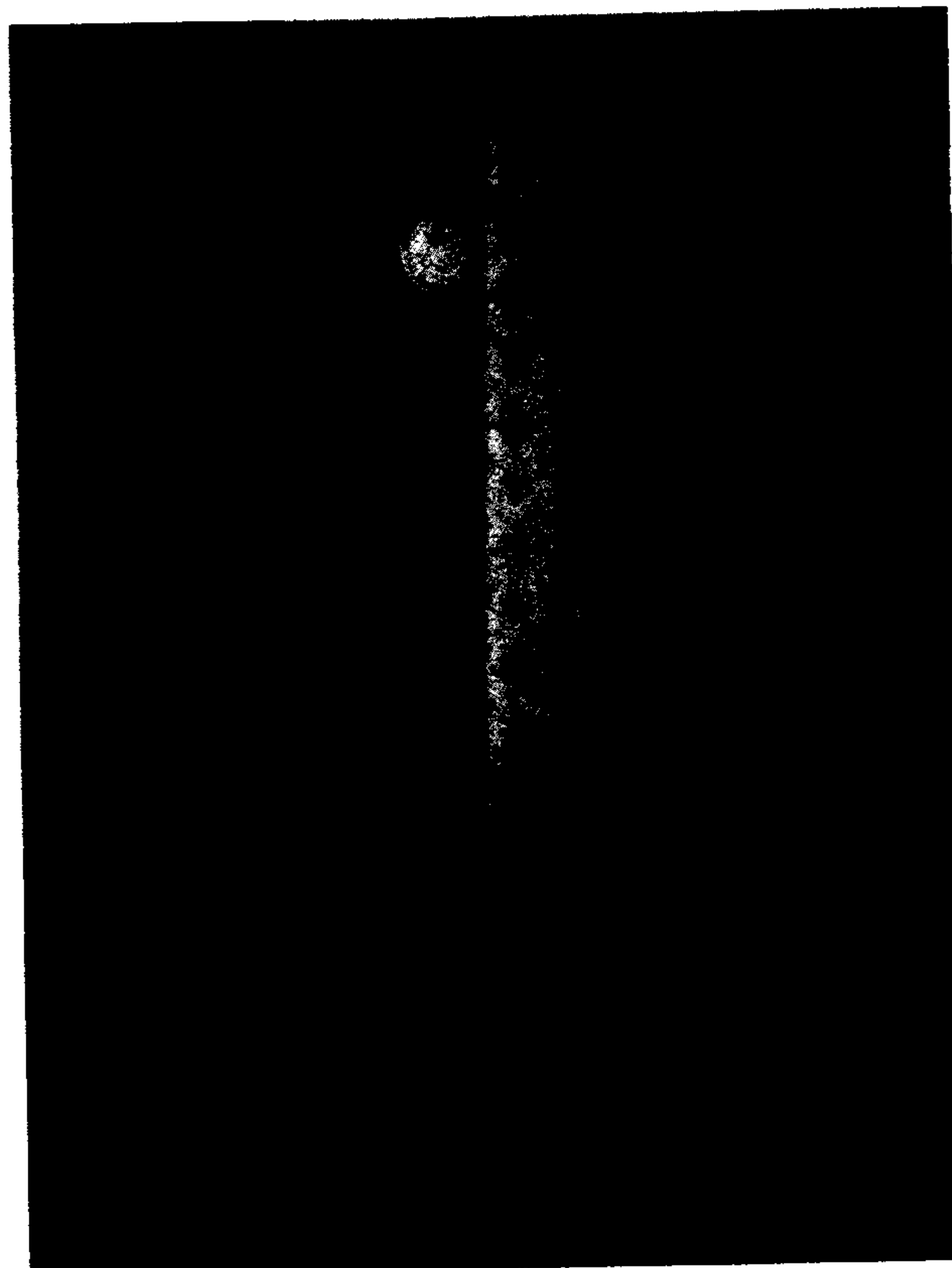
Photograph #8 - "Kitchen" Beam-Beam Connection



Photograph #9 - "Kitchen" Ceiling/Attic Joist



Photograph # 10 – “Storage 1” Sloped Floor



Photograph #10.1 – “Storage 1” Cracked Wood Column



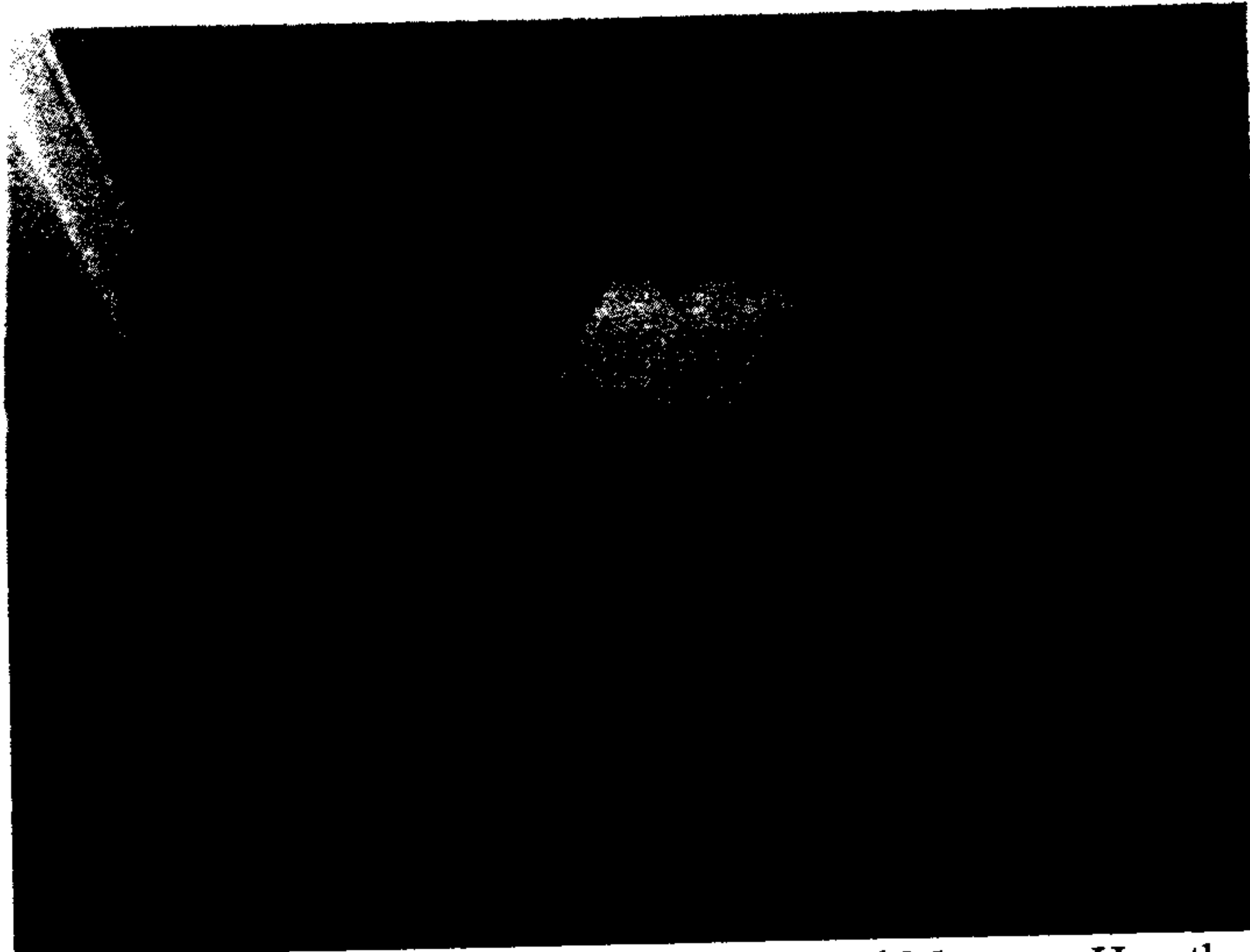
Photograph #10.2 – “Storage 1” Cracked Wood Column



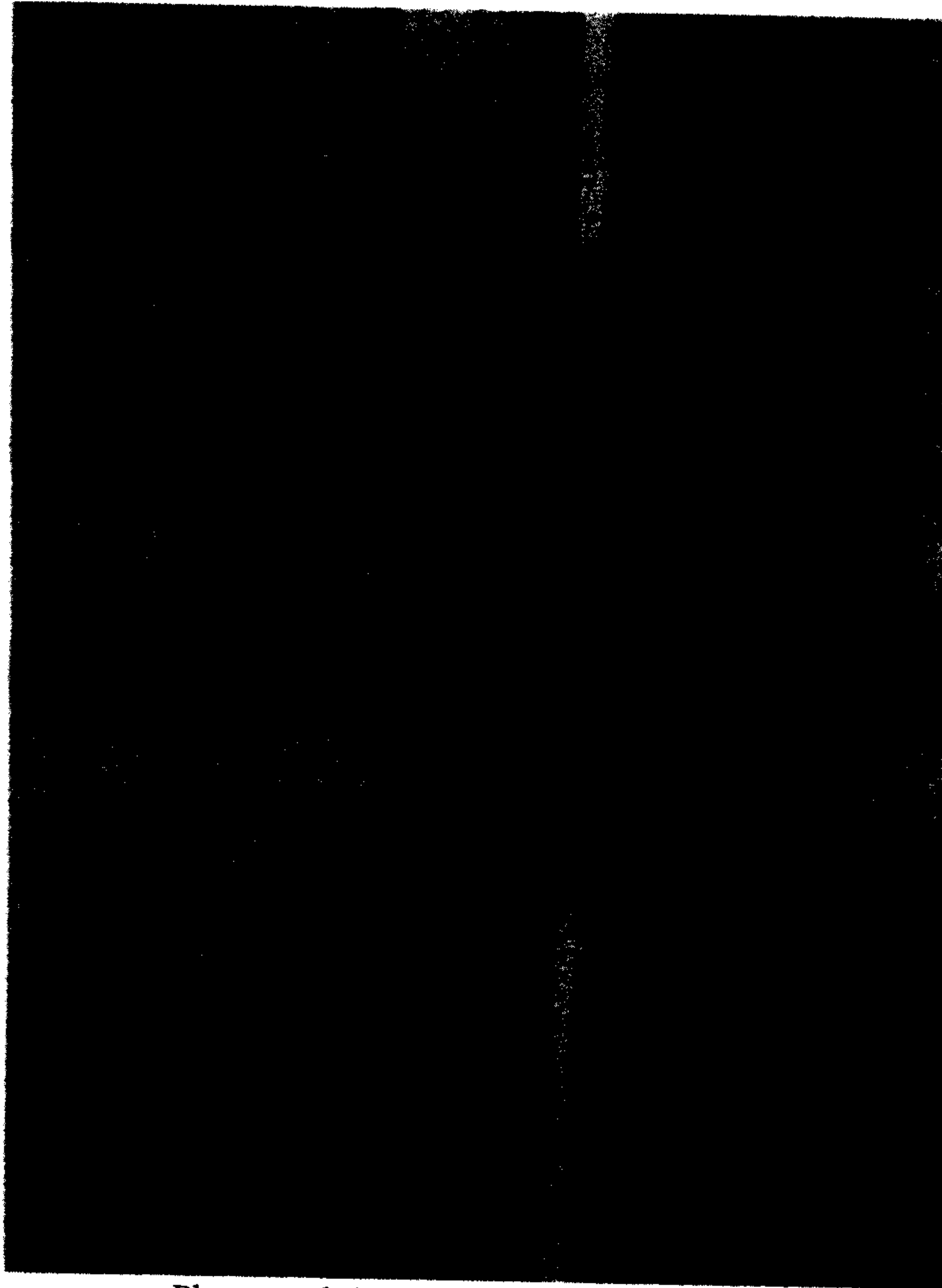
Photograph #11 – “Treasurer” Sloped Floor



Photograph #12 – “Conservation” Sloped Floor



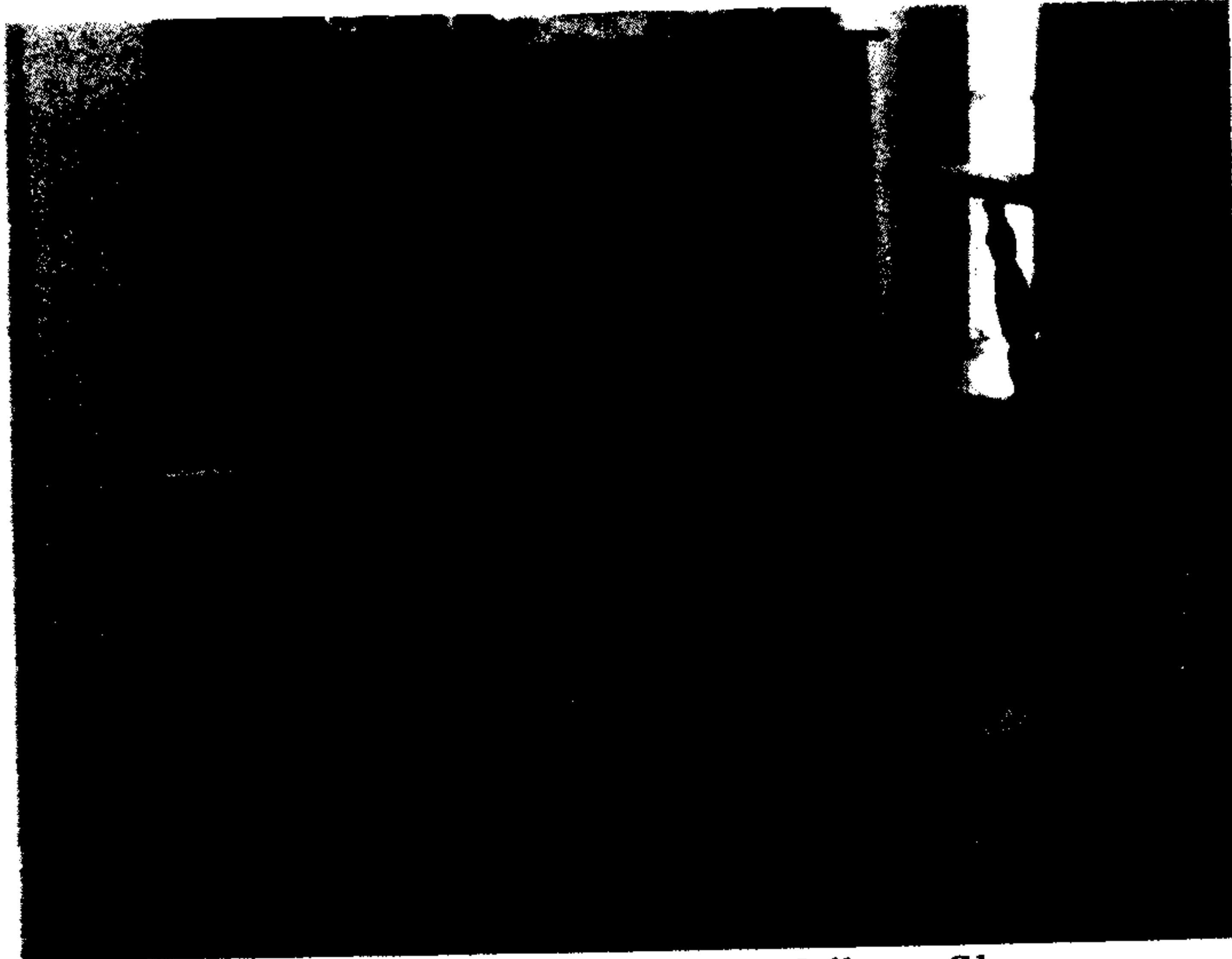
Photograph #13 – “Conservation” Cracked Masonry Hearth



Photograph #14 – “Meeting Room” Sign



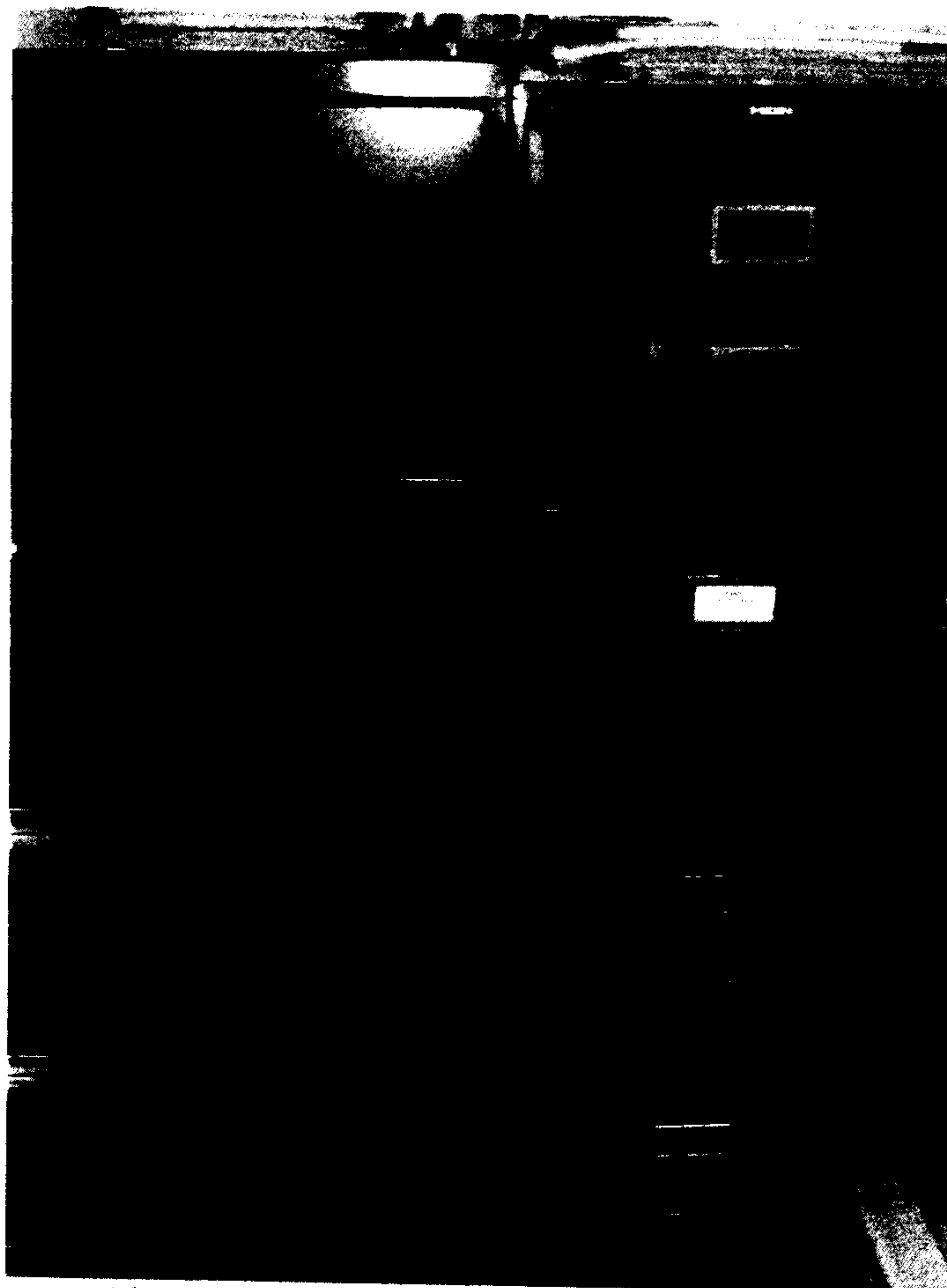
Photograph #14.1 – Rotted Sill at “Meeting” Exterior Door



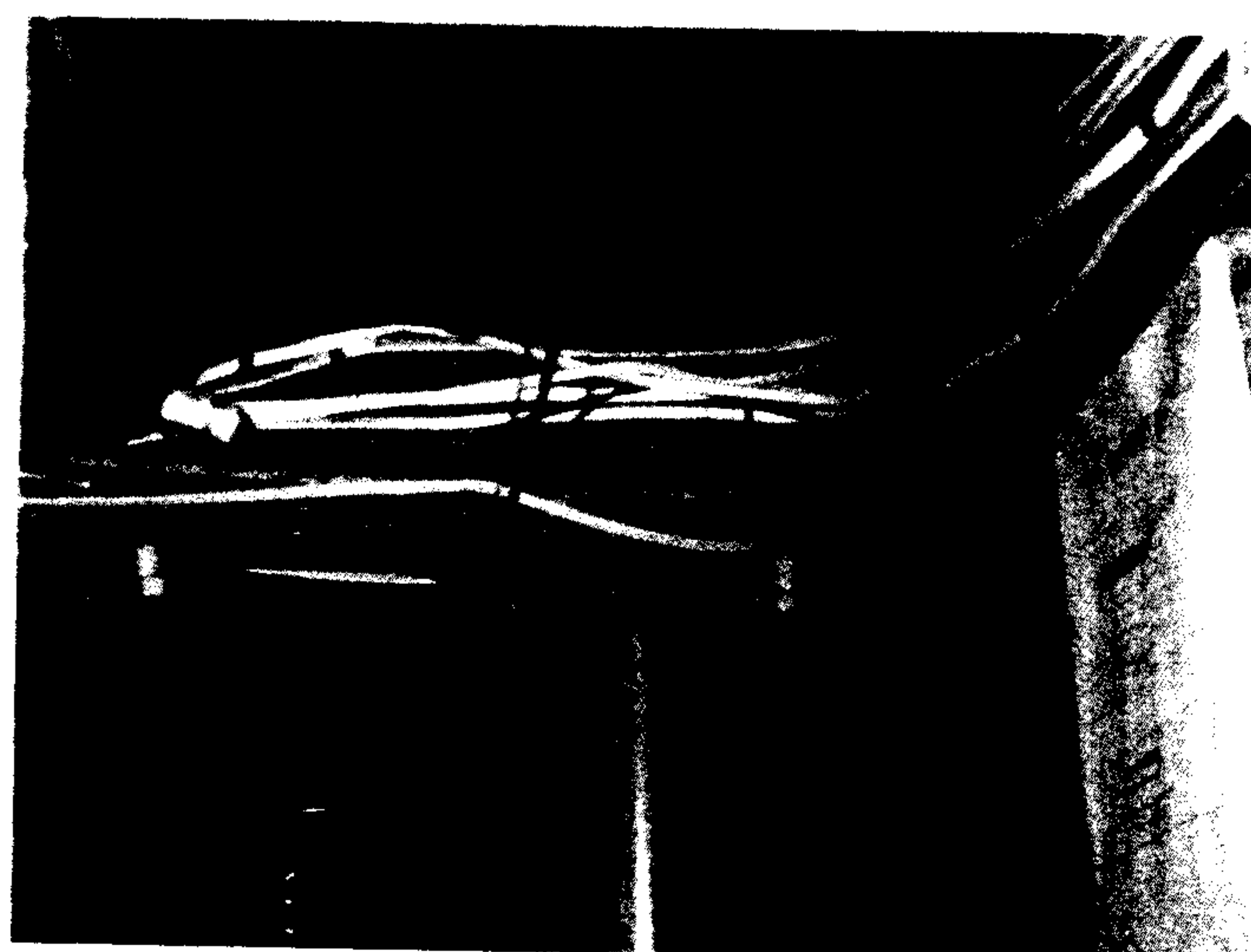
Photograph #15 – First Floor Hallway Slope



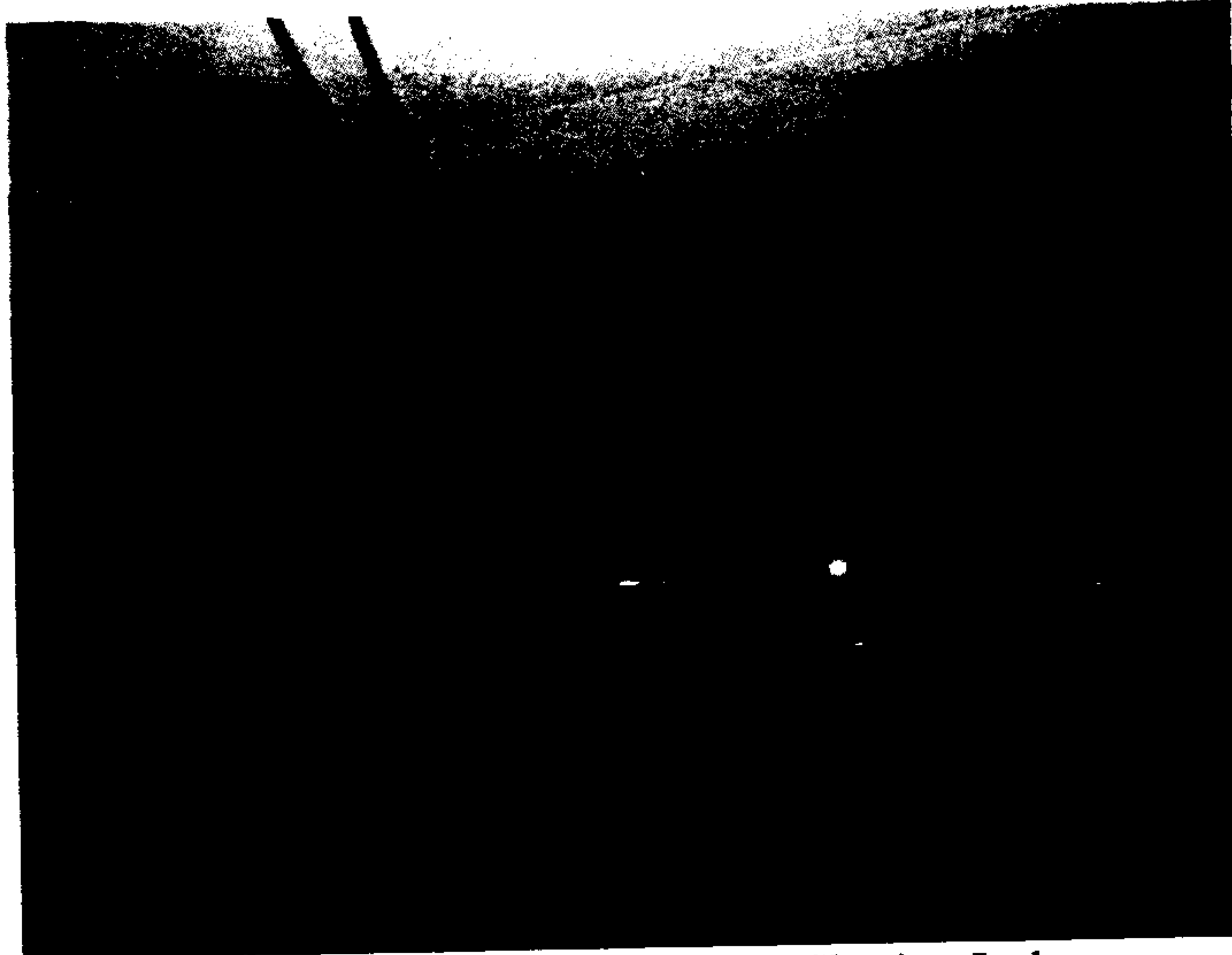
Photograph #16 – Sloped Hallway in front of Assessor's Office



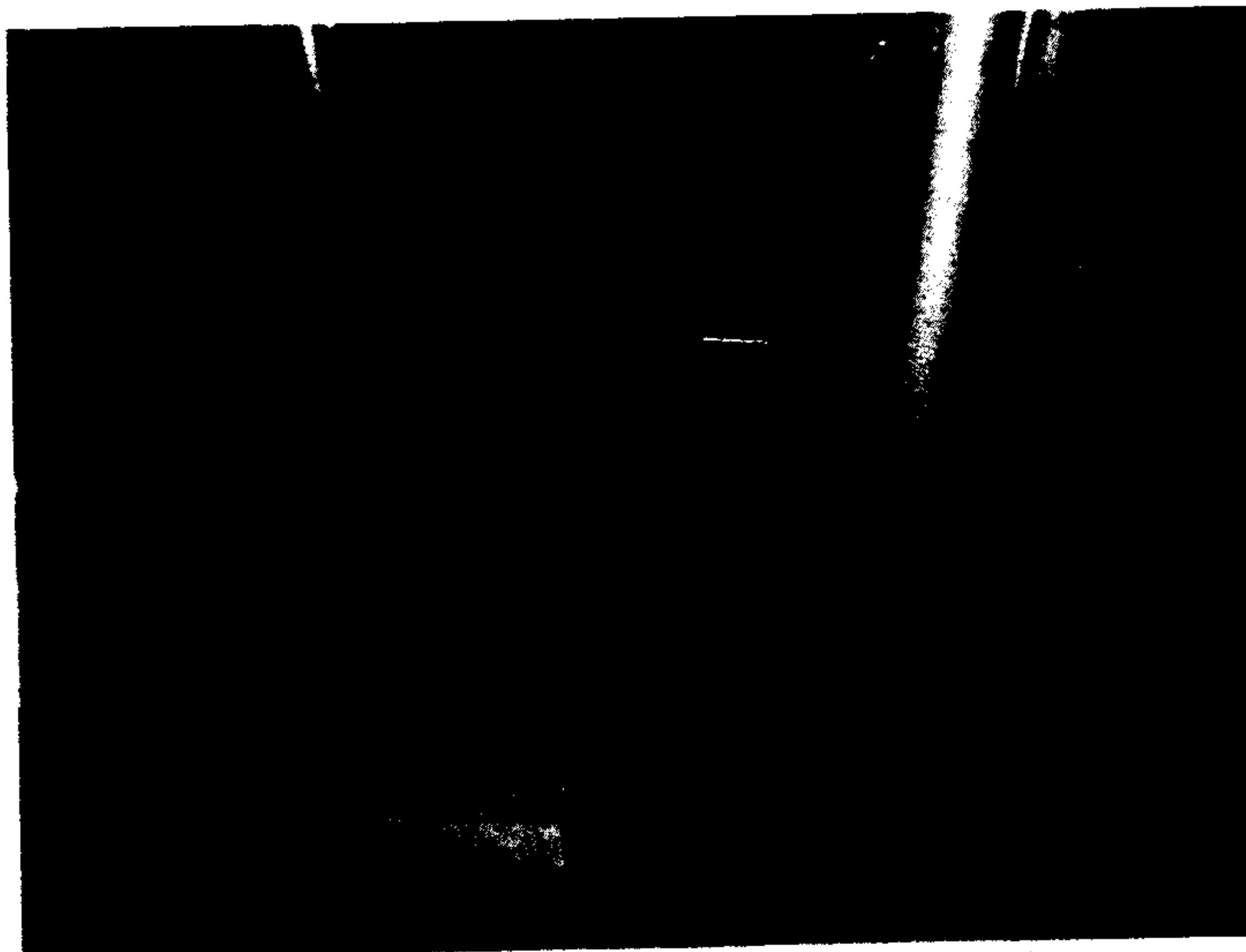
Photograph #17 - "Board of Health" Sloped Floor



Photograph #18 - First Floor Framing (Cracked)



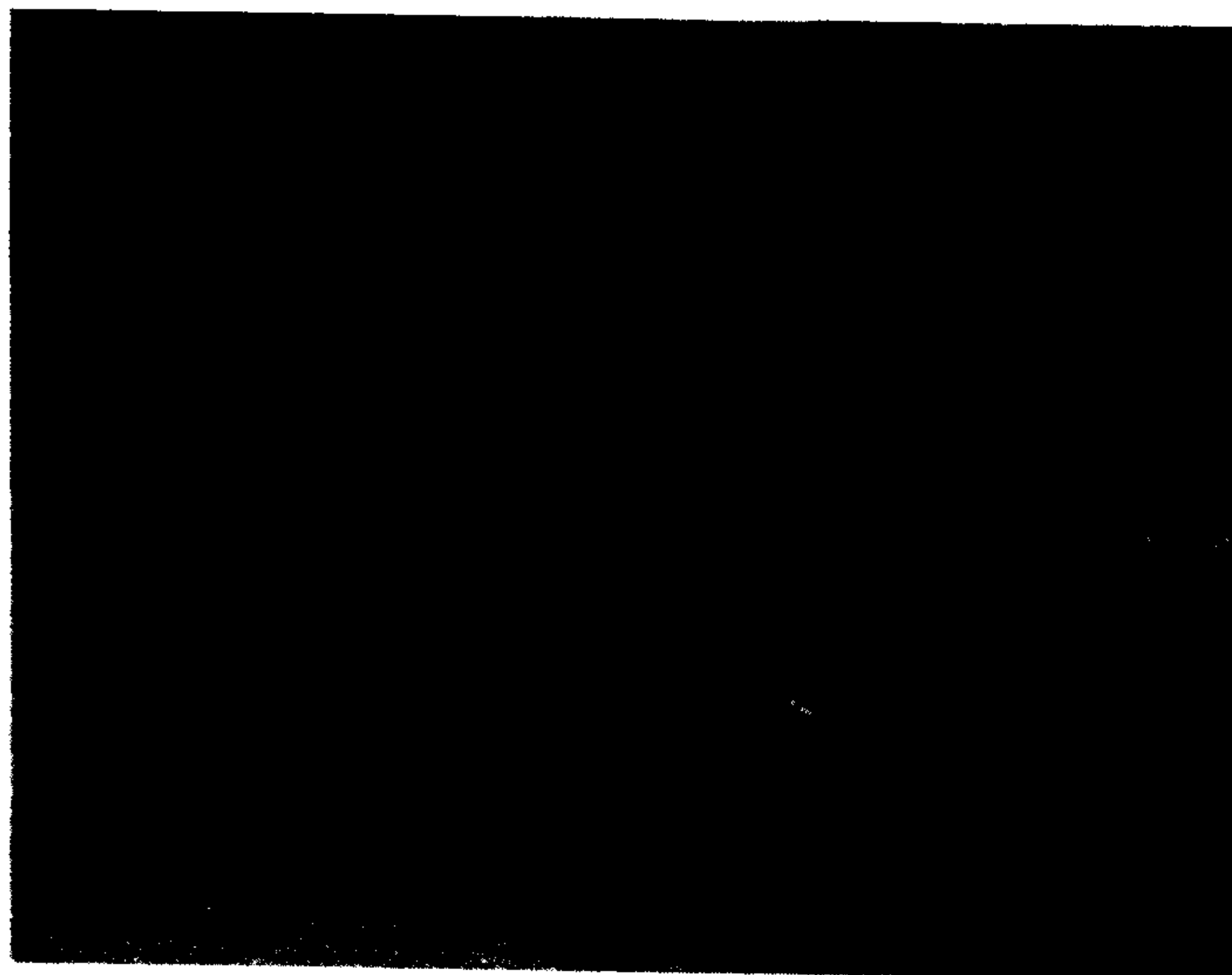
Photograph #18.1 – First Floor Shoring Jacks



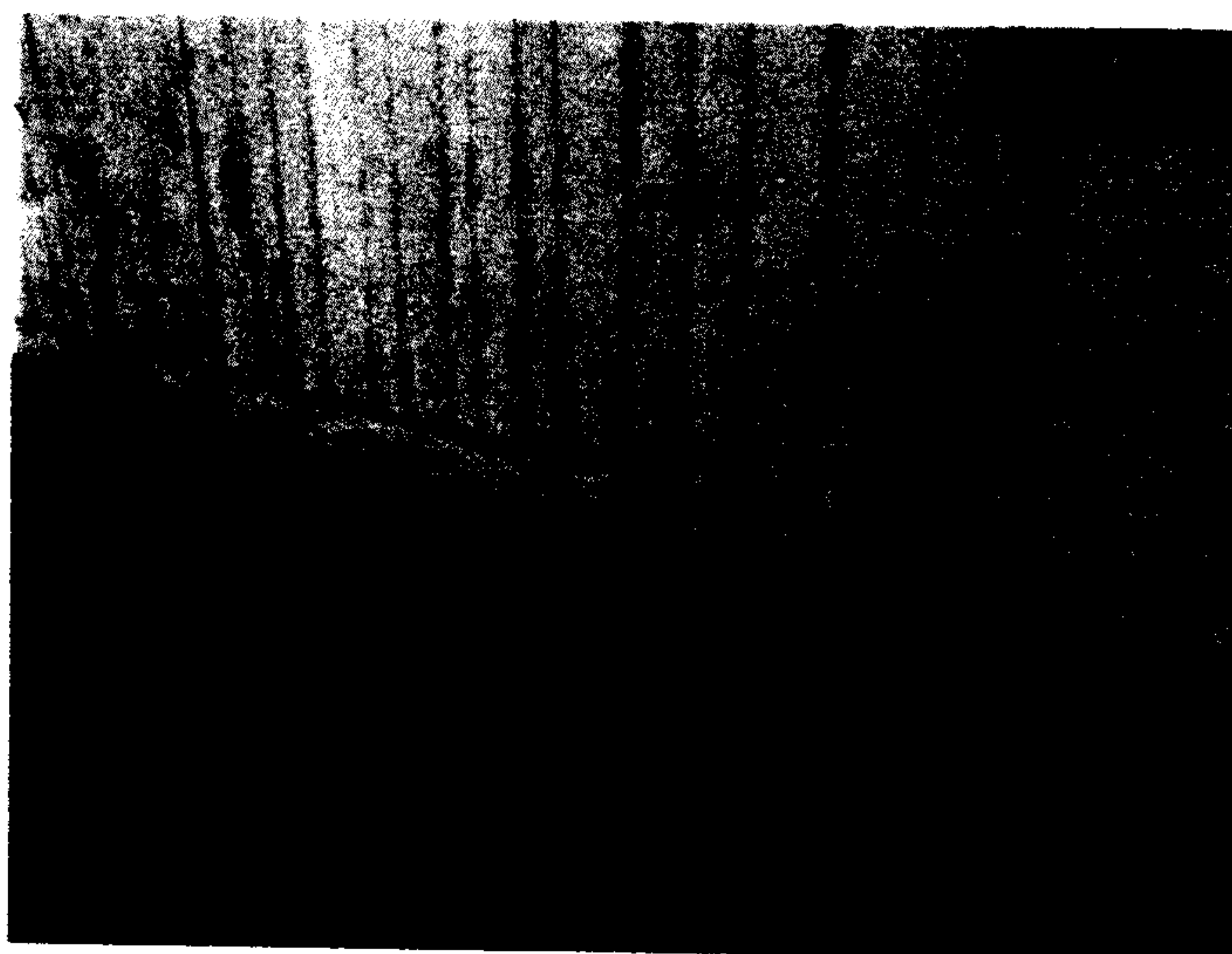
Photograph #19 – First Floor Shoring Jacks



Photograph #20 – First Floor Beam-Column Connection



Photograph #21 -Cracked Wood Column and Concrete Slab



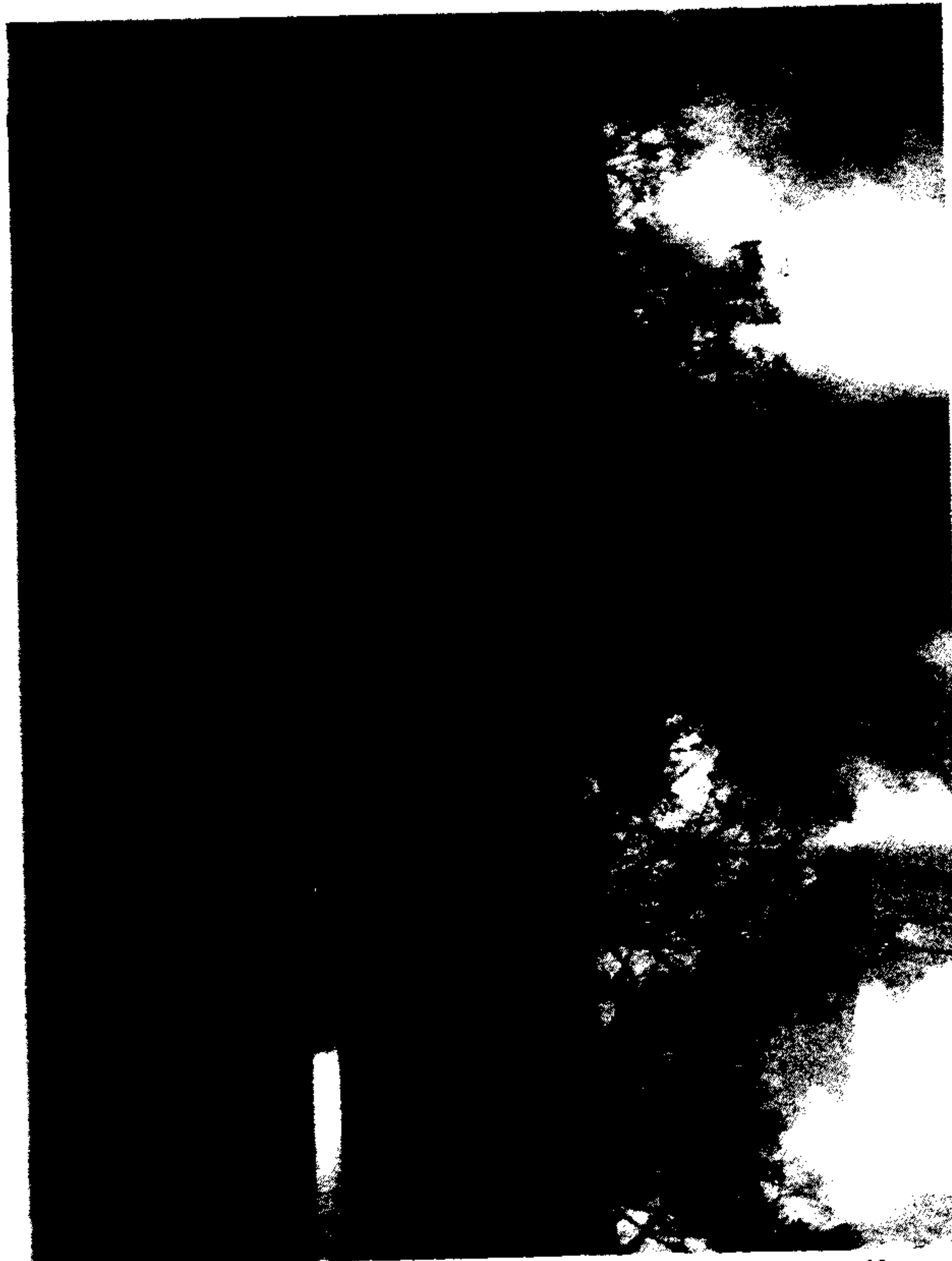
Photograph #22 – Missing “Storage” Foundation



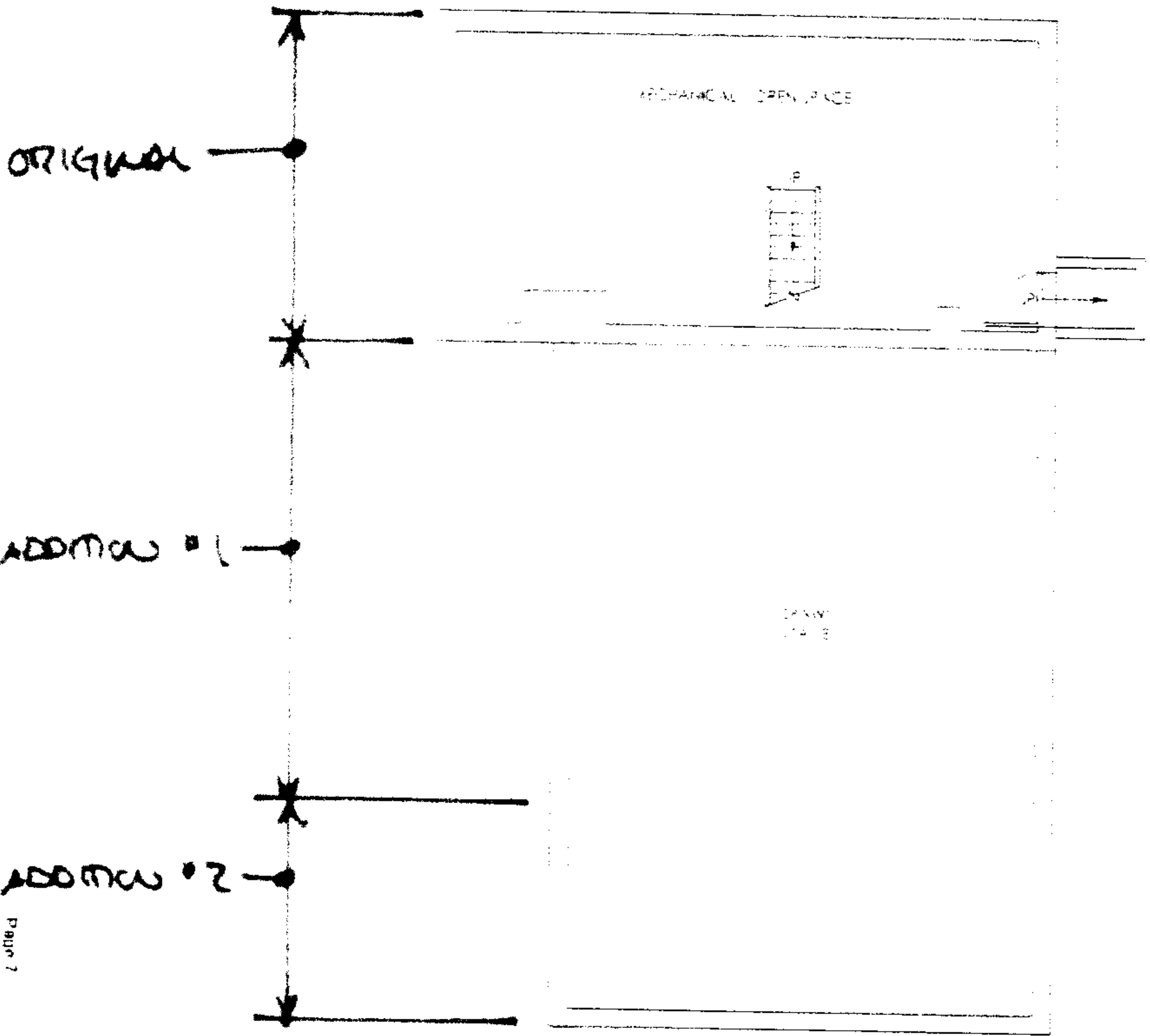
Photograph #23 – Chimney



Photograph #24 - Bowed Front Exterior Wall



Photograph #25 - Bowed Front Exterior Wall



BASEMENT PLAN

Page 7



D·R·A

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 210 River Hill Road
 Waltham, MA 02461
 Telephone: 781-942-1111
 Fax: 781-942-1112
 Email: dra@drainc.com

Town Of Brimfield
 Municipal Facilities Study and Planning
 Brimfield, Massachusetts

EXISTING TOWN HALL ANNEX BASEMENT PLAN

Scale: 3/32" = 1'-0"
 Date: 10/02/00
 4/17/03

EX-THA1



SECOND FLOOR PLAN

Page 11



EX-THA3

3/32/11
AUC/GH
1302.00
4/17/11

Town Of Brimfield
Municipal Facilities Study and Planning
Brimfield, Massachusetts

EXISTING TOWN HALL ANNEX SECOND FLOOR PLAN

Dunsmuir Research Associates, Inc.
215 West Hill Road
Walpole, MA 02455
Phone: 603-883-1100
Fax: 603-883-1101
www.dunsmuir.com



#3

JSE JOHNSON STRUCTURAL ENGINEERING, INC.

101 Huntoon Memorial Highway (Rt. 56), Rochdale, MA 01542 (508) 892-4884 Fax (508) 892-0477

May 18, 2023

Town of Brimfield
21 Main Street
Brimfield, MA
Attn: Michael Egan

Re: Structural Inspection
Brimfield Town Hall Annex & Town Hall Buildings

Dear Mr. Egan:

As per your request, Johnson Structural Engineering (JSE) has performed a structural inspection of the Town Hall Annex Building and Town Hall Building located on Main Street in Brimfield, Massachusetts. The purpose of the inspection was to review the existing building structure and to comment on the building's condition. Travis Alexander of JSE performed a site visit on May 4, 2023 to document the existing conditions. The following report summarizes the results of the structural inspection.

Town Hall Annex

The Town Hall Annex is a two story structure with a partial basement and crawl space and a partial attic. There used to be a one-story addition along the rear of the building that connected the building to a barn structure. The one-story connector and the barn have been demolished.

JSE previously performed a structural review on the Town Hall Annex building in August 2016 with Jones Whitsett Architects. JSE's report from that study is attached in Appendix A. A majority of the structural items noted in the 2016 report are still applicable today based on JSE's most recent site visit with the exception of items 12, 13, and 17 which pertain to the one-story connection and barn structure that have since been demolished. This includes the cracked, checked, and rotated roof framing members, the severe slopes in flooring at the first floor and second floor levels, bowed exterior walls, and inadequate shoring.

Item 15 in JSE's 2016 report discusses temporary screw jack shoring that was previously installed to support the existing first floor structure. The screw jack shoring has since been replaced with new steel shoring comprised of W-shape steel beams, HSS steel tubes and steel lally columns (see photographs #1 and #2). However, the steel framing does not appear to have been designed or approved by a structural engineer due to (a) the hardware used to connect the beams to the columns (see photographs #3 and #4), (b) the wood blocking that was installed to support the steel beams on the foundation wall (see photograph #5), (c) how the existing floor joists (round logs) were planed where needed to install the steel beams (see photograph #6), and (d) the thickness of the wood shims that were installed between the existing floor joists (round logs) and the steel beams (see photograph #7).

Comparing photographs taken from JSE's site visit in 2016 to JSE's site visit on May 4, 2023, there appears to have been some horizontal movement in the chimney located on the right side of the building when viewed from Main Street (see photograph #8).

The existing deck/fire escape structure located on the second floor level along the right side of the building does not have a ladder or stair down to grade, is missing a guard along one side, and the rails are structurally inadequate (see photograph #9).

As noted in JSE's 2016 report, the front wall is bowed and appears to have an inward lean (see photographs #10 and #11). It was observed during the most recent site visit that the exterior wall along the left side of the building (when viewed from Main Street) also has an inward lean (see photograph #12). Using a laser measurer, it appears that this wall is around 4" to 5" out of plumb. There has also been settlement in the exterior grade at this corner of the building as evidenced by the exterior stairs (see photograph #13).

The structural issues noted in this report (and JSE's 2016 report) will not improve without substantial structure repairs and reinforcing. The issues may worsen over time if they are not addressed. Due to the extent and severity of the issues, it is our professional opinion that a decision is made in the near future whether to proceed with repairing and reinforcing the existing structure or to look for a new facility.

Town Hall

The Town Hall is a two story building with a full basement and attic. The following summarizes the structural issues noted during JSE's May 4, 2023 site visit. Please note that the inspection was limited to the existing structure that was accessible at the time of the site visit.

- The existing foundation is comprised of field stone and masonry. The mortar in the masonry joints and field stone joints are deteriorated (see photographs #14 through #16).
- There are signs of water damage at the second floor level (see photograph #17).
- The low, flat roof in the rear of the building is in poor condition (see photograph #18).
- There is likely a lot of rotted wood trim around the eaves, windows, doors, etc. (see photographs #19 and #20).
- The exterior masonry at the foundation requires repointing and replacement where deteriorated (see photographs #21 and #22).
- The masonry on the chimney appears to be in poor condition when viewed from grade (see photograph #23).
- It was stated that one of the timber beams comprising a roof truss previously failed. The failed timber was reinforced with steel plates and diagonal 2x members (see photograph #24).
- The timber members comprising the roof trusses are severely split (see photographs #25 through #28).
- There has been a lot of movement within the roof trusses. Large gaps have formed at the member joints (see photographs #29 through #33). Wood shims were installed at some of the joints to fill the gaps (see photograph #34).

- There are areas of water damage to the roof decking and bell tower floor structure.
- The exterior fire escape along the rear of the building will require reinforcing to comply with the loads and dimensions specified in the building code (see photograph #35).
- The exterior wall along the front right side of the building when viewed from Main Street appears to lean inward (see photograph #36).

During the site visit, it was discussed to possibly construct a second floor addition within the first floor meeting room. The second floor addition will need to be kept structurally separated from the existing building structure in order to not impose any additional gravity or lateral loads onto the existing building. Otherwise, a complete upgrade to lateral system of the existing building will be required if the second floor addition is structurally attached to the existing building. The second floor addition could either be constructed of plywood decking supported by wood floor joists or a concrete slab on metal deck supported by steel infill beams. The wood joists or steel infill beams would be supported by steel girder beams and steel columns. The steel columns supporting the second floor addition would need to be continued down to the basement level and supported by new reinforced concrete footings. The lateral system for the second floor addition would likely be comprised of diagonal steel braced frames or moment frames.

It was also stated during the site visit that an elevator will need to be installed. If the elevator is installed where the existing lift is located, then a new elevator shaft and 5'-0" (+/-) deep elevator pit will be needed. It is likely that concrete underpinning will be needed below the existing foundation walls and interior masonry walls adjacent to the elevator shaft (current lift location) due to the required depth of the elevator pit. Alternatively, it was stated that an elevator addition may be constructed along the outside of the building. The addition will need to be kept structurally separated from the existing building. If the addition is structurally attached to the existing building, then the lateral system of the existing building will need to be upgraded to comply with the wind load and seismic force specified in the current building code. Concrete underpinning may be required below the existing foundation that is adjacent to the elevator addition depending on the depth of the existing foundation.

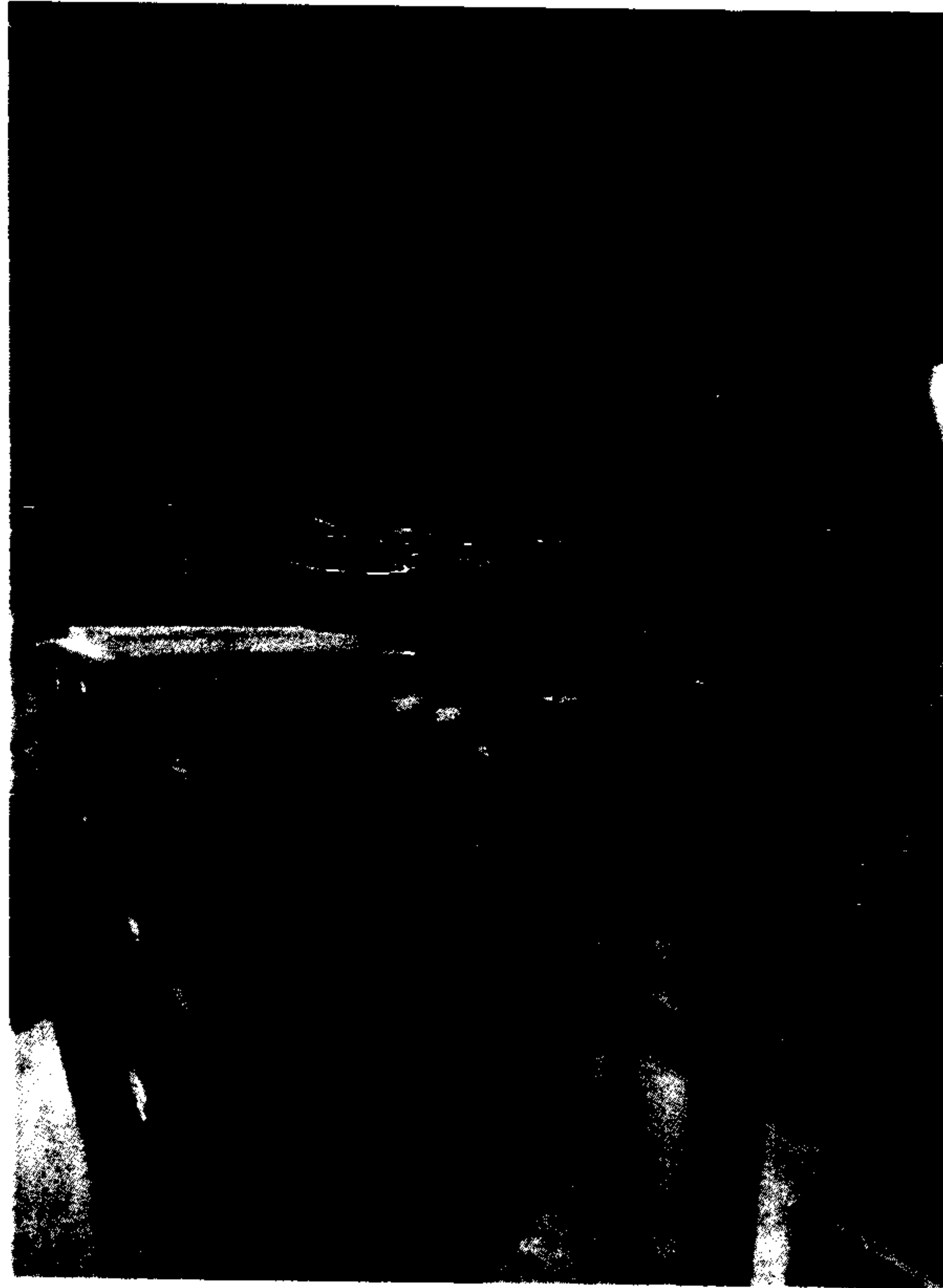
Substantial structural repairs and reinforcing will be required to address the structural issues noted above before considering any renovations to the existing building. Due to the extent and severity of the issues, it is our professional opinion that a decision is made in the near future whether to proceed with repairing and reinforcing the existing structure or looking for a new facility.

If you have any questions regarding this report, please do not hesitate to call.

Sincerely Yours,
Johnson Structural Engineering, Inc.

 Robert A. Johnson, P.E.

Robert A. Johnson, P.E.
President



Photograph #1 (Town Hall Annex)
- First Floor Shoring



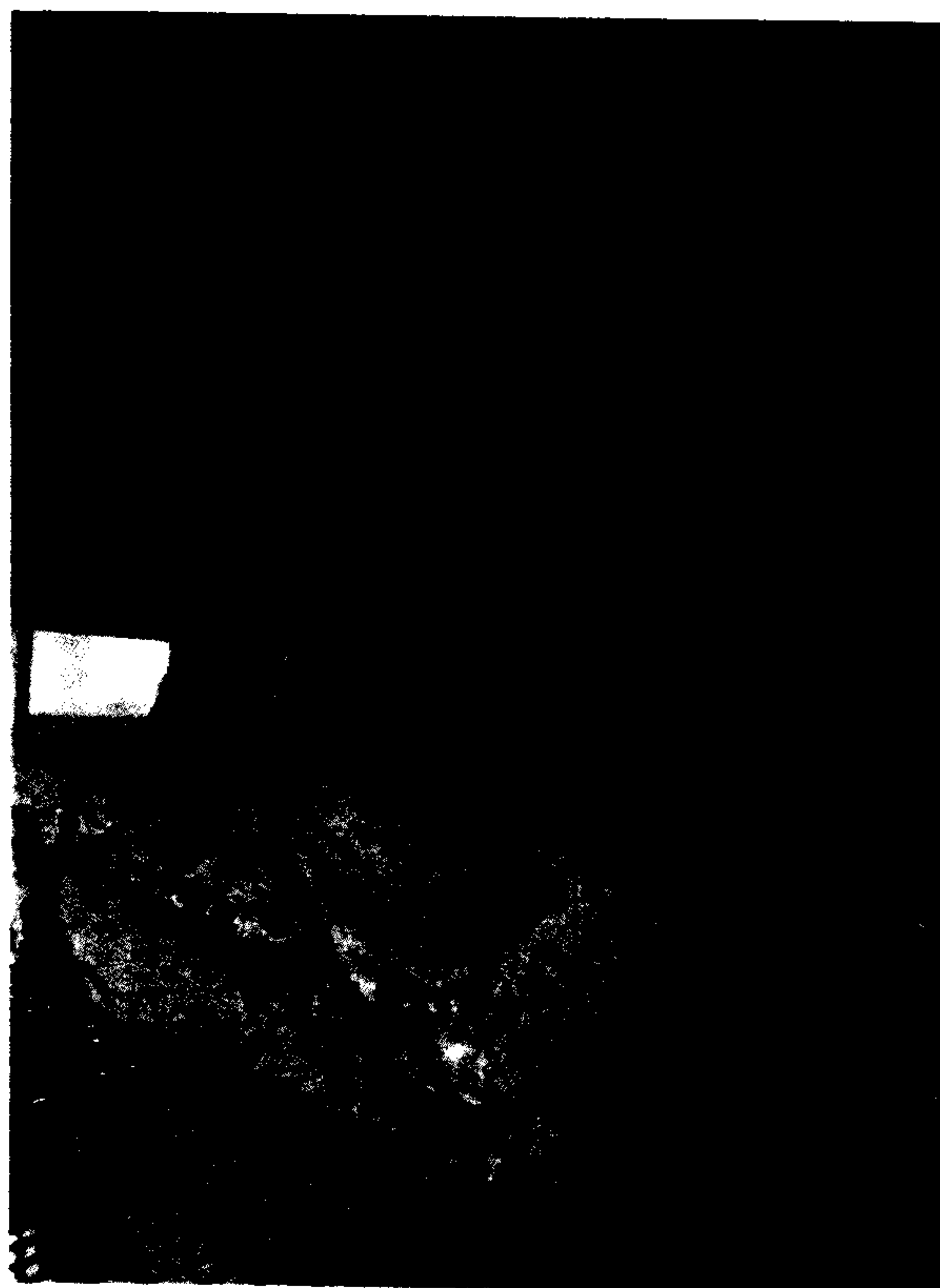
Photograph #2 (Town Hall Annex)
- First Floor Shoring



Photograph #3 (Town Hall Annex)
– First Floor Shoring Member Connections



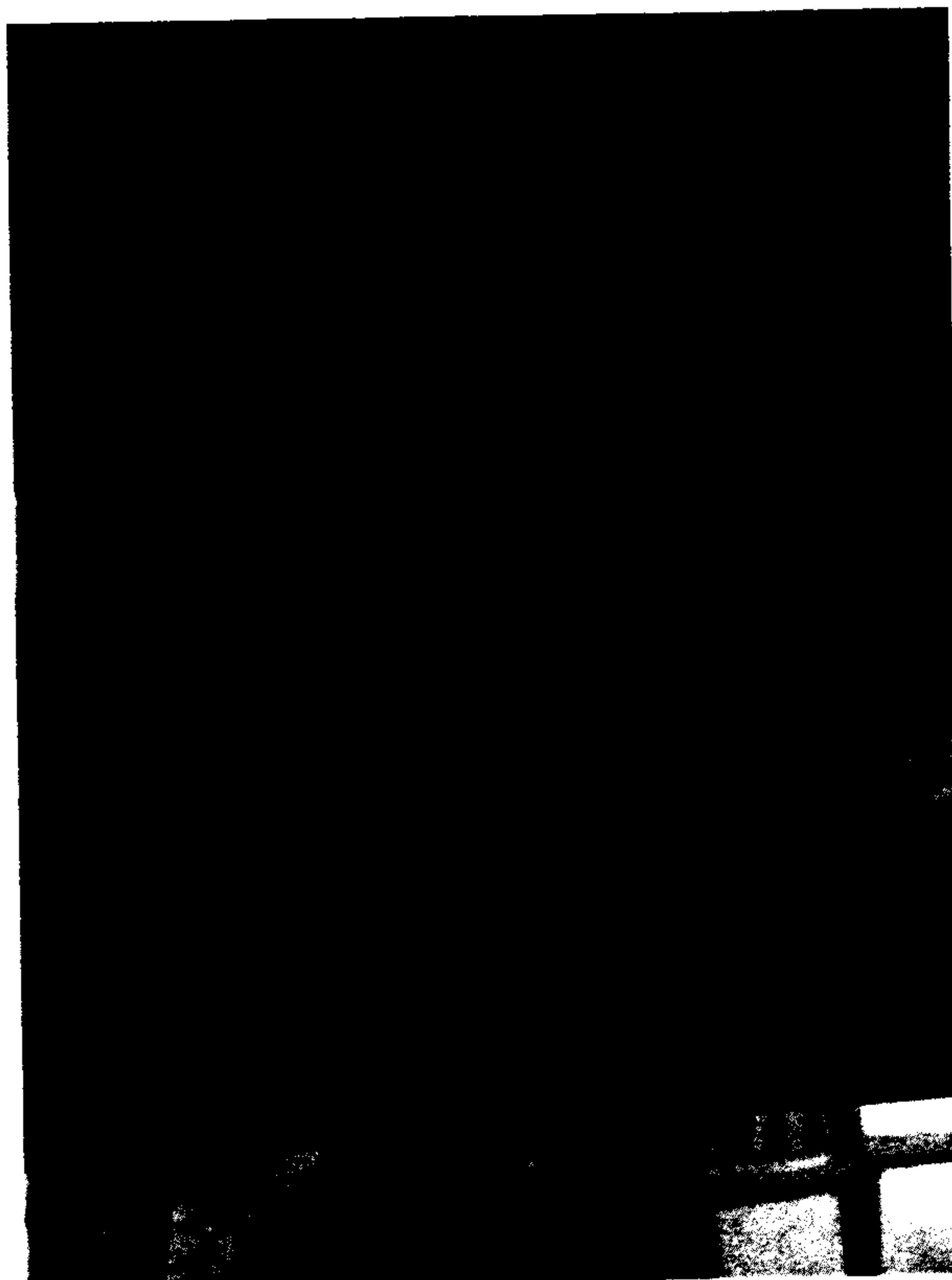
Photograph #4 (Town Hall Annex)
– First Floor Shoring Member Connections



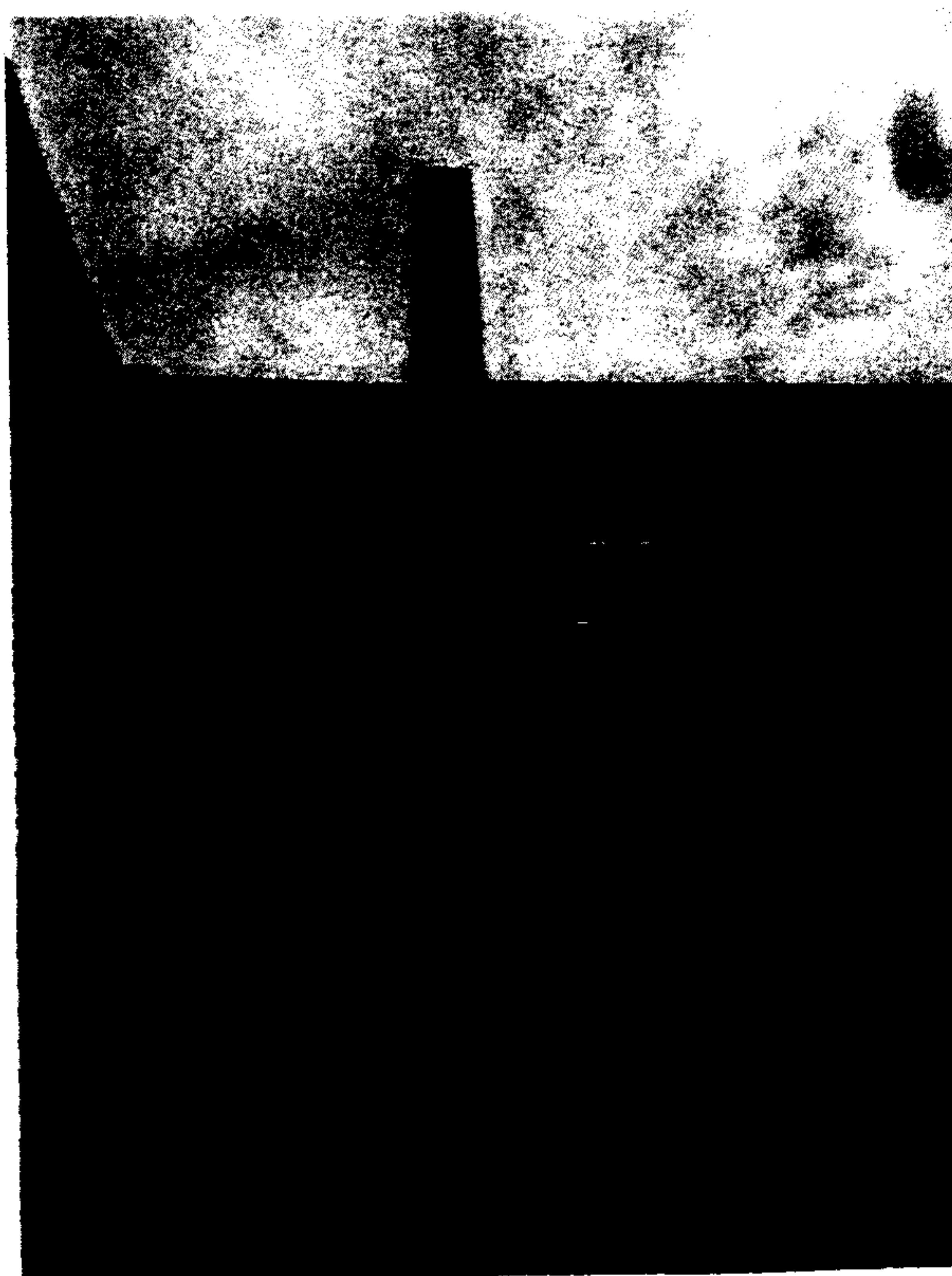
Photograph #5 (Town Hall Annex)
– Shoring Beam Bearing



Photograph #6 (Town Hall Annex)
– Plained Floor Joists Above Shoring



Photograph #7 (Town Hall Annex)
– Wood Blocking Above Shoring



Photograph #8 (Town Hall Annex)
– Chimney



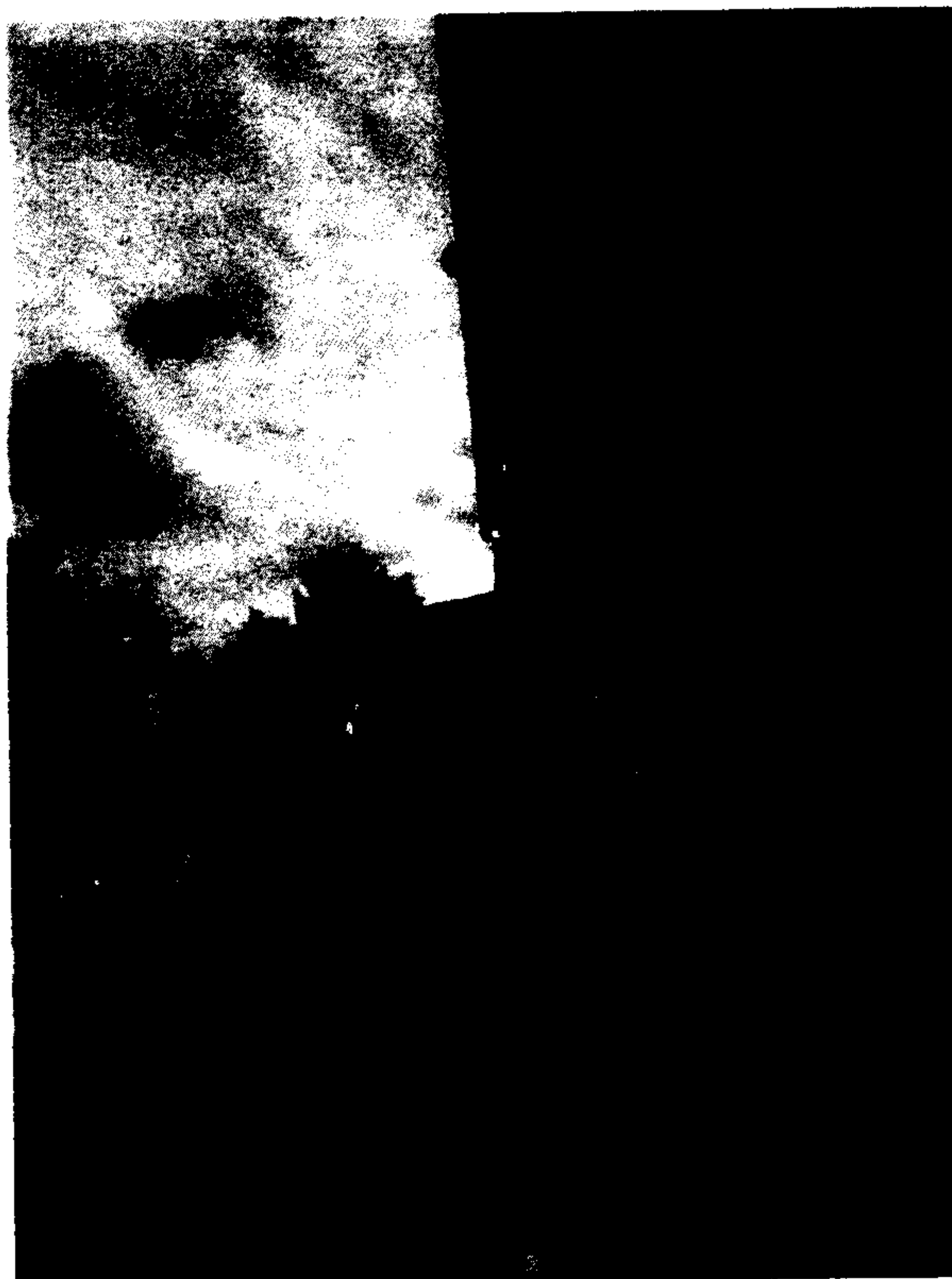
Photograph #9 (Town Hall Annex)
- Exterior Fire Escape



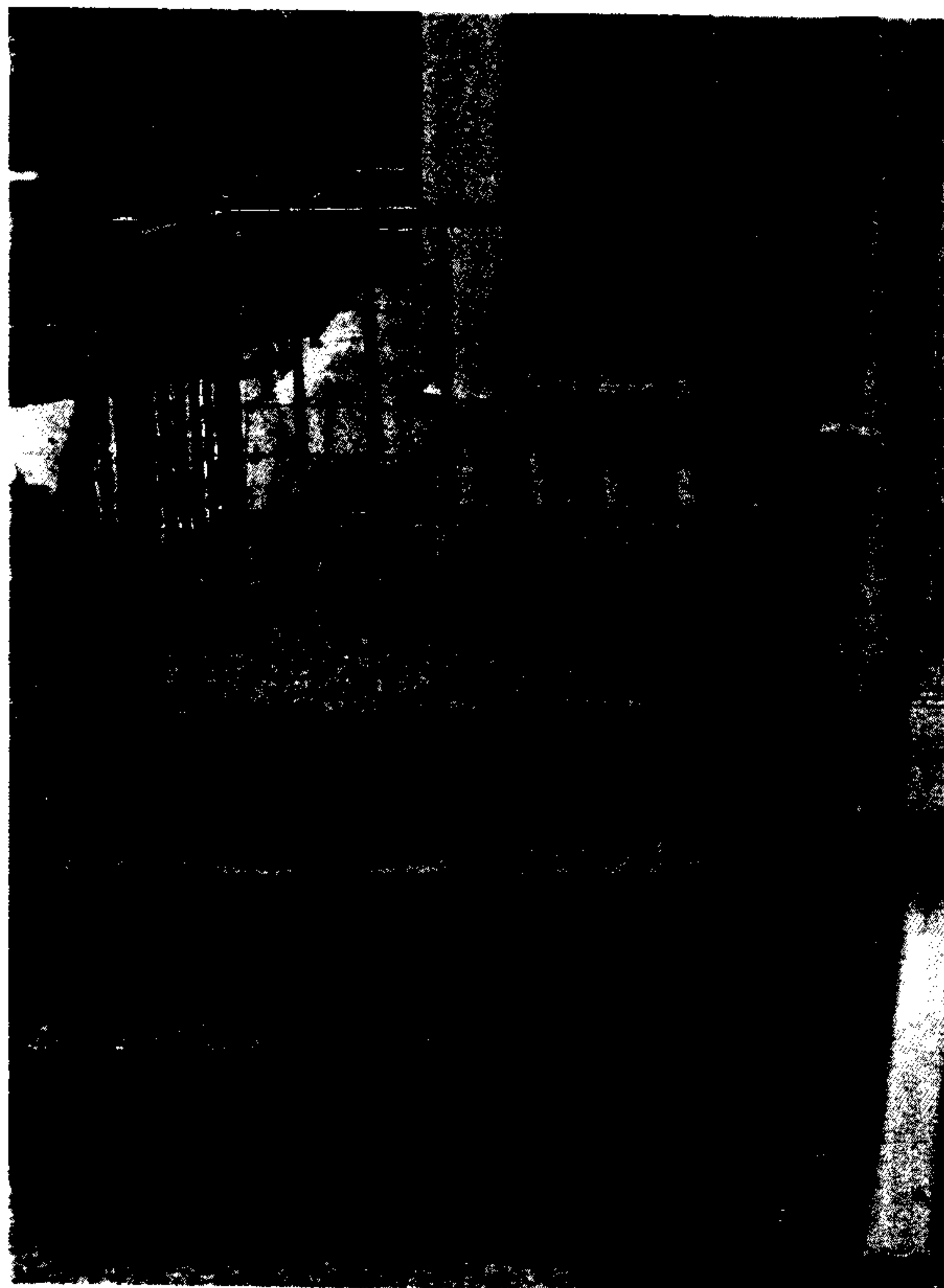
Photograph #10 (Town Hall Annex)
- Bowed & Leaning Front Wall



Photograph #11 (Town Hall Annex)
– Bowed & Leaning Front Wall



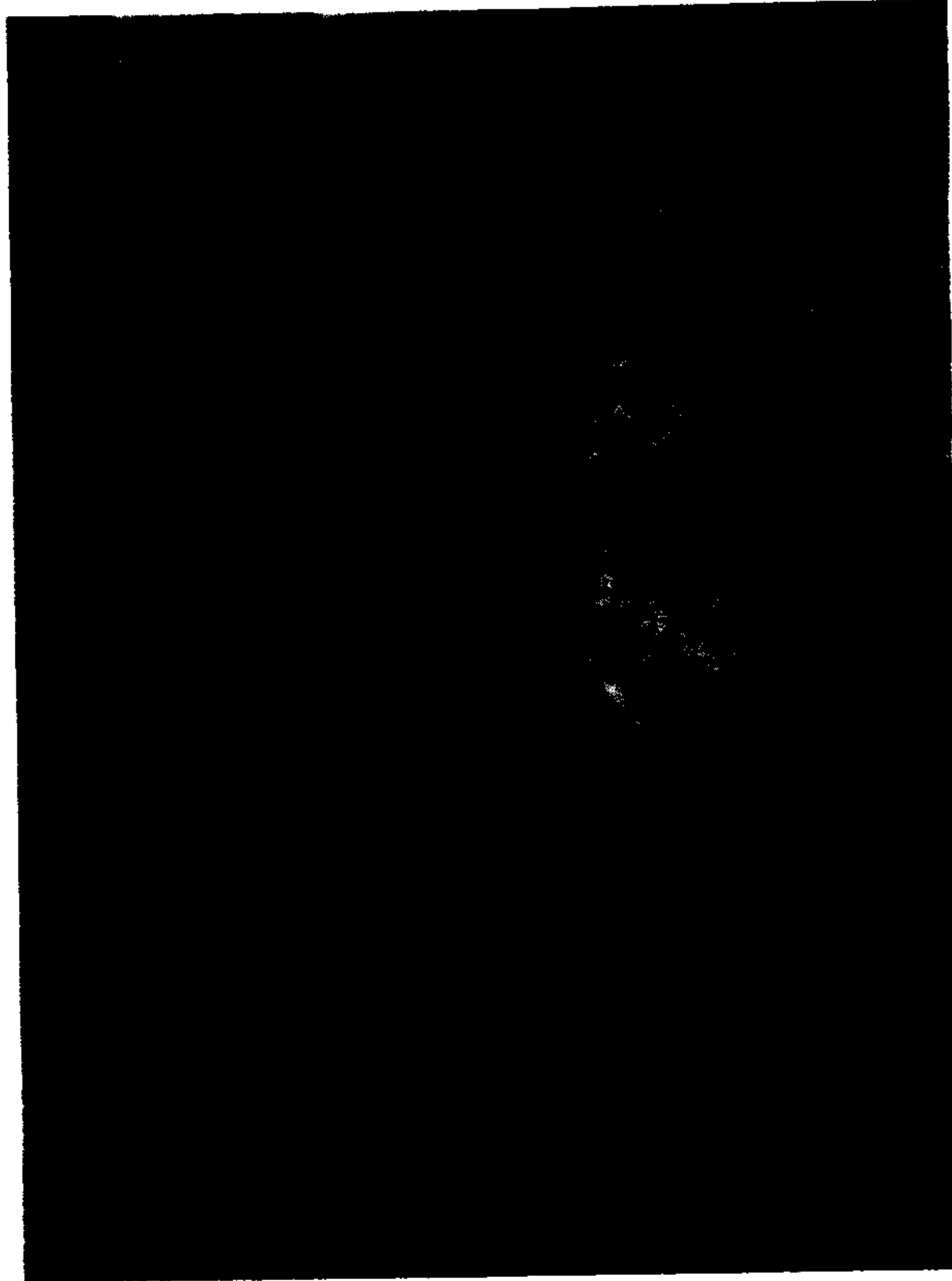
Photograph #12 (Town Hall Annex)
– Leaning Side Wall



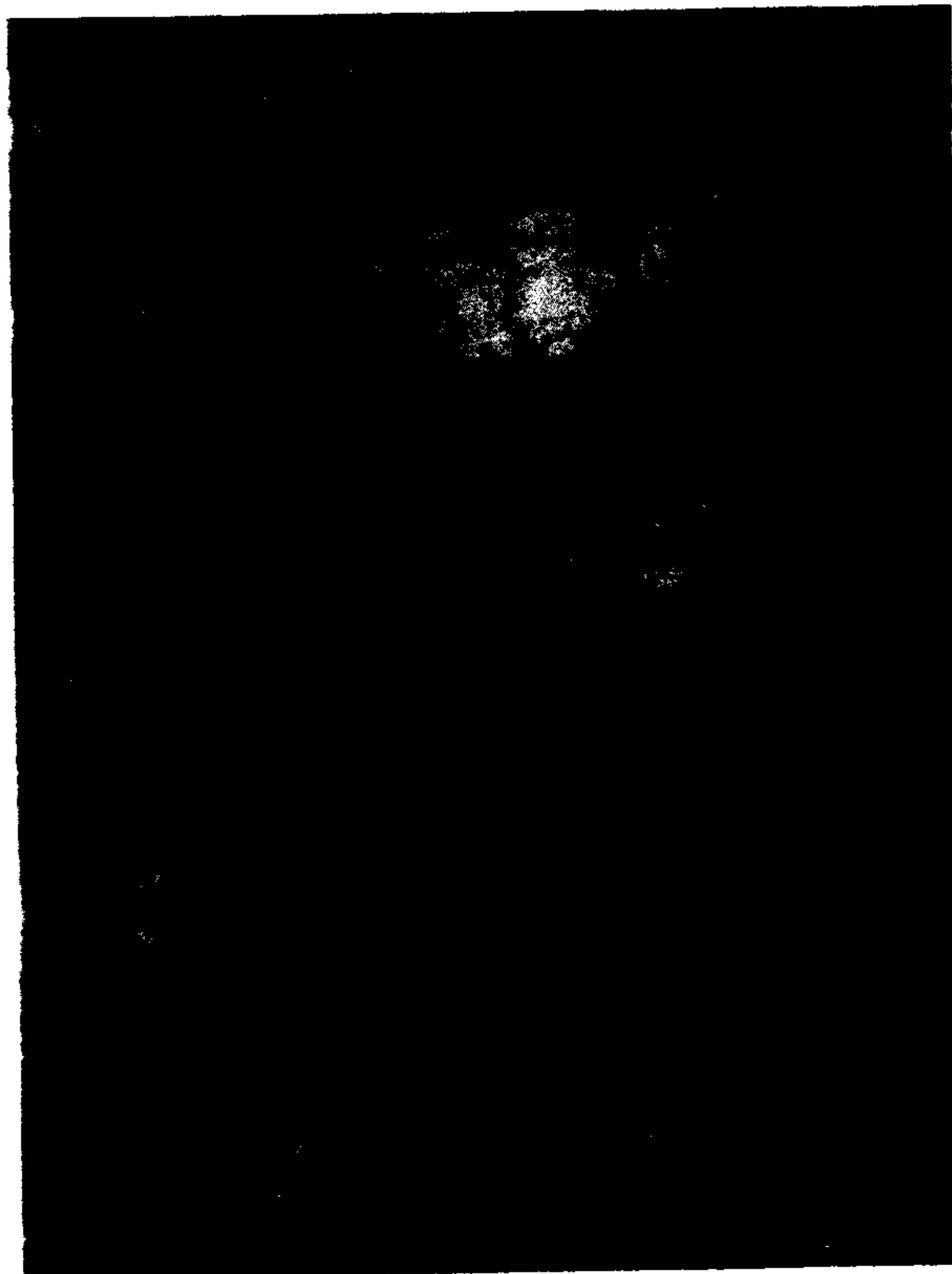
Photograph #13 (Town Hall Annex)
– Sloped Exterior Side Stairs



Photograph #14 (Town Hall)
– Deteriorated Masonry/Field Stone Mortar Joints



Photograph #15 (Town Hall)
– Deteriorated Masonry/Field Stone Mortar Joints



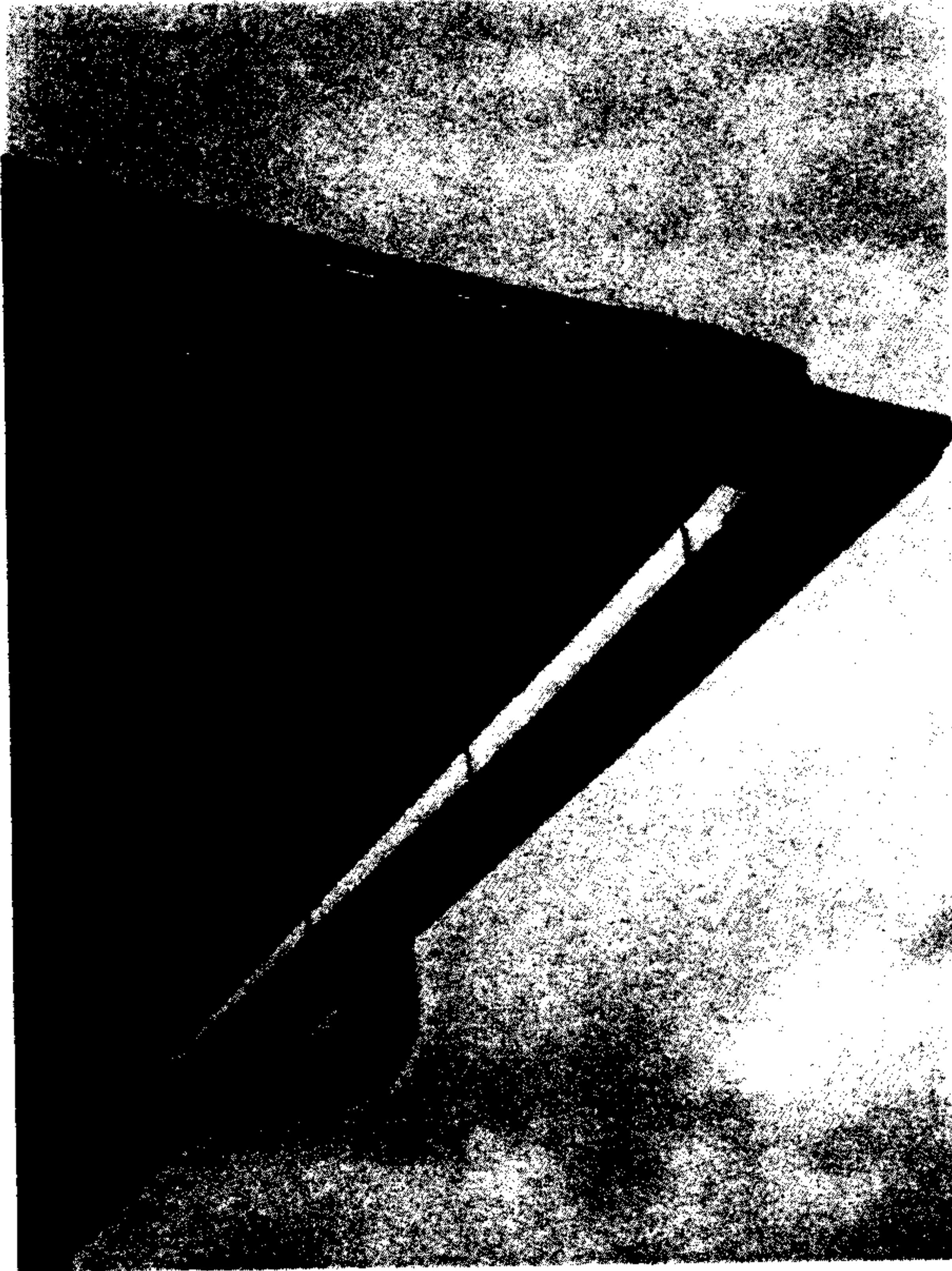
Photograph #16 (Town Hall)
– Deteriorated Masonry/Field Stone Mortar Joints



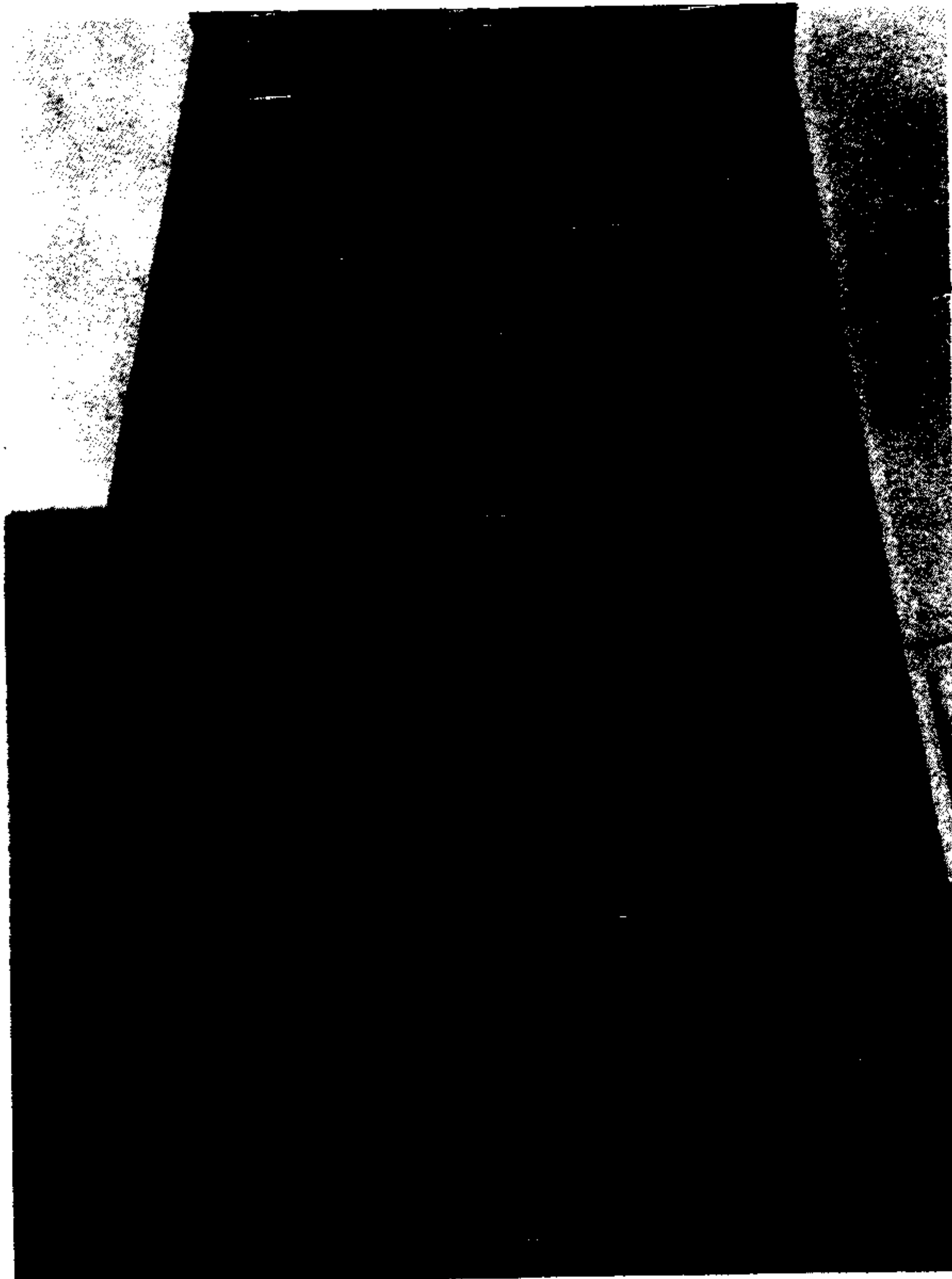
Photograph #17 (Town Hall)
- Interior Water Damage



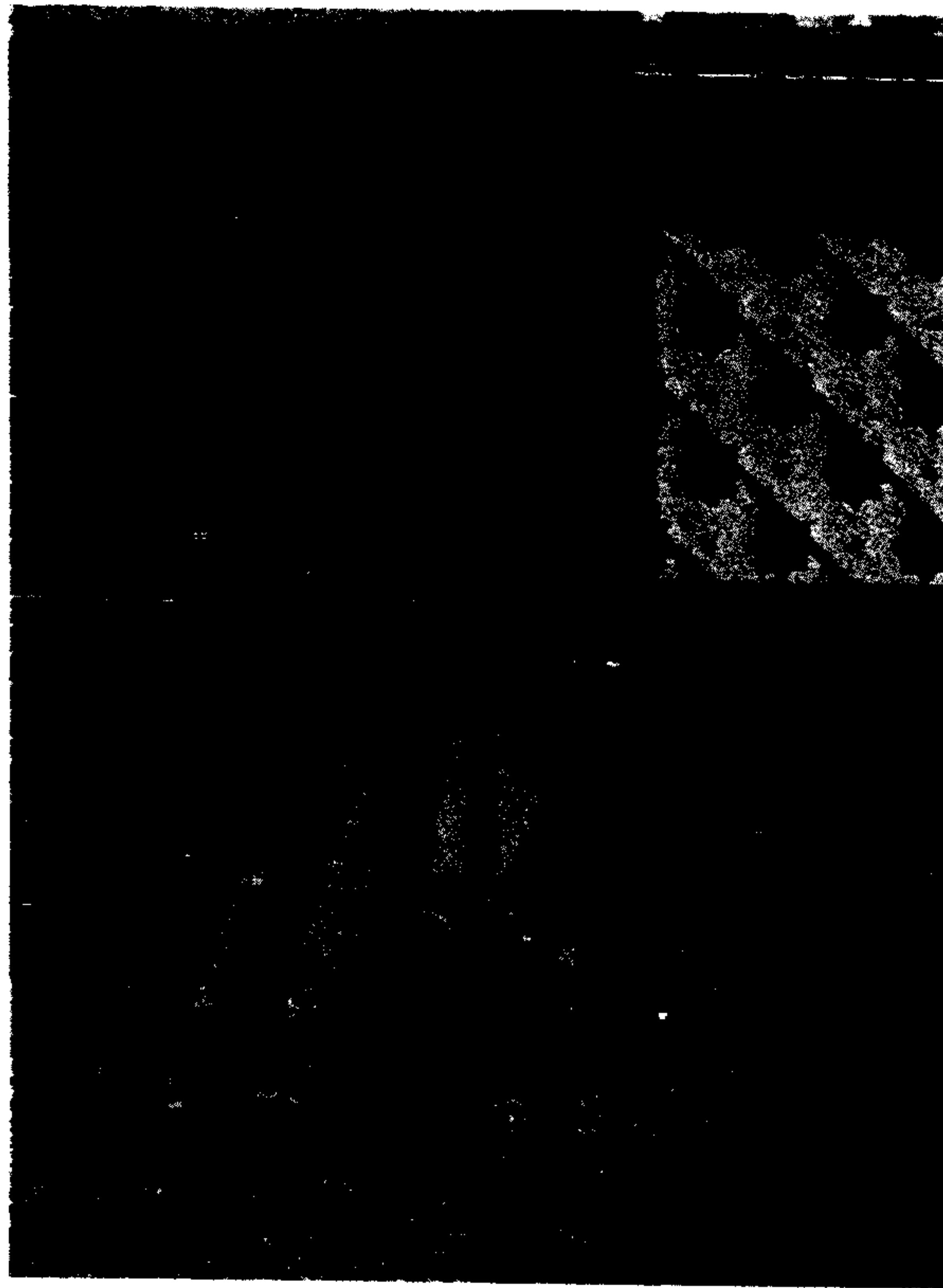
Photograph #18 (Town Hall)
- Low Roof



Photograph #19 (Town Hall)
- Rotted Wood Trim



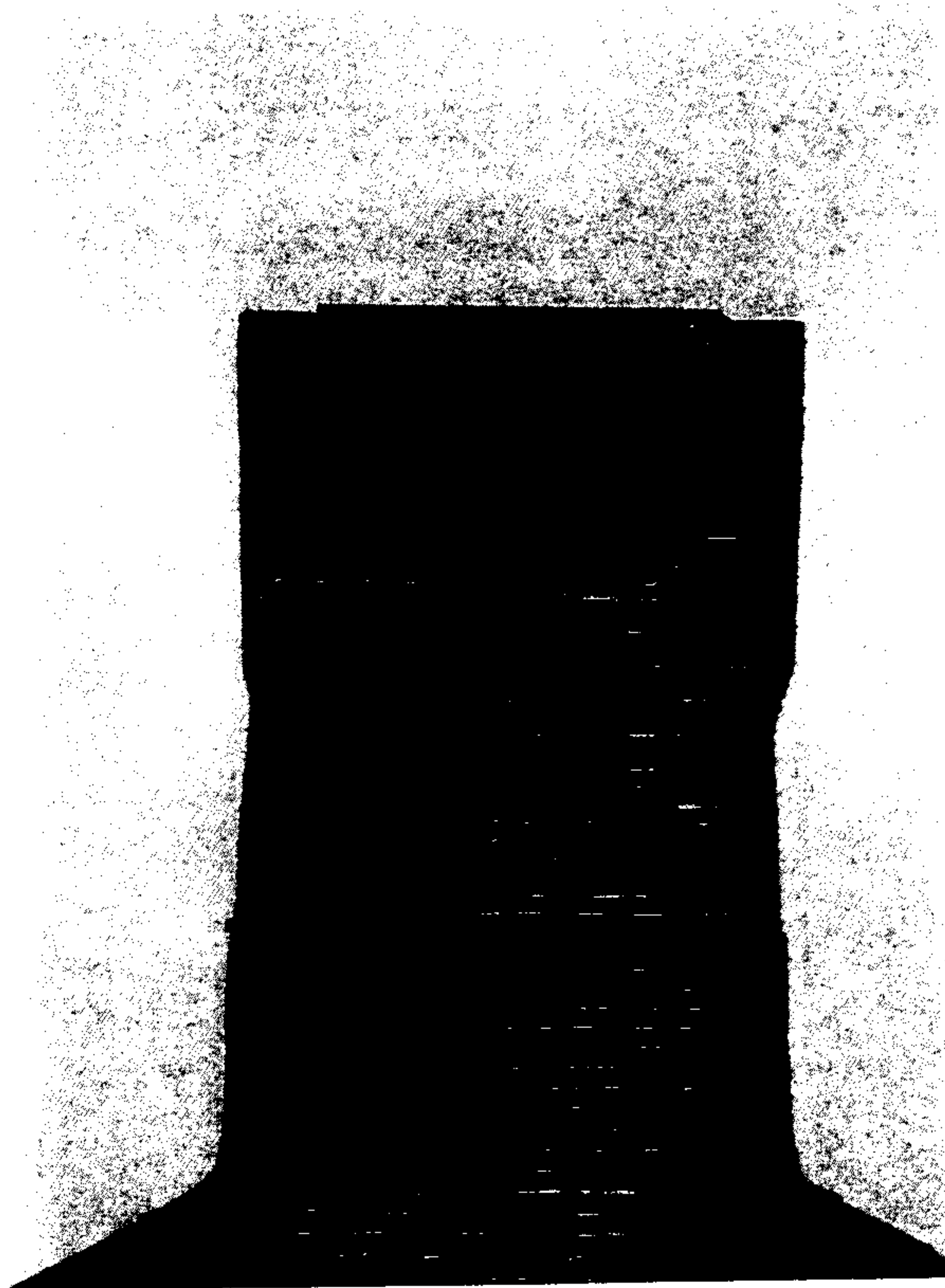
Photograph #20 (Town Hall)
- Exterior Wood Siding & Trim



Photograph #21 (Town Hall)
- Damaged Exterior Masonry



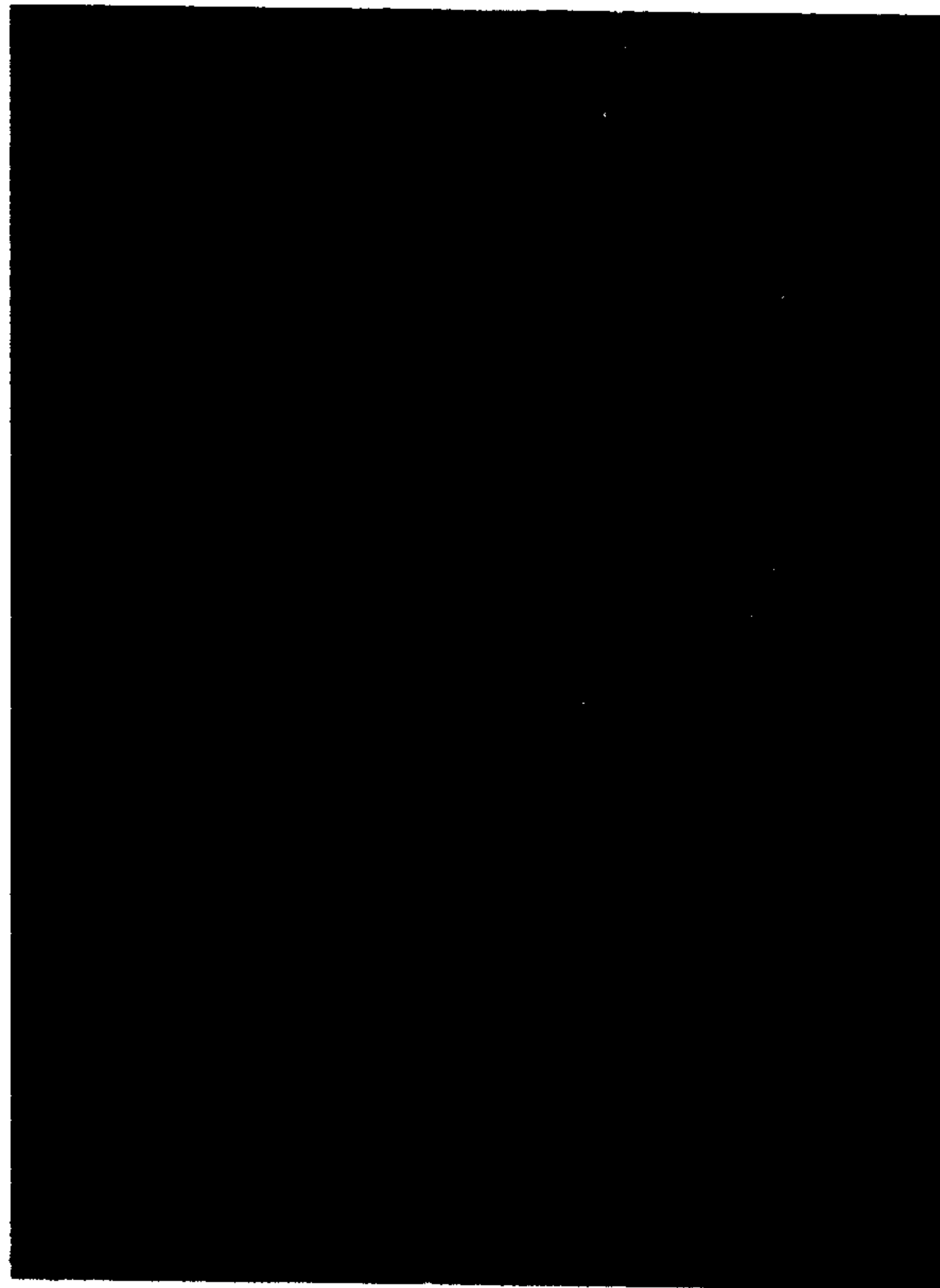
Photograph #22 (Town Hall)
- Deteriorated Exterior Masonry Joints



Photograph #23 (Town Hall)
– Chimney Masonry



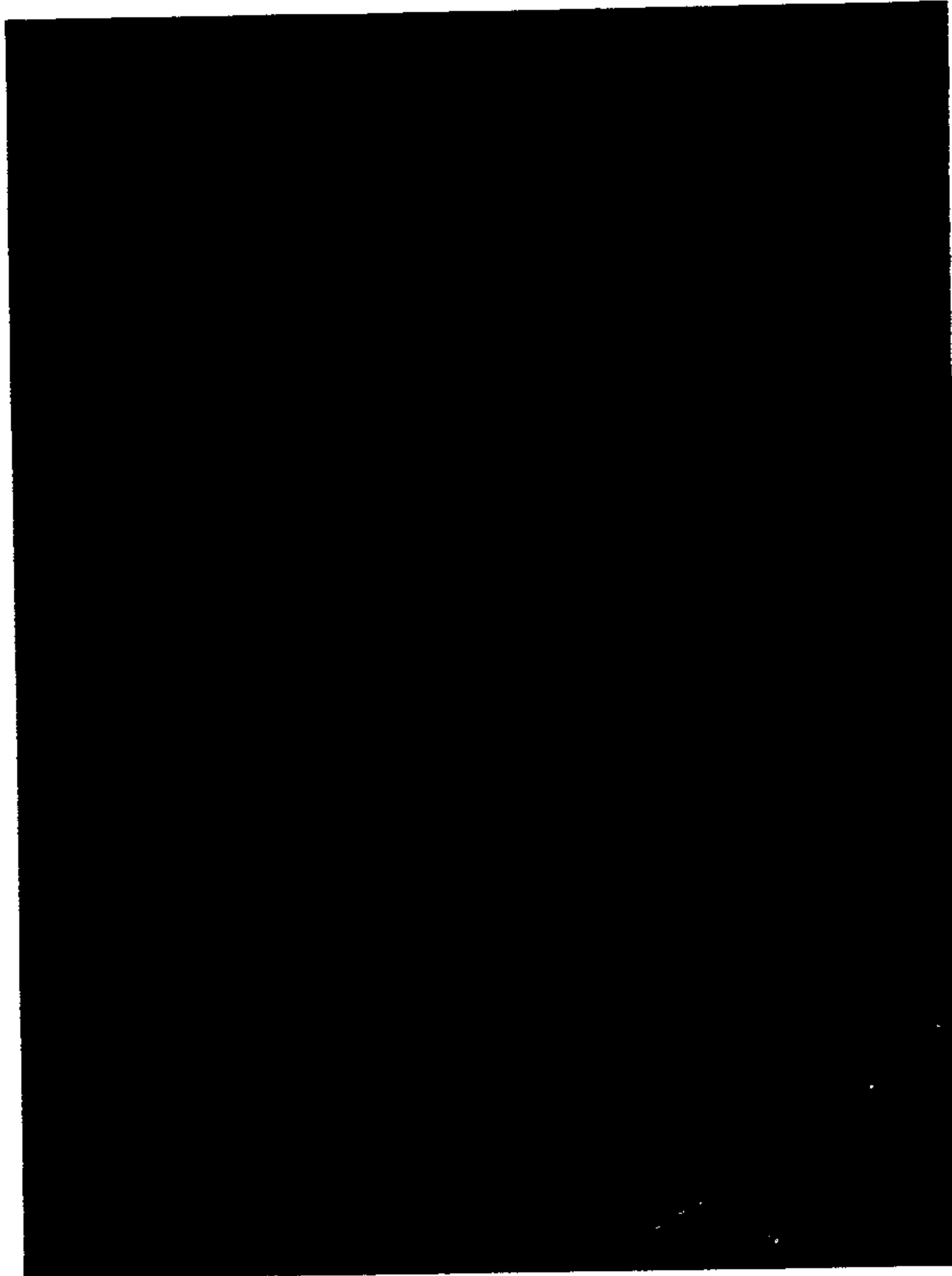
Photograph #24 (Town Hall)
– Reinforced Roof Truss Member



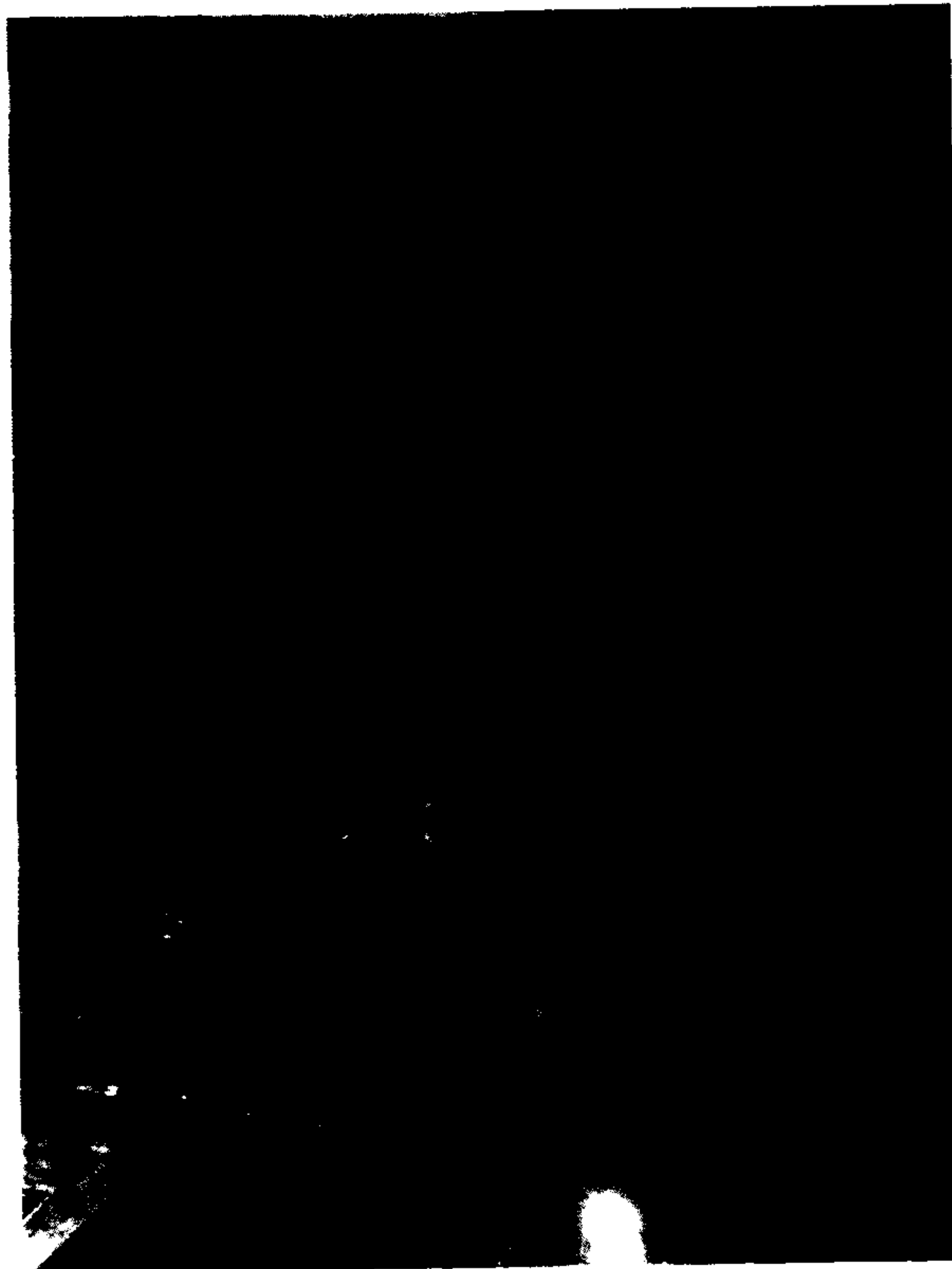
Photograph #25 (Town Hall)
- Cracked Truss Member



Photograph #26 (Town Hall)
- Cracked Truss Member



Photograph #27 (Town Hall)
– Cracked Truss Member



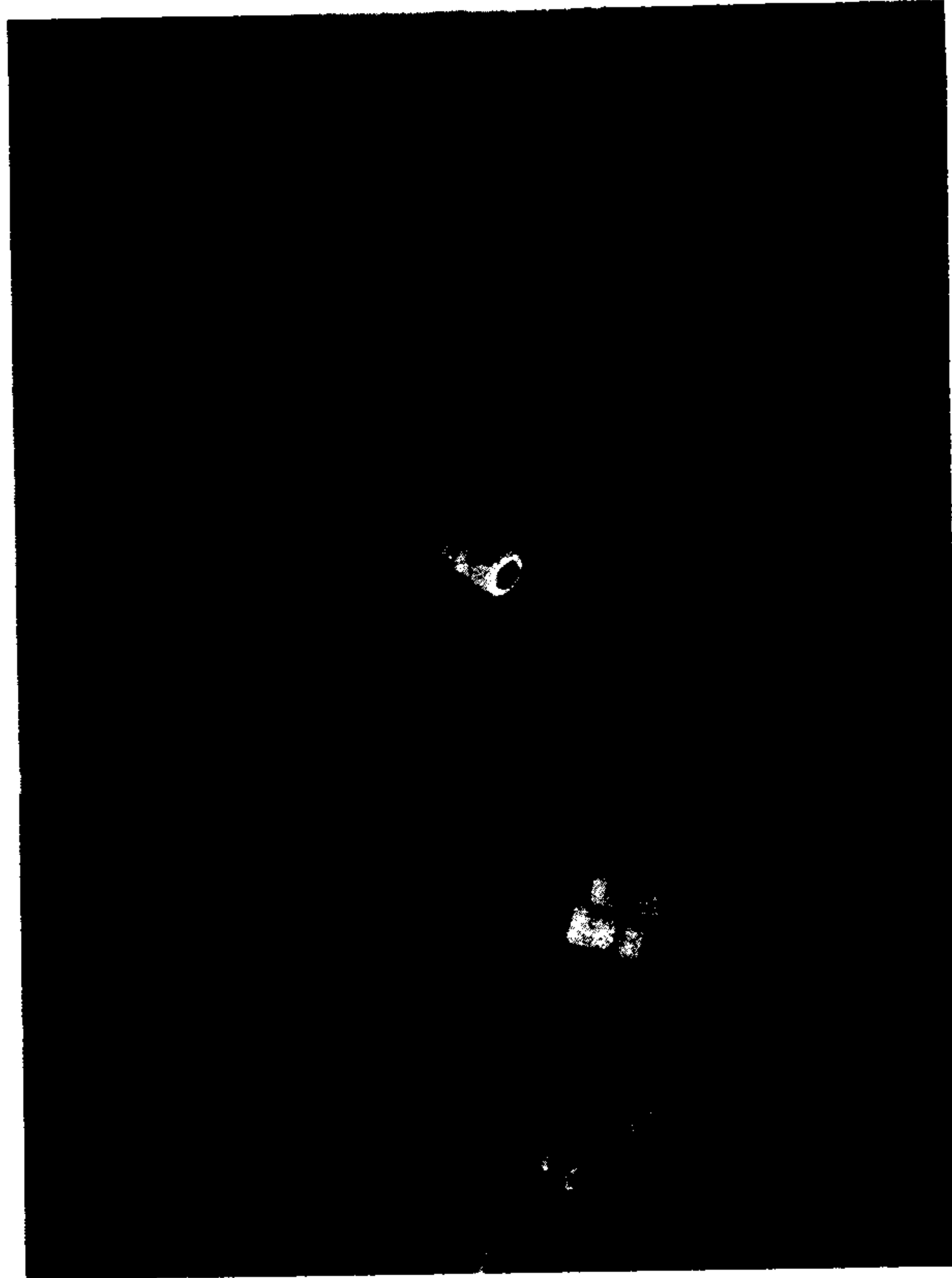
Photograph #28 (Town Hall)
– Cracked Truss Member



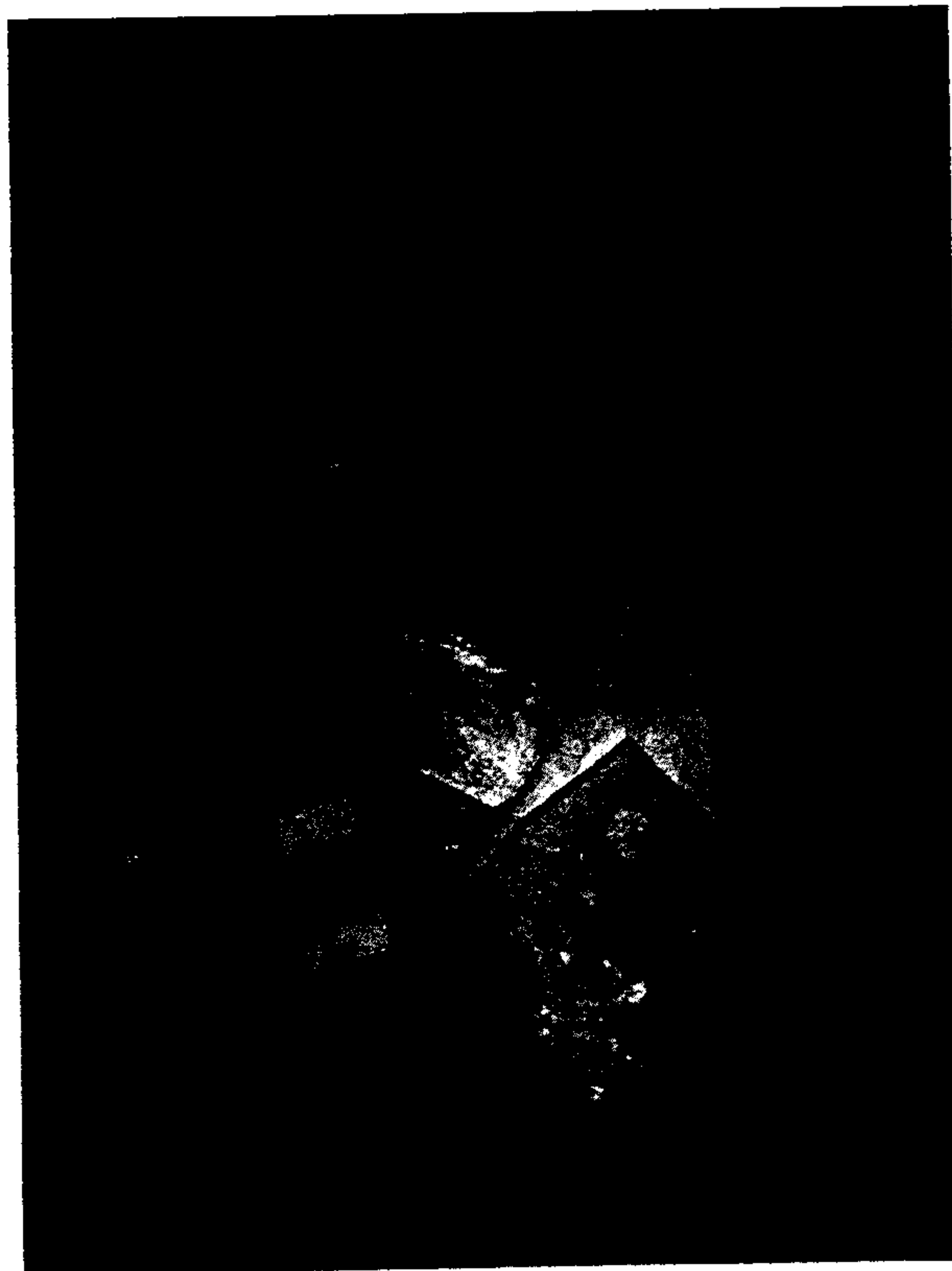
Photograph #29 (Town Hall)
– Gaps at Truss Member Joint



Photograph #30 (Town Hall)
– Gaps at Truss Member Joint



Photograph #31 (Town Hall)
– Gaps at Truss Member Joint



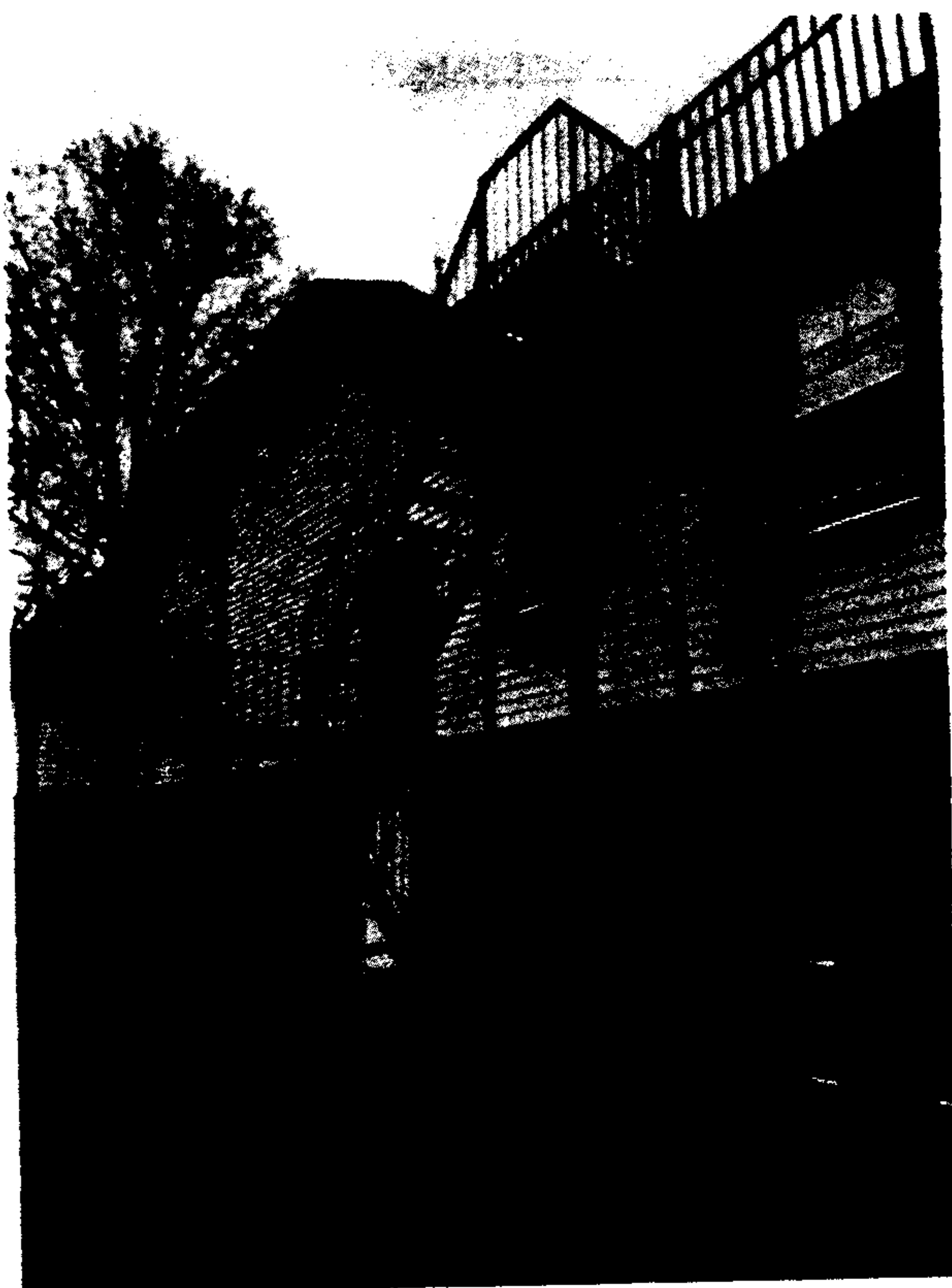
Photograph #32 (Town Hall)
– Gaps at Truss Member Joint



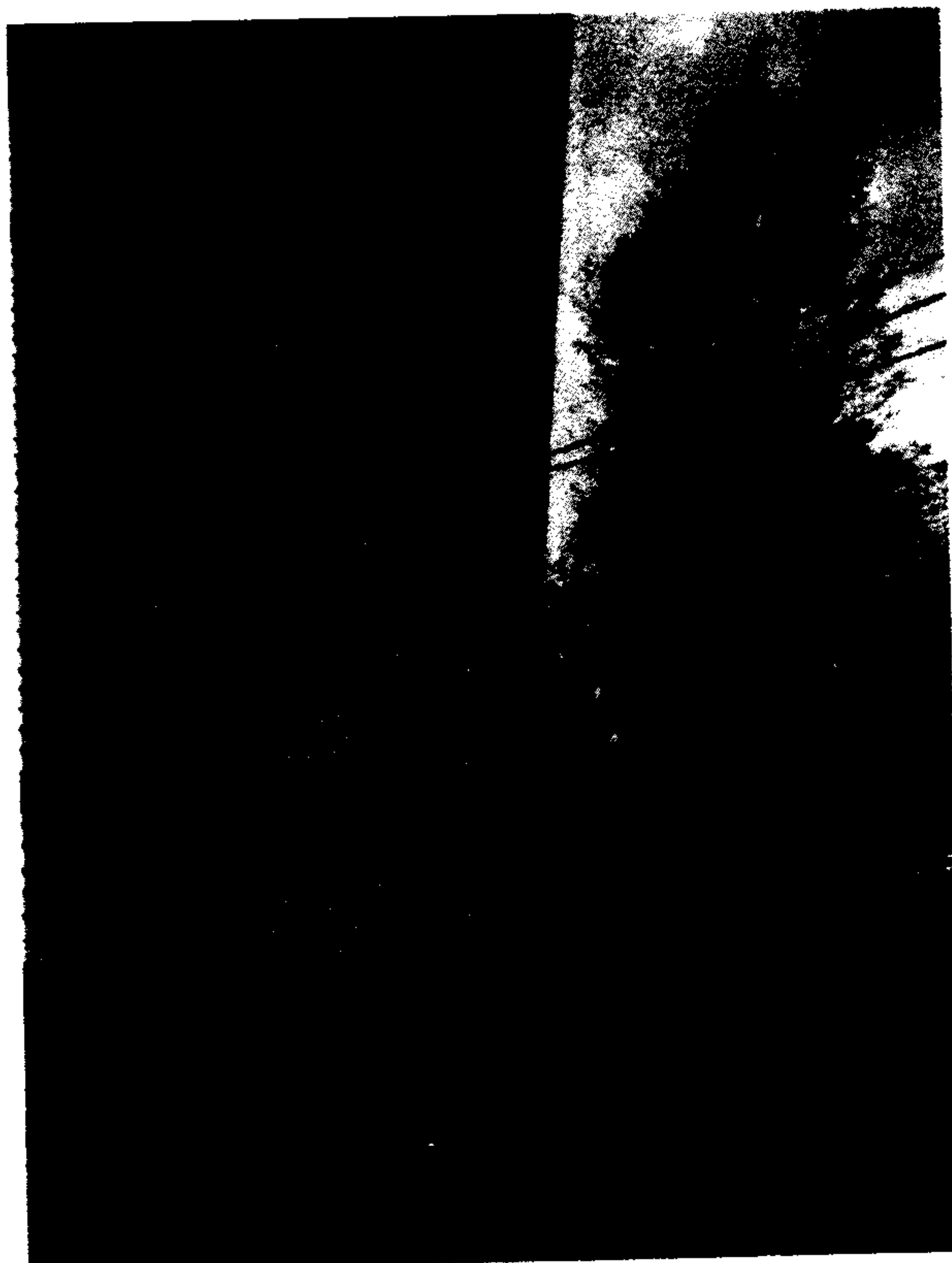
Photograph #33 (Town Hall)
– Gaps at Truss Member Joint



Photograph #34 (Town Hall)
– Wood Shims at Truss Member Joint



Photograph #35 (Town Hall)
- Exterior Fire Escape



Photograph #36 (Town Hall)
- Leaning Exterior Side Wall

Appendix A

#5



13 Main Street, Wales, MA 01081
(413) 245-6582

Bob Corry/Brimfield Historical Commission
Brimfield, Mass.
Via Email

August 20, 2023

Earlier in August of this year, I once again visited the Salisbury house. Various repairs had been made to shore up the structure. While there are some deficiencies with the repairs as noted in the Structural Engineer's report, improvements can be made without too much difficulty. The improvements should be undertaken under the guidance of an architect or engineer sympathetic to the special challenges of working with historic structures. There are a number of other structural issues noted in the Engineer's report that should be addressed. These issues are not so severe that they make the building un-repairable - on the contrary, historic structures are routinely repaired and reinforced. For example, the bow noticed by the engineer on the front of the house is due to a structural sill that is rotting. Sill replacement is a routine component of historic house restoration, but again should be undertaken under the guidance of an architect or engineer.

Previously, I had suggested a one-time, full restoration of the house: removal of all non-original components, repair and reinforcement of the structure, updating mechanical systems, and upgrading finishes. Upon further reflection and recognizing budget constraints and other issues, it occurred to me that the Salisbury house could easily be restored in a methodical and ongoing way by simply continuing repairs and upgrades on a yearly basis. Basically, this is a conservative approach: by identifying issues and making repairs in an ongoing fashion this important town historical resource can be upgraded and preserved. This is a continuation of existing policy: problems have been periodically identified and repairs/upgrades have been undertaken. In some cases, the repairs or changes haven't been executed properly, but in others, repairs have been professionally specified and executed. Going forward, it is desirable to enlist professional help to ensure that town funds spent on the building are spent wisely.

My recommendation is to hire an Architect with experience in Historic Preservation to survey the Town Hall Annex, in conjunction with the Town Hall, to identify deficiencies and outline ways to restore and use the existing structures. By carefully planning a staged restoration of both buildings, the town might be able to achieve more usable working space while simultaneously restoring both historical assets. An architect or other preservation professional could also assist the town by applying for grants towards dedicated preservation tasks. For example, restoration

of the historic wood windows at the Town Hall might be an excellent prospect for funding by the State's Preservation Projects Fund which provides generous matching grants for exterior preservation work. The Pioneer Valley Planning Commission might also be of assistance in this regard.

This conservative approach to the restoration/preservation of both the Town Hall and the Town Hall Annex can likely be achieved without large, one-time expenditures. Instead, it is an incremental, flexible approach that can be tailored to meet the Town's budgetary needs. By being a responsible steward of these important historical assets, the town can meet the twin goals of preservation and developing additional usable working space.

Peter Hamm
August, 2023

#4

JSE JOHNSON STRUCTURAL ENGINEERING, INC.

101 Huntoon Memorial Highway (Rt. 56), Rochdale, MA 01542 (508) 892-4884 Fax (508) 892-0477

June 2, 2023

Town of Brimfield
21 Main Street
Brimfield, MA
Attn: Michael Egan

Re: Structural Scope of Work
Brimfield Town Hall Annex & Town Hall Buildings

Dear Mr. Egan:

As per your request, Johnson Structural Engineering (JSE) has prepared a structural scope of work for the Brimfield Town Hall Annex Building and Town Hall Building. The structural scope of work is for the critical structural items discussed in JSE's "Structural Inspection" report dated May 18, 2023. Please note that the structural work for these critical structural items must be completed by the end of October 2023 (prior to any significant snowfall).

Town Hall Annex Building

- Carry an allowance of 40-hours for carpentry work to install additional wood blocking, shims, and reinforced connections between the existing first floor framing and the temporary steel shoring that was previously installed in the basement.
- Carry an allowance of 20-hours for carpentry work and \$3,000.00 in material for additional wood framed shoring walls in the basement to support the first floor framing adjacent to the front wall where the first floor structure has substantially settled.
- Install wood framed shoring walls at the basement, first floor, second floor, and attic levels to support the existing floor, attic, and roof framing that bear on the leaning and bowed exterior wall along Main Street. The shoring walls will need to be installed along the interior of the building, directly adjacent to the exterior wall. Please note that it is assumed that the exterior wall along Main Street is a load bearing wall. The wood framed shoring walls shall be comprised of 2x6 studs spaced at 16" o.c. with double 2x6 top plates, single 2x6 sill plates at the upper floor levels, and tripled 2x12 sill plate at the basement level.
- Install wood framed shoring walls at the basement, first floor, second floor, and attic levels adjacent to the leaning exterior wall at the front left corner of the building that faces the parking lot. The shoring walls will need to be installed along the interior of the building, directly adjacent to the exterior wall. Please note that it is assumed that the exterior wall facing the parking lot is a non-load bearing wall. The wood framed shoring walls shall be comprised of 2x6 studs spaced at 16" o.c. with double 2x6 top plates, single 2x6 sill plates at the upper floor levels, and tripled 2x12 sill plate at the basement level.
- Install a handrail along the side of the second floor deck/fire escape where a handrail does not currently exist.

Town Hall – Existing Conditions

- All roof leaks must be identified and repaired.
- Install wood framed shoring walls at the basement and first floor levels adjacent to the leaning exterior wall along the right side of the Great Room. The shoring walls will need to be installed along the interior of the building, directly adjacent to the exterior wall. Please note that the exterior wall along the right side of the Great Room is a load bearing wall that supports the roof structure. The wood framed shoring walls shall be comprised of 2x6 studs spaced at 16" o.c. with double 2x6 top plates, single 2x6 sill plates at the upper floor levels, and tripled 2x12 sill plate at the basement level.
- Install continuous steel plates on each side of the roof truss top chord and diagonal members for all roof trusses. The steel plate thickness and thru-bolt spacing shall be similar to the reinforcing that was previously installed along one diagonal truss member (to be viewed on site).
- Install wood shims and steel clips at all roof truss top chord member connections.

It is our recommendation that your office schedules walk-throughs with the general contractors that are bidding the project so they have a better understanding on the scope of work, the extents of the work, and the working conditions.

If you have any questions regarding this report, please do not hesitate to call.

Sincerely Yours,
Johnson Structural Engineering, Inc.

Robert A. Johnson, P.E.

Robert A. Johnson, P.E.
President

HC

Harold P. Leaming

Code Consultants Conflict Resolution

PO box 304 116 Allen Hill Rd Brimfield MA 413-544-0349

September 9, 2023

History of Brimfield Annex:

The Brimfield Town Hall Annex, commonly known as the "Captain Benjamin Salisbury House" located at 23 Main Street Brimfield MA was constructed in 1819 making it over 200 yrs old. The Annex is consisting of two floors and a partial basement. The first floor houses town offices, the upper floor is dedicated to mostly storage and ancillary uses. The Annex is of the Federalist style with a unique hip style roof. The annex has been used to house the town of Brimfield's municipal offices for many years and previously was a doctor's office.

Town Hall Use and Building Type:

According to 780 CMR 302.1 and 780CMR 602.5 respectively 2015 edition, the Brimfield Town Hall Annex falls into the following sub sets;

Use Group: "B" Business Use

Wooden Structure

Stone Foundation

Asphalt Shingle type roof

Building Type: "5-B" type B non-protected

Business Use open to general public

Year Built: 1819 making it over 200 yrs old

On September 3rd 2023 I had the opportunity to assess the condition of the Brimfield Annex building. As I conducted my survey, I viewed the partial basement looking at the condition of the foundation, bearing sill plates, the support beams and the floor joist assemblies, I then concentrated on the first floor paying attention to the floor, load bearing walls and ceiling, as my inspection progressed, I viewed the second floor and attic area. As the assessment continued, I inspected the exterior of the building paying special attention to the sills and load bearing walls. As the survey came to a conclusion, I viewed the roof line, hips and eaves.


Conclusion:

As a retired Senior State Building Inspector, my findings are as follows:

There is no substantial evidence of any major movement or signs of serious structural deficiencies that in my professional opinion would create a dangerous situation for the continued use and occupancy of the Brimfield Town Hall Annex.

The Town Hall Annex is in need of updates and restoration to bring it back to it's former glory, as stated in multiple engineering reports. Nowhere in the multiple reports is there any indication of evidence of imminent collapse. I feel this building with proper repairs will be a safe and viable town building well into the future.

Thank you for your consideration on this project.



Harold P. Learning

Code Consultant-Conflict resolution

