480 Wrangler Dr, Ste. 300
Coppell, Texas 75019 | US
(469) 993-1261
Project #: 240500935
jsheld.com

June 27, 2024

Shari L. Bradix
CNA Construction Defect Claims
Managing Claims Consultant
P.O. Box 8317
Chicago, Illinois 60680-8317
Sent via email to: Shari.Bradix@cna.com

Re: **Construction Damage Assessment - Engineering Report**

File Name:	Casey Slone
Address:	303 North Washington Avenue, Marshall, Texas 75670
Claim No.:	W2C22131
Reported Date of Damage:	February 14, 2024
J.S. Held No.:	240500935

Ms. Bradix:

It is our understanding that on or about February 14, 2024, the building located at 303 North Washington Avenue in Marshall, Texas was allegedly damaged by construction activity performed by Casey Slone Construction (CSC). At your request, J.S. Held LLC (J.S. Held) has conducted an engineering assessment at this property to determine the nature and extent of the reported damage to the building. Specifically, we were requested to determine if the reported damage to the brick wainscot under the storefront window, the reported water damage to the interior, the reported damage to an air-conditioning (A/C) air handling unit, and/or the reported damage to a sanitary sewer line were related to construction activities performed by CSC.

Throughout our evaluation, we inspected the interior, exterior, and crawlspace of the structure as well as documented and photographed representative conditions. As **Appendix A** to this report, we include a selection of captioned photographs. These photographs may have been cropped or otherwise enhanced to emphasize certain conditions. All photographs have been retained in their original formats in our file.

CONCLUSIONS

Based on the inspection performed by J.S. Held of the subject property, the evaluation of the information discussed below, and the information presented in the appendices, it is our professional opinion that:

1. The chip and hairline stair-step cracks in the brick wainscot under the north, east-facing storefront window were caused by construction activity performed by CSC. However, J.S. Held disagrees that

the wainscot required removal and replacement when other, more economical repair methods would have sufficed.

2. The water intrusion into the interior was caused by construction activity performed by CSC. However, this water damage was not the cause of the longitudinal fracture in the concrete beam in the crawlspace.
3. While the A/C air handling unit was not available for inspection, the unit being nonfunctional after the water intrusion event (which, per the above, was caused by construction activity performed by CSC) is the most probable outcome given the site conditions observed by J.S. Held and the owner.
4. The break in the sanitary sewer line was caused by construction activity performed by CSC. However, the contract drawings did not depict the sewer lines from the individual buildings to the sewer main, so CSC had no way of knowing they were excavating above a sanitary sewer line.

DESCRIPTION

According to the Harrison (County) Central Appraisal District's online records, the 2,184 square foot building was constructed in 1900, and the most recent deed transfer date was listed as July 19, 1999. The building was constructed of structural masonry exterior load-bearing walls and supported by a concrete foundation system. The front of the structure faced approximately east. An aerial site view of the property, obtained from Nearmap is depicted as **Figure 1** below.

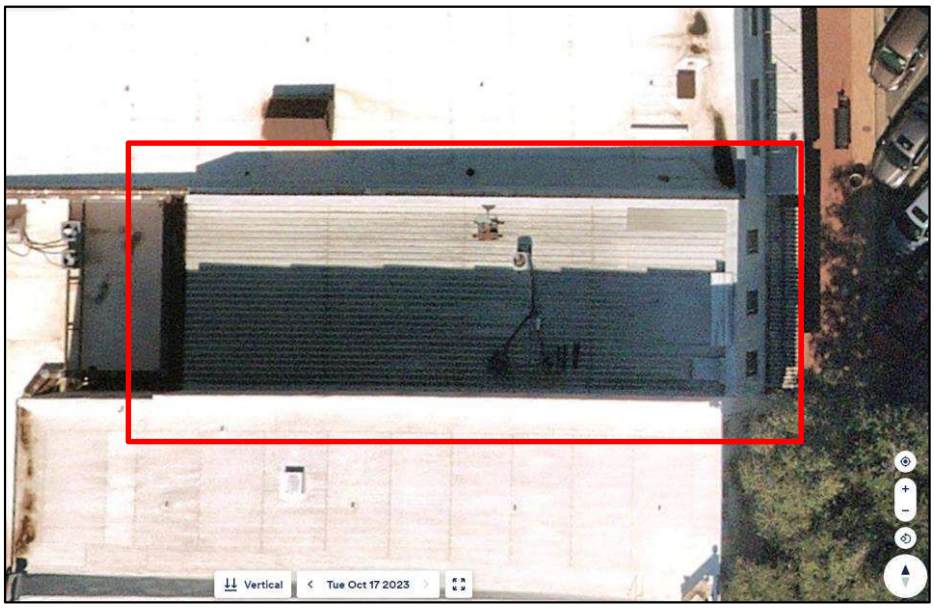


Figure 1 - Aerial site view of the property, dated October 17, 2023, provided by Nearmap.

DOCUMENT REVIEW

We reviewed the following information in conjunction with our evaluation.

- Google Maps, URL: https://www.google.com/maps
- Google Earth, URL: https://earth.google.com/
- Google Street View, URL: https://www.google.com/maps.
- Nearmap, URL: https://www.nearmap.com/us/
- Harrison (County) Central Appraisal District's online records, URL: https://harrisoncad.net/.
- "Construction Plans for Downtown Redevelopment Phase III, 300 and 400 Block of N. Washington Avenue". City of Marshall, Texas. 2023. Approved by Eric Powell, P.E., Director of Public Works/City Engineer on October 20, 2023.
- "City of Marshall, Texas 300 and 400 Blocks of North Washington Ave Redevelopment" Contract, Subcontract, and Technical Specifications, by Hayes Engineering, Inc. October 2023.
- Photographs provided by CSC.
- Photographs provided by Larry Watts.

SITE INSPECTION

J.S. Held inspected the property on May 23, 2024. The following people were present at the site inspection:

- Mr. Casey Slone, with CSC.
- Mr. Larry Watts, the building owner.
- Mr. Daniel Treppel, P.E., Engineer, J.S. Held.

Mr. Slone provided the following pertinent background information onsite during the site assessment on May 23, 2024, and in a phone conversation on June 10, 2024 (paraphrased by J.S. Held):

- The scope of work was to replace the sidewalk along North Washington Avenue.
- The demolition work was subcontracted out.
- The general process for removing the existing sidewalk was as follows:
    - A saw cut was made in the sidewalk approximately 6 to 8 inches from the edge of the building.

  - The sidewalk was then pulled away using an excavator, leaving only the approximate 6 to 8 inches of sidewalk adjacent to the building.
  - This remaining material was chipped out manually until the edge was flush with the building. In some rare instances, a light duty electric jack hammer was used if manual chipping proved to be insufficient.
- The brick storefront wainscot was supported by the sidewalk, which was supported by a concrete grade beam along the front of the property.
- During demolition, a hole was discovered under the existing sidewalk in front of the building. The city engineer was alerted and instructed CSC to cover the hole as it was before when the new sidewalk was installed. No deadline was given for this, and while the hole was exposed, the edges were dammed up using filter socks. While it was known that the hole led under the building, it was not known at the time that the hole led to a habitable space in the building that was below grade.
- There were clay storm drainage pipes under the curb to the street that kept breaking during excavation. The city decided to replace them with new storm drains.

Mr. Watts provided the following pertinent background information onsite during the site assessment on May 23, 2024 (paraphrased by J.S. Held):

- The hole that was uncovered during excavation was not a vent; it was a hole with a pipe for utilities.
- During a rainstorm while construction was underway, water entered the utility hole, and collected mud from the earthen crawlspace, flooding the basement of the building with water and mud. He has been forced to prevent water from reentering the hole ever since. A 10-ton A/C air handling unit was located at the entrance (from the basement) to the crawlspace and was flooded during this event. This A/C unit has since been removed. The water and moisture mitigation of the crawlspace and basement was performed by him.
- The flood through the crawlspace eroded the soil supporting a large concrete beam under the structure.
- After the flood event, he put cement bags around the utility hole, which succeeded in preventing future flooding.
- A plumbing backup was caused by damage to the sewer line during excavation of the street curb. He heard water throughout the building, then water and toilet paper began coming through the shower drain, until he finally located the shutoff valve and turned off all the water.

- The storefront brick and windows had already been demolished prior to J.S. Held's site assessment.

SITE OBSERVATIONS

Photographs of representative site conditions are attached in **Appendix A**. These photographs and their accompanying captions are only intended to describe the general conditions of the property, not all conditions and/or damage that may be present.

The following site observations pertain to the exterior of the building:

- The storefront windows at the entrance to the building had been demolished, and the ground was covered with sloped plywood and tarps to address alleged insufficient drainage (**Photos 1 through 3**).

- There were two concrete troughs in the concrete adjacent to the property that were meant to be filled with brick paving (accent) that had accumulated dirt and sediment (**Photo 4**).

- A small portion of the brick veneer remained at the edges of the property, and it could be seen that demolition had been performed down to the top of a concrete grade beam that supported the structural brick behind the brick veneer. However, while the structural brick was directly supported by the grade beam, there was a several inch tall gap between the top of the grade beam and the veneer brick. The landing leading to the front door, which still had the concrete base intact, illustrated that the concrete base (sidewalk), that supported the veneer was not integral with the top of the grade beam (**Photos 5 through 9**).

- There was a rectangular opening leading to the crawlspace and eventually the basement. According to Mr. Watts, this was not the utility hole that was discovered during demolition. This opening was kept open to install a replacement polyvinyl chloride (PVC) sewer line to tie into the main (**Photo 10**).

The following site observations pertain to the crawlspace and basement of the building:

- Nearly under the above-described rectangular opening, there was a tall concrete beam with a longitudinal fracture approximately down the middle where there was an unusually high concentration of exposed aggregate. The edges of this fracture were generally rounded. There was a void in the soil under the fracture, and where the soil remained, the soil was probed with both a finger and a metal ruler and found to have weak strength (**Photos 11 through 16**).
- A new PVC sanitary sewer line was present in the crawlspace (**Photo 17**).

- The wood framing the ceiling of the crawlspace (the floor joists for the interior space above) was newer in appearance and featured metal joist hangers that also indicated a more recent construction (**Photo 18**).
- The crawlspace was open to the basement, and reportedly the A/C air handling unit was placed near this interface. The conduit for the A/C unit was still present at the entry to the crawlspace (**Photos 19 and 20**).
- Dirt and water marks up to 6 inches above the finished basement floor level were observed on objects such as a safe and storage bins (**Photos 21 and 22**).

CONTRACTOR PHOTOGRAPHS

Representative photographs by CSC are attached in **Appendix B**. These photographs and their accompanying captions are only intended to describe the general conditions of the property, not all conditions and/or damage that may be present.

The following observations pertain to the photographs taken by CSC:

- Prior to the placement of the concrete, a new PVC sanitary sewer line was constructed leading from the crawlspace to the sewer main (**Photo 1**).
- There were photographs that were taken after the sawcut, removal, and chipping process. Due to the red dust emitted when the brick was saw cut, the nominally neutral colored brick wainscot was temporarily tainted with a pink hue, with a distinct line separating where the brick was tinted (above the top of the prior, now-demolished walkway surface) and where it was still neutral colored (below the walkway surface). At the north, east-facing wainscot, there were hairline, stairstep cracks in the brick (**Photos 2 and 3**).
- On the north side of the entry, there was a brick that had been chipped, with a small portion of that chip protruding above the above-described line between the neutral and pink colored areas. Under this chip there was a void, approximately two bricks wide, where the concrete had been chipped out from under the wainscot as well (**Photo 4**).
- The front-facing window for the store front on the north side of the entry had broken at the corner (**Photo 5**).
- In a still image taken from a video by CSC as they were walking by the subject property prior to construction commencing, the wainscot did not exhibit the distress, including the chip or hairline cracking that was present in the above-described photos (**Photo 6**).

OWNER PHOTOGRAPHS

Representative photographs by Mr. Watts are attached in **Appendix C**. These photographs and their accompanying captions are only intended to describe the general conditions of the property, not all conditions and/or damage that may be present.

The following observations pertain to the photographs taken by Mr. Watts:

- Under the tarps in front of the building observed by J.S. Held, there was no concrete yet poured; it was just earthen grade (**Photo 1**).
- There was a fractured sanitary sewer line directly under the location of a new corrugated stormwater pipe (**Photos 2 and 3**).
- There were photographs taken after the sawcut, removal, and chipping process, similar to those taken by CSC (**Photos 4 and 5**).
- The crawlspace and the basement were visibly flooded, and the cleanup of the basement and crawlspace were documented (**Photos 6 through 8**).
- There were multiple photos of the A/C air handling unit depicting residual water and mud inside the cabinet. A water mark was visible several inches above the bottom of the cabinet (**Photos 9 and 10**).

CONSTRUCTION PLANS, CONTRACTS, AND TECHNICAL SPECIFICATIONS

The following pertinent information was garnered from the "Construction Plans for Downtown Redevelopment Phase III, 300 and 400 Block of N. Washington Avenue". City of Marshall, Texas. 2023.

- On Sheet 2, General Note 9 states the following: "*Contractor shall grade the site such that all disturbed areas drain freely with uniform, gently sloping grades as the work progresses along the project…*".
- On Sheet 2, General Note 19 states the following: "*All utility service lines broken or interrupted by the contractor's operations shall be repaired immediately at the contractor's expense*".
- On Sheet 3, the existing site plan does not depict the sanitary sewer lines running from the buildings to the sewer main
- On Sheet 5, the legend for demolition of the brick sidewalk states the following: "*Remove Existing Brick Sidewalk Paving, Including 1-5/8" Brick, 1" Grout, 4" Concrete Base…*"

The following pertinent information was garnered from the "City of Marshall, Texas 300 and 400 Blocks of North Washington Ave Redevelopment" Contract, Subcontract, and Technical Specifications by Hayes Engineering, Inc.

- On Page IB-5, Section 18 states the following: "*The contractor- shall be fully responsible to the City for the acts and omission of his subcontractors, and of person either directly or indirectly employed by them, as he is for the acts and omissions of persons directly employed by him.*".
- On Page GC-3, Section 2.07 states the following: "*The Conjractor [sic] is and at all times shall remain an independent contractor, solely responsible for the manner and method of completing his work under this contract, with full power and authority to select the means, method and manner of performing such work, so long a [sic] such methods do not adversely affect the completed improvements… Likewise; the Contractor shall be solely responsible for the safety of himself; his employees and other persons, as well as for the protection of the safety of the improvements being erected and the property of himself or any other person…*"
- On Page GC-7, Section 3.12 states the following: "*The said Coniractor [sic] shall take proper means to protect the adjacent or adjoining property or properties in any way encountered, which might be injured or seriously affected by any process of construction to undertaken under this Agreement, from any damage or injury by reason of said process of construction; and he shall be liable for any and all claims for such damage on account of his failure to fully protect all adjoining property. The Contractor agrees to indemnify, save and hold harmless the Owner and Engineer against any claim or claims for damages due to any injury to any adjacent or adjoining property, arising or growing out of the performance of the contract; but any such indemnity shall not apply to any claim of any kind arising out of the existence or character of the work."*

DISCUSSION and ANALYSIS

The contract documents, most notably Sections 2.07 and 3.12, place the responsibility of protecting property from injury solely on the contractor, which in this case would be CSC. Further, Section 18 on Page IB-5 also establishes that the contractor is responsible for the acts and omissions of the subcontractors. Thus, CSC was responsible for any property damage directly caused by their work or the work of their subcontractors, as Mr. Slone indicated that the demolition work was subcontracted out.

The onsite evidence, including the gap between the top of the grade beam and the bottom of the veneer, and the locations where the original sidewalk remained, indicated that the brick veneer was immediately supported by the sidewalk, which was in turn supported by the grade beam. This also makes chronological sense as the structural brick behind the veneer was directly supported by the grade beam and the sidewalk was originally cast against it. The veneer was placed sometime after, bearing on the sidewalk. Section 2.07 of the contract documents also empowers the contractor to decide the means and methods to accomplish the work, provided it does not adversely affect the outcome of the work. The methodology employed by CSC and its demolition subcontractor was a nominally viable approach for removing the sidewalk adjacent to the building but allowed for a very small margin of error. The sidewalk was saw cut through a few inches

from the building and pulled away using an excavator and further chipped out to be flush. This created a condition in which for a time, only a strip of sidewalk roughly the same width as the brick veneer/wainscot was providing support for the veneer, a precarious condition until the new slab is poured against it. There was a location where, for unknown reasons, the remaining piece of sidewalk supporting the brick wainscot was chipped out from under the wainscot. This action was accompanied by a visible chip in the brick itself. This created an isolated unsupported condition in the brick, approximately two bricks wide, resulting in hairline stair-step cracking in the aged veneer. As a still image from a preconstruction video taken by CSC showed the brick without a chip or hairline cracks, it is reasonable to conclude that the construction activity by CSC caused this distress.

However, based on the available documentation to J.S. Held, there does not appear to be a reason why the wainscot required demolition and reconstruction (and the other side as well for matching), when the condition could have been repaired in place. Grout or slurry (mud jacking) could have been injected under the wainscot to restore the integrity of the support and simultaneously lift the elevation of the wainscot to a higher elevation if it was felt that it had subsided. The brick could have been repointed to address the hairline cracking and maintain uniformity, and according to the color difference between the brick originally below the surface of the pavers and the brick above, a small portion of the chip in the brick would have been visible above the finished surface, which could have been spot addressed. The glass for the storefront would have had to be removed and reset/replaced regardless.

According to the General Notes of the construction drawings, positive drainage was to be maintained at all times during construction. The very fact that water flowed into the exposed utility hole near the edge of the building and not toward the street is evidence such positive drainage was not maintained. However, the bigger issue here was that filter socks were used to dam up the utility hole. Filter socks are an environmental and sediment control measure usually placed in front of inlet grates to allow water to pass through while capturing undesirable sediment or environmental pollutants. That is, they are specifically designed to let water through, which is why they failed to prevent water from entering the hole. As such, both the creation of the condition that directed water toward the hole as well as the failure to adequately protect the hole from water intrusion were caused by CSC. This fact is highlighted by the fact that reportedly, since Mr. Watts had dammed the hole with concrete sacks, there has not been another flooding event.

However, the assertion that the water caused the distress to the concrete beam in the crawlspace is unfounded for several reasons. First, while the soil was of poor structural strength, and water likely did erode some of the soil under the beam, a concrete beam that is more than 2 feet tall should easily be able to span a void of such size. That being said, with the void there, there were currently stresses on the beam that were not there before, and soil support should be restored to its pre-flood condition. Second, the surfaces of the fracture were rounded, indicating an aged condition and inconsistent with the timeframe of February 14, 2024. Third, the fracture was through a section of the beam that clearly had a deficiency

in the concrete mixing process, as there was a drastically higher concentration of exposed aggregate, weakening the beam at that location.

The A/C unit was not able to be inspected during J.S. Held's site assessment. However, Mr. Watts provided photographs of the damaged condition of the A/C unit, and it was noted that there was residual water and mud as well as a water mark at a significant height relative to the bottom of the cabinet. In addition, J.S. Held did observe dirt and water lines up to six inches from the finished floor in the basement. Given that the water that flowed through the A/C unit would have had to have first gone through the predominantly earthen, easily eroded crawlspace, the water would have been filled with salts and particulate, easily conducting electricity. As such, it is highly unlikely that the A/C unit would have survived the flooding event.

The break in the sanitary sewer line was immediately below a newly constructed corrugated stormwater pipe. Since the area had to be excavated to place the stormwater line in, the excavator would have had to get dangerously close to the sanitary sewer line to properly excavate. Given that there were no breaks anywhere else except where the sanitary sewer line and stormwater pipe excavation crossed, it can be reasonably concluded that the excavator accidentally hit the sanitary sewer line. It is worth noting that none of the sanitary sewer lines from the buildings along North Washington Avenue were depicted in the construction drawings, so CSC had no way of knowing that they were excavating near the line.

(END OF REPORT)

CLOSING

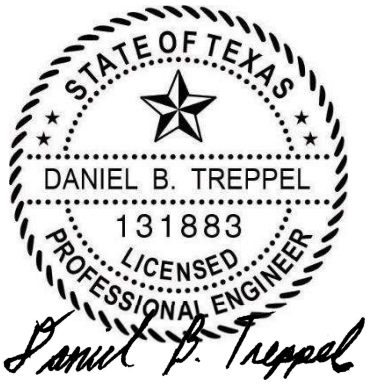
Thank you for the opportunity to provide professional services. Please note that J.S. Held opinions are based on the information provided and/or obtained as well as our training, knowledge, and experience. To the extent that hidden conditions exist, and/or additional information is made available, J.S. Held reserves the right to revise or update any of the observations, assessments, and/or opinions as conditions change or additional information is provided for our review.

Any recommendations offered are of a conceptual nature and are only intended to restore integrity to the affected systems and/or components.

This document is to inure to the benefit of the addressee only and may not be relied upon, used by, or referenced by any third party without the written consent of J.S. Held. If clarification or additional information required, please do not hesitate to contact us.

Respectfully,

J.S. Held
Texas CoA No. F-19689 (Expiration date April 30, 2025)



This document has been electronically signed and sealed using Digital Signatures. Digital Signatures can be authenticated by clicking on the name of the professional in the signature block. Printed copies of this document are not considered signed and sealed and cannot be relied upon as such.

Daniel Treppel, P.E.
Professional Engineer III
Texas Licensed Engineer No. 131883, Expiration Date: June 30, 2025

Attachments: Appendix A – Captioned Site Photographs
Appendix B – Captioned Contractor Photographs
Appendix C – Captioned Owner Photographs

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APPENDIX A

Captioned Site Photographs

Photo 1: Overview of the east-facing storefront showing the absence of the allegedly damaged storefront windows and brick.

Photo 2: Overview of the south portion of the east-facing storefront showing the absence of the allegedly damaged storefront windows and brick.

Photo 3: Overview of the north portion of the east-facing storefront showing the absence of the allegedly damaged storefront windows and brick.

Photo 4: Accumulated dirt and sediment in a concrete trough not yet filled with brick.

Photo 5: Remaining veneer brick and structural brick behind it at the north edge of the entryway.

Photo 6: The structural brick was directly supported by the grade beam, but there was a several-inch-tall gap between the top of the grade beam and the veneer brick.

Photo 7: Close-up of the condition depicted in **Photo 6**.

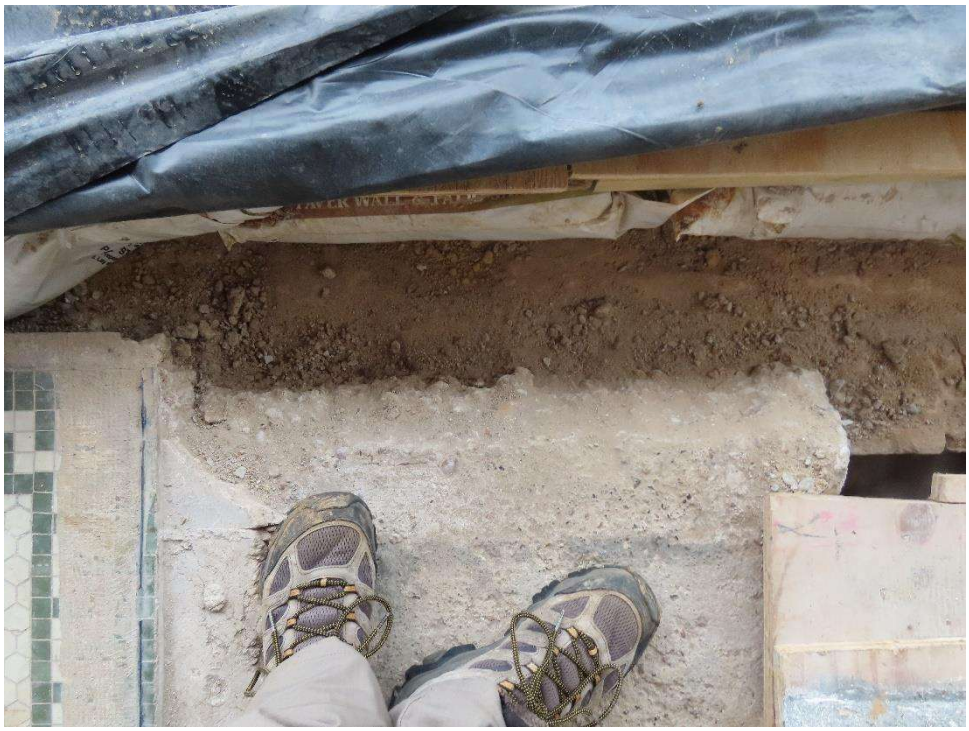

Photo 8: View showing the distinction between the sidewalk base and the top of the grade beam.

Photo 9: Alternate view of the condition depicted in **Photo 9**.

Photo 10: Rectangular opening leading to the crawlspace with a PVC sanitary sewer line visible.

Photo 11: Longitudinal fracture approximately down the middle of a concrete beam where there was an unusually high concentration of exposed aggregate.

Photo 12: Close-up of the condition depicted in **Photo 11**, showing the rounded edges of the fracture.

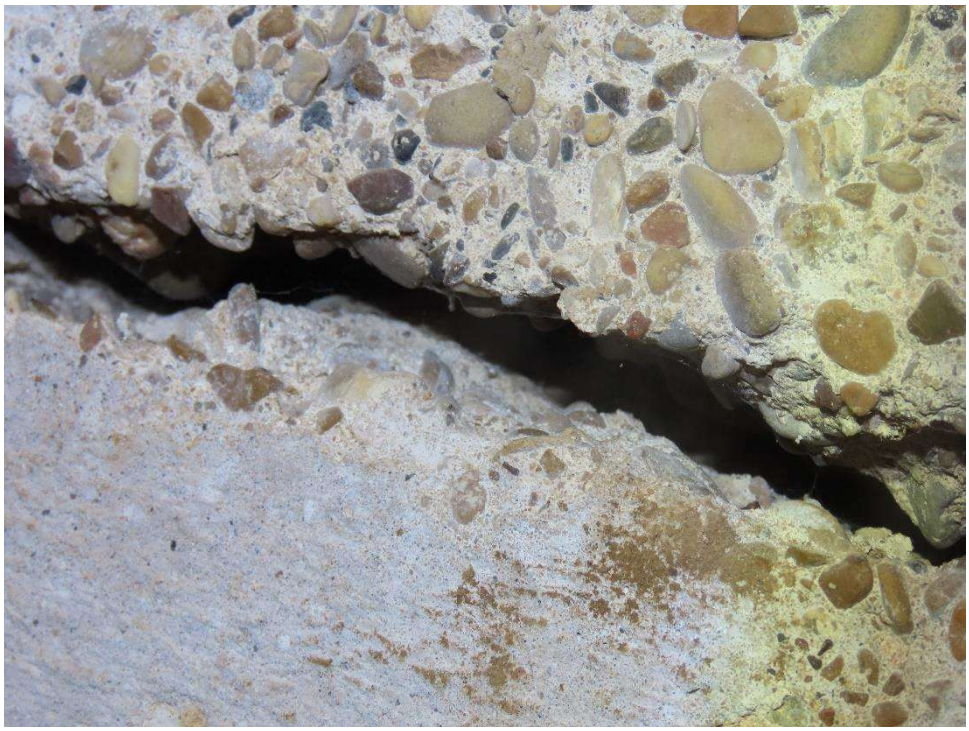

Photo 13: Close-up of the condition depicted in **Photo 12**, showing the rounded edges of the fracture.

Photo 14: Void in the soil under the beam depicted in **Photos 11 through 13**.

Photo 15: The soil yielded to finger pressure.

Photo 16: A metal ruler was easily inserted into the supporting soil.

Photo 17: New PVC pipe in the crawlspace.

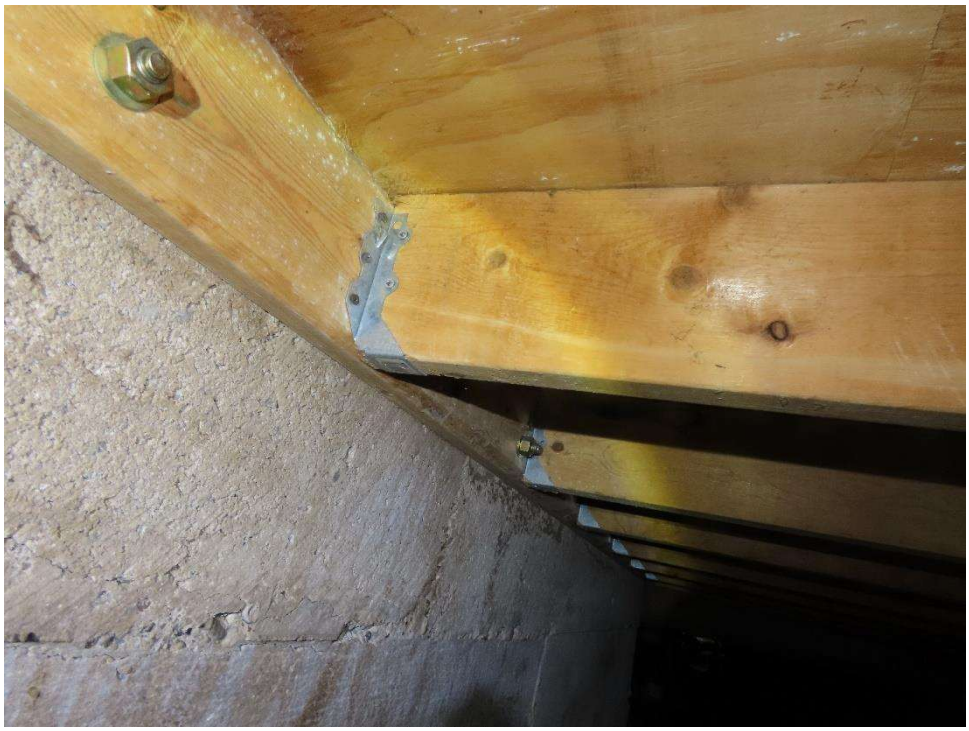

Photo 18: Newer wood framing and metal joist hangers on the ceiling of the crawlspace (the floor framing for the interior above).

Photo 19: Entrance to the crawlspace from the basement.

Photo 20: The conduit (indicated) for the A/C air handling unit was still present.

Photo 21: Dirt and water marks on a plastic storage bin.

Photo 22: Dirt and water marks on a metal safe.

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APPENDIX B

Captioned Contractor Photographs

Photo 1: New PVC sanitary sewer line was constructed leading from the crawlspace to the sewer main.

Photo 2: North side of the brick storefront wainscot, having been saw cut and chipped, with a distinct line indicating the location of the finished walkway surface. Note the fine stair-step cracks (indicated).

Photo 3: North side of the brick storefront wainscot, having been saw cut and chipped, with a distinct line indicating the location of the finished walkway surface. Note the fine stair-step cracks (indicated).

Photo 4: Chip in the brick and a void under the wainscot.

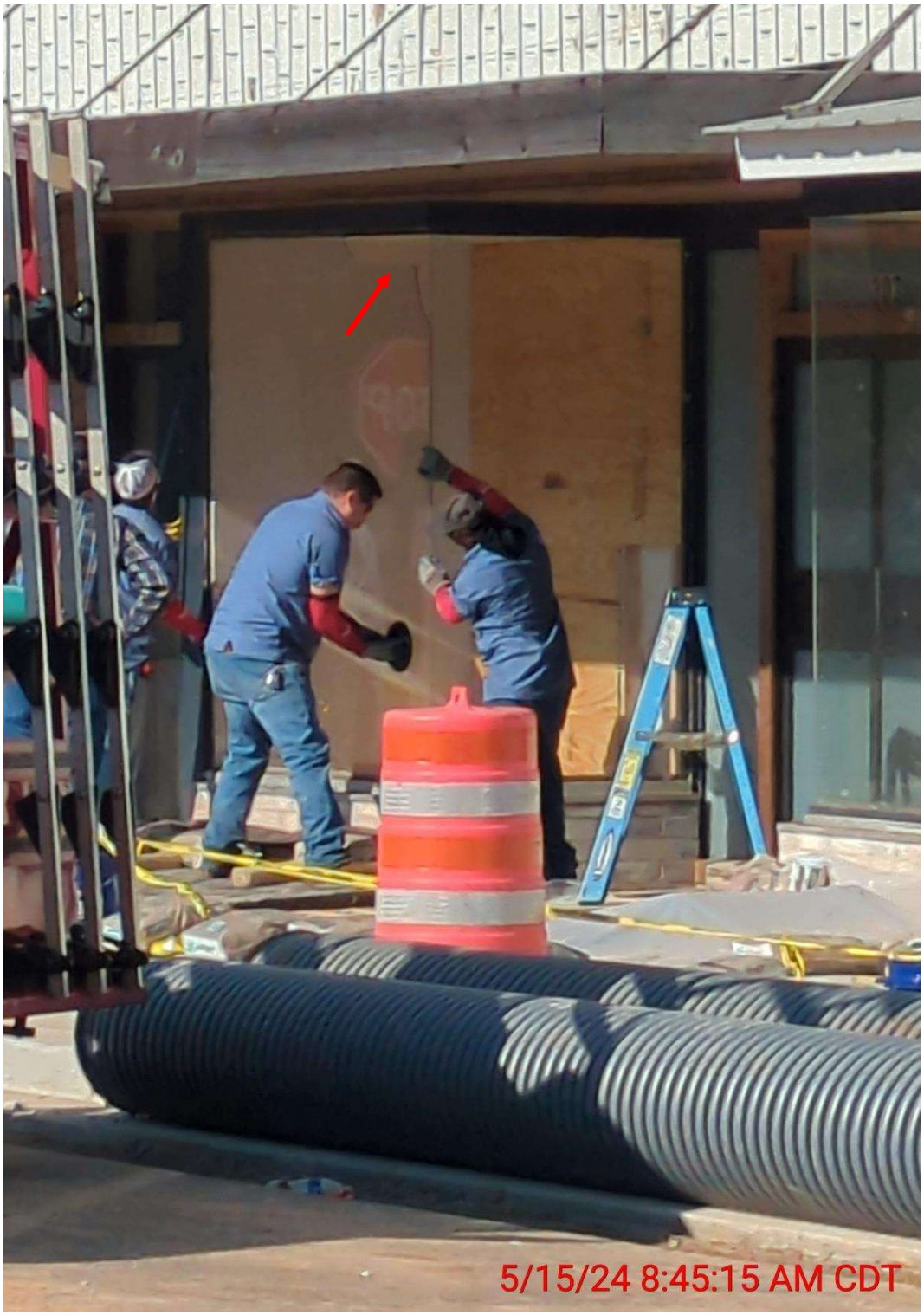

Photo 5: Broken storefront glass (indicated) being removed.

Photo 6: No distress in the brick wainscot prior to construction.

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APPENDIX C

Captioned Owner Photographs

Photo 1: No concrete poured adjacent to the building.

Photo 2: Fractured sanitary sewer line directly under the location of a new corrugated stormwater pipe.

Photo 3: Zoomed out view of **Photo 2** showing the position of the break relative to the stormwater pipe.

Photo 4: Chip in the brick and a void under the wainscot.

Photo 5: Chip in the brick and a void under the wainscot.

Photo 6: Flooded crawlspace under the newly installed PVC sanitary sewer line.

Photo 7: Flooded basement.

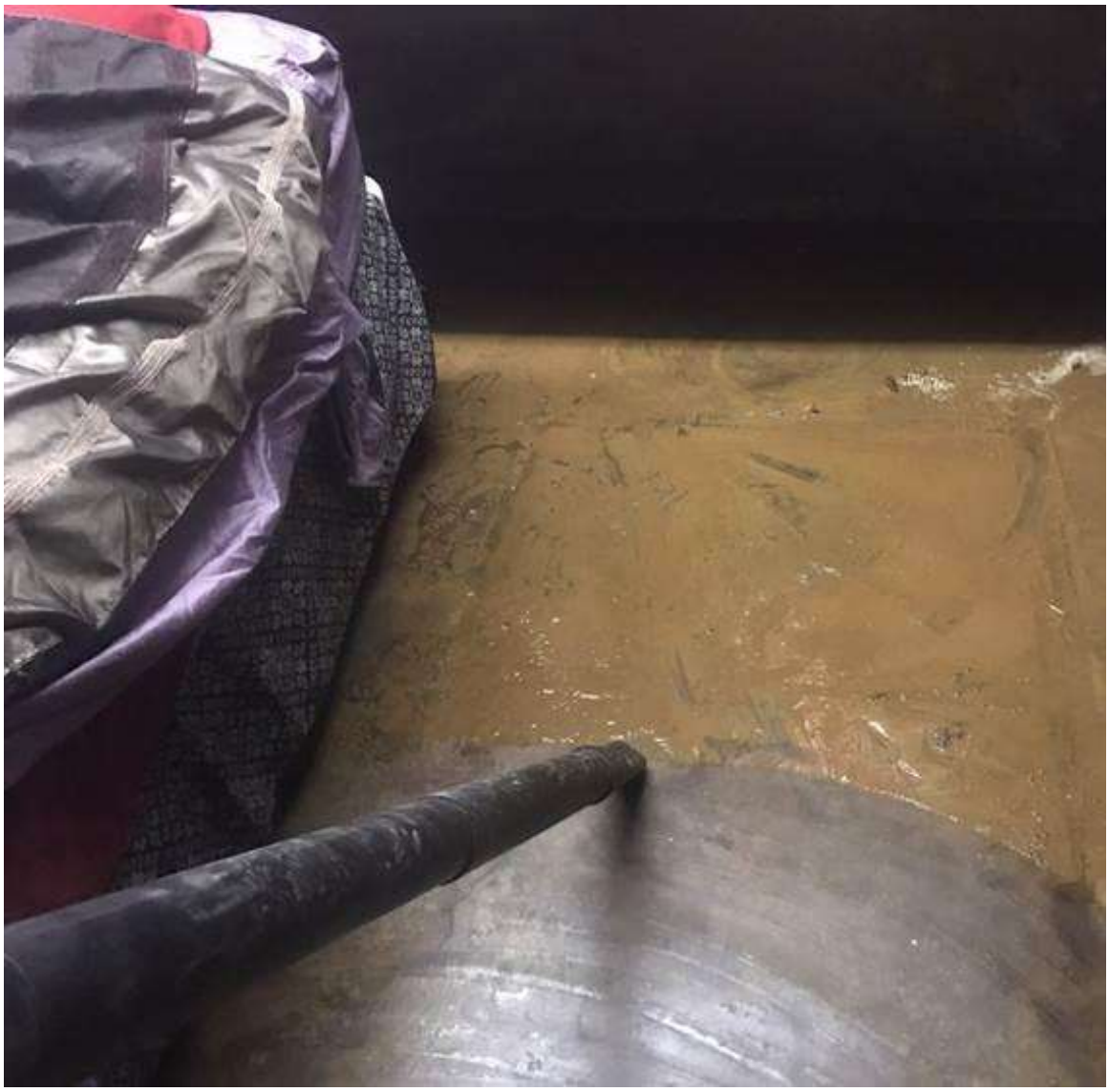

Photo 8: Vacuuming the mud from the basement.

Photo 9: Residual mud in the cabinet of the A/C air handling unit.

Photo 10: Residual water and mud in the cabinet of the A/C air handling unit. Note the water line (indicated).