

**THE CITY OF PLATTEVILLE, WISCONSIN
COMMON COUNCIL AGENDA**

PUBLIC NOTICE is hereby given that a special meeting of the Common Council of the City of Platteville shall be held on Tuesday, July 30, 2024, at 6:00 PM in the Council Chambers at 75 North Bonson Street, Platteville, WI.

- I. **CALL TO ORDER**
- II. **ROLL CALL**
- III. **WORK SESSION** – 250 East Main Street
- IV. **ADJOURNMENT**

***Please note - this meeting will be held in-person.**

If your attendance requires special accommodation, write City Clerk, P.O. Box 780, Platteville, WI 53818 or call (608) 348-9741 Option 6.

**THE CITY OF PLATTEVILLE, WISCONSIN
COUNCIL SUMMARY SHEET**

COUNCIL SECTION: WORK SESSION ITEM NUMBER: VIII.	TITLE: 250 East Main Street	DATE: July 30, 2024 VOTE REQUIRED: None
PREPARED BY: Howard B. Crofoot, P.E., Public Works Director		

Description:

The Wisconsin DOT approved a project to reconstruct East Main Street from Water Street to Broadway. Currently, the project is scheduled for construction in 2027. Jewell Associates has been hired under a three-party agreement between Jewell, the DOT and the City to provide design services for this project.

One of the major components of the project is to realign and reconstruct the storm sewer for the road. Currently, the waterway flows south, makes a turn to the west, flows under the basement of the building at 250 East Main Street, turns back to the south while under the building and continues under East Main Street. (See attached photos) The project intent is to upsize the culvert to account for climate change and realign it to get it out from under the building to improve capacity and flow. Jewell Associates has a subconsultant come in to do soil borings along the proposed realignment. It was determined that a contractor would need to remove rock to install a new storm sewer culvert at the proper depth. Jewell Associates questioned whether the building at 250 East Main Street could withstand the vibrations from excavating rock so close to the foundation.

The City contracted with Jewell Associates to have structural engineers do a more in-depth study of the building. The evaluation team got permission from the owner to look at the building. Enclosed is a copy of reports from their inspector. The initial report from February 9, 2024 is from exterior observations. The report from July 1, 2024 is from interior inspections. There are concerns with the structural stability of the building if there is construction vibration too close to the building and foundation.

Option 1: Drop the project. The planned reconstruction will not take place in 2027. The City is liable to DOT for its share of design work done to date. The City would delay reconstruction of the street for the next 5 years or more. Not recommended.

Option 2: Pavement replacement only. Reduce the scope of work to replace the pavement only. It will be a new pavement structure, but the storm sewer under the road will continue to deteriorate. Some sections may last 15 – 20 years or more, but other sections may not last more than 5 – 6 years, in which case, the City will be spending its own funds to repair the storm sewer. Additionally, this storm sewer is not sized for current storms. In previous large storm events, there has been flooding in the back parking area and up to 6 feet of water in a basement level garage. While a realigned and larger storm culvert will reduce the incidents of flooding, it will not prevent it. Not recommended.

Option 3A: Dig carefully. Hire geotechnical engineers and specialized contractors to install shoring along the excavation, have vibration monitoring and thresholds while digging in increments as we review the building for damage. This is estimated to cost an additional \$150,000. It would be included in the bid package and if the budget is sufficient, DOT **may** be able to help pay for this work. If the budget is tight, the City is liable for costs above the maximum established in the City – DOT agreement. Additionally, there is no guarantee that

this will not result in damage to the building. We document the conditions extensively before and after work and hope that the current level of distress is not increased after the project.

Option 3B: Support the building. Hire geotechnical engineers and specialized contractors to develop a system to support the foundation of the building. The idea is that this would be a higher level of expectation that the project work will not impact the structural stability of the building. The estimated cost is \$200,000. There was a project in Watertown where the city paid to improve the foundation of a historic building. The 250 East Main building is NOT on the historic register. It is unlikely that the DOT would pay for improvements to the building foundation. Let's be clear, this option would improve the building, not just keep it from further deterioration. ANY deterioration in the future would likely be blamed on the project and this foundation support. Staff anticipates the owner would expect the city to fund all or part of any needed foundation repairs – now and into the future.

Option 3C: Purchase and demolish the building. The only way to guarantee that the project will not impact the building would be to purchase and demolish the building. Under the law, the City would be required to go through purchasing procedures. It would take time and a lot of money. Between fair market value purchase price as determined by appraisers, relocation costs to relocate the business and persons in the rental units, the cost for appraisers, purchasing agents, legal reviews, demolition, etc., could easily run \$850,000 or more.

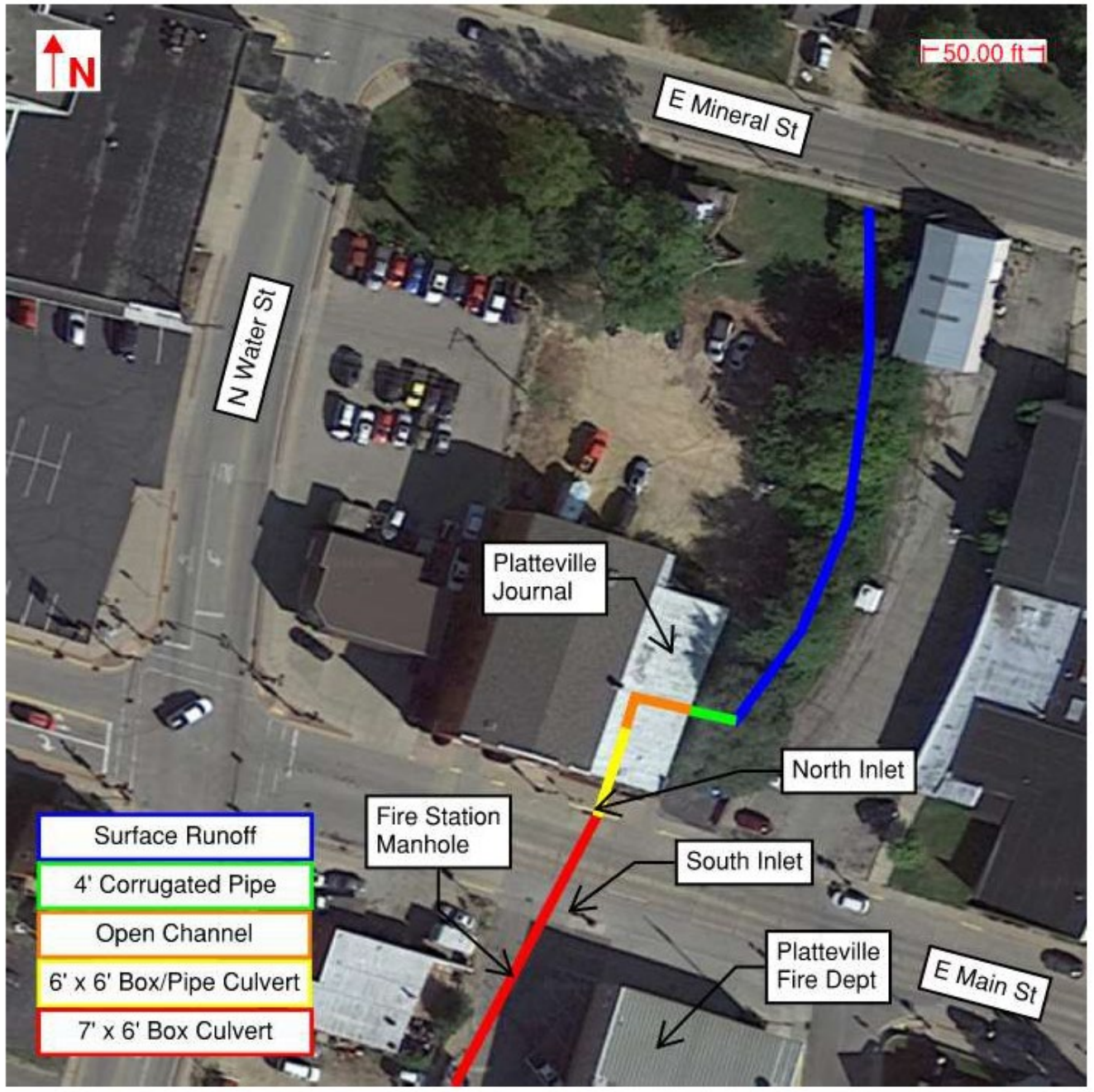
Mr Nathan Lipinski is the Project Engineer from Jewell Associates for the E. Main Street project. He will be available in person to discuss and answer questions about the reports.

Staff and Mr. Lipinski are here to take questions on the situation and present possible solutions.

Attachments:

- Site Overview
- Photo of the waterway under 250 E. Main St./ E. Main Street
- Jewell Associates report dated July 1, 2024, with a copy of the February 9, 2024 report and photos.

Site Overview



Photo



Attached to the February 9, 2024 report is a photo of the channel as it transitions from the open area under 250 E. Main Street to a channel. In that photo, it appears that the arch above the box channel was a metal pipe that was sprayed with a concrete coating. This will extend the life of the metal pipe, but if it was rusted before the concrete spray, it will not be as effective. Approximately where the channel exits the foundation of the building/under the sidewalk, there is a transition back from sprayed concrete to plain metal pipe. It is plain to see that the metal pipe is severely rusted. In the Staff note, this is the portion that Staff is deeply concerned about if we delay the project or not replace storm sewer.

July 1, 2024

Howard Crofoot, P.E.
Director of Public Works
City of Platteville
75 N Benson Street
Platteville, WI 53818

RE: 250 E Main Street, Platteville, WI
Structural Condition Assessment

Dear Mr. Crofoot,

Jewell Associates inspected the above reference property to perform a general structural condition assessment. The unfinished basement, partially finished basement and exterior were inspected. The main level was not inspected because the current finishes cover all areas of interest and the upper level was not inspected because it is private residences and access was not allowed.

Construction plans of the existing structures are not available, and our inspection was limited to those elements exposed to view, and did not utilize ultrasonic or destructive testing.

This report supplements our previous inspection and memo dated February 9, 2024 (copy attached).

Observations

Exterior (observed from the outside):

- The base of the east wall below the trim is rotted and soft. (See Photo 1 & 2)
- The east wall bows from the ground line up the main level floor structure elevation. The bow is roughly 6", with a lean of 2-3 degrees. (See Photo 1 & 2)
- The brick at the east end of the entry (planter wall) has shifted to the east. (See Photo 3, 4, 7)
The lower wall portion leans to the east 1 1/8" at the top. There is a 1/4" wide crack in the mortar joint. This crack extends to the south face diagonally. (See Photo 8 & 9) There is also a loss of mortar at the corbel near the ground on the southeast corner of the building. (See Photo 5 & 6)
All of this indicates that the southeast corner of the building has settled approximately 1 1/8".
- The brick work on the parapet and fascia on the south and east side of the building near the roof is in very bad shape with almost no mortar on the outside face. The brick appears loose and concrete wall caps have shifted. (See Photo 10)

Partially Finished Basement (observed from the inside):

- The windows on the east wall lean out approximately 5 degrees. (See Photo 15)
- There is a crack in the south foundation wall near the east corner. (See Photo 13 & 14)
- The timber posts supporting the main level floor structure lean to the east 2-4 degrees. With one post 2" out of plumb over its height. (See Photo 11 & 12)
- The plywood subfloor is rotted in areas, has a spongy feel when stepped on.
- The wood floor joists above look to be in good condition.

- There is a 15'-8" concrete slab at the south end of the partially finished basement. This appears to be a slab on grade with the unfinished basement starting 15'-8" from the south end of the building. This slab has two large diagonal cracks originating at the south wall extending to the NW & NE respectively. This crack extending to the NE also indicates possible settlement at the SE corner of the building.
- The joists above framing the ceiling/main level floor have two span conditions. One has 2x12 rough sawn joists at 12" o.c. spanning 19 feet, the other has 2x12 rough sawn joists at 16" o.c. spanning 13 feet. Some areas have joists spaced at 22" o.c.

Recommendations

The structure seems to be settling or leaning to the east. The settling and leaning is noted in the interior columns, east exterior wood wall and entry brick. As noted in the February inspection, there is also significant deterioration to the stone foundation at the east wall and southeast corner.

This current inspection has reinforced concerns I had expressed in the February 9, 2024 memo, and they remain substantially unchanged. There are significant concerns about the stability of the stacked stone foundations supporting the upper levels of the building. The roadway construction will likely be excavating immediately adjacent to the foundation to depths up to 20 feet. The construction process will also cause vibrations through the soil substrata. I have concerns that the stone foundations in their current condition could not withstand the adjacent construction and vibration. The loss of mortar has allowed the existing stone to become very loose making the potential for wall collapse possible, if not likely.

Additionally, the brick and stone work at the south and south east corner of the building is in very poor condition. In my opinion this condition poses a safety concern to pedestrians using the public sidewalk. Adjacent construction has a potential to dislodge the existing brick and stone, both at the ground level and near the upper parapets.

If construction of the underground facilities is to proceed, and the existing building is to remain, I would recommend that a soils expert and building shoring expert be retained during the design and construction process to assure the stability of the existing building as underground construction proceeds.

If you have any questions regarding my recommendations, feel free to contact me in my office at 608-459-6029.

Sincerely,



Michael Mertens, P.E.
Jewell Associates Engineers, Inc.



Photo 1 – East wall bowing in above grade



Photo 2 – East wall bowing in above grade

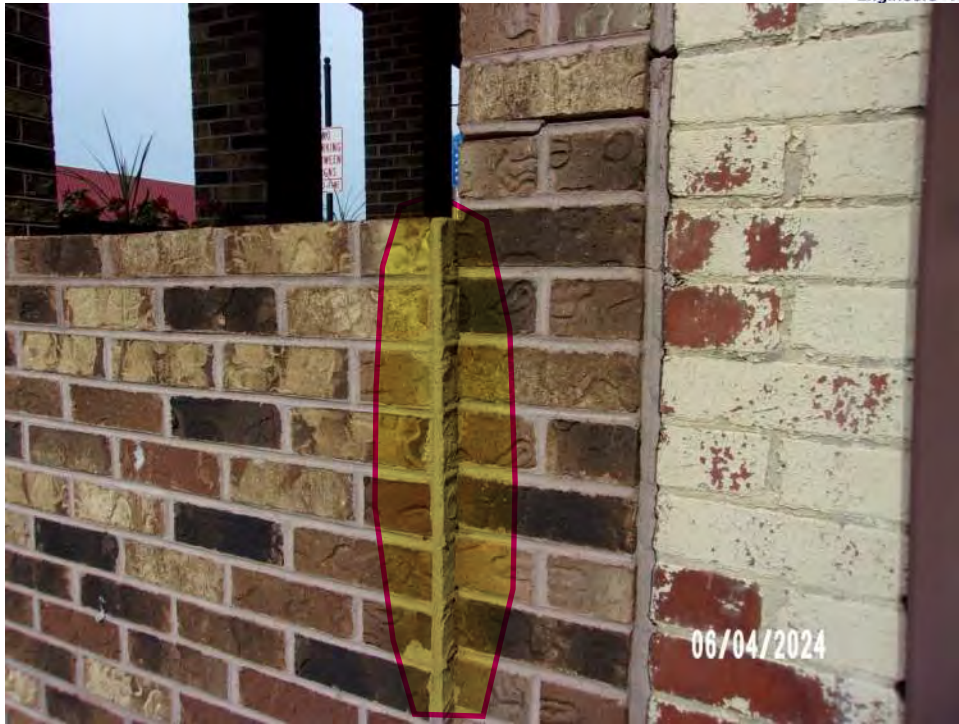


Photo 3 – Brick planter wall leaning east



Photo 4 – Brick planter wall leaning east



Photo 5 - Loss of mortar at the corbel near the ground on the southeast corner of the building



Photo 6 - Loss of mortar at the corbel near the ground on the southeast corner of the building



Photo 7 - Brick planter wall leaning east



Photo 8 - Crack in south brick wall



Photo 9 – Crack in south brick wall

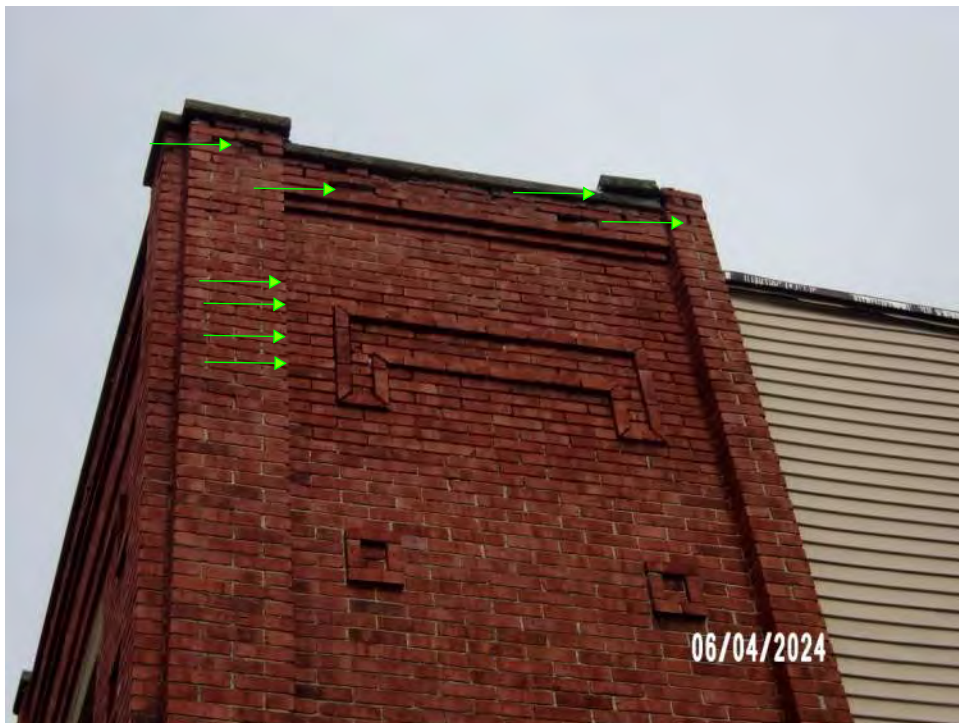


Photo 10 – Poor mortar joints in brick on east and south face of building



Photo 11 – Interior columns lean to the east significantly



Photo 12 - Interior columns lean to the east significantly



Photo 13 – Crack in south stone foundation wall



Photo 14 – Crack in south stone foundation wall



Photo 15 – Windows set in wood wall lean to the east

Memo

To: Jeff Smith
From: Michael Mertens
CC:
Date: February 9, 2024
Re: City of Platteville, 250 E Main Street

Jeff,

I observed the existing building foundations at 250 E Main Street in Platteville, WI in anticipation of a roadway reconstruction project planned for Main Street. The following are my observations.

Observations:

The existing building foundation appears to be constructed of stacked stone. The exposed areas of stone do not have mortar in the joints. I assume that mortar was originally used, but has failed since it was constructed. The stone is very loose in areas and appears ready to fall. Individual stones could be removed by hand.

The East wall of the foundation has had a concrete wall poured adjacent to portions of the foundation on the inside. This wall appears to be supporting a wood framed beam & column system used to support a wood framed floor system. It appears that the loads from the upper walls still are transferred through the stone foundation walls.

An interior support system constructed of concrete piers, wood columns and wood beams is used to support the floor system. This interior structural system seems "cobbled together" without much thought or planning.

Viewing the exterior elevation of the building from the south, there appears to be gap widening between the subject building and the adjacent building to the West. The gap appears to grow in width as it gets to the roof indicating that the building may be leaning to the east. It has not been determined if the possible movement is ongoing or has happened in the past and been arrested.

There is a culvert system that conveys storm water out of the foundation to the south. The first portion of the culvert is constructed with concrete walls and a concrete arch, which transitions to concrete walls with a steel arch. This culvert appears to be in fair condition with some isolated areas

of moderate to significant steel section loss at joints and overhead inlets. There was no significant concrete deterioration observed.

Recommendations:

If the construction project proceeds, openings to the building foundation should be closed up. This could be accomplished by blocking up the openings with CMU and grouting them closed. The CMU could be doweled into the existing concrete or stone. The inlet opening may need a footing constructed to create a level bearing surface to construct the CMU wall.

If the foundation is closed up, consideration should be given to future access from the upper level and ventilation of the space to prevent mold and the build up of possible hazardous of gasses.

I have significant concerns about the stability of the stacked stone foundations supporting the upper levels of the building. The roadway construction will likely be excavating immediately adjacent to the foundation to depths up to 20 feet. The construction process will also cause vibrations through the soil substrata. I have concerns that the stone foundations in their current conditions could withstand the adjacent construction and vibration. The loss of mortar has allowed the existing stone to become very loose making wall collapse possible to likely.

Following are representative photos.



Photo of SE corner of lower basement showing crumbling stone foundation, timber floor support system and concrete concrete wall poured against stone foundation.



Photo showing timber floor support system

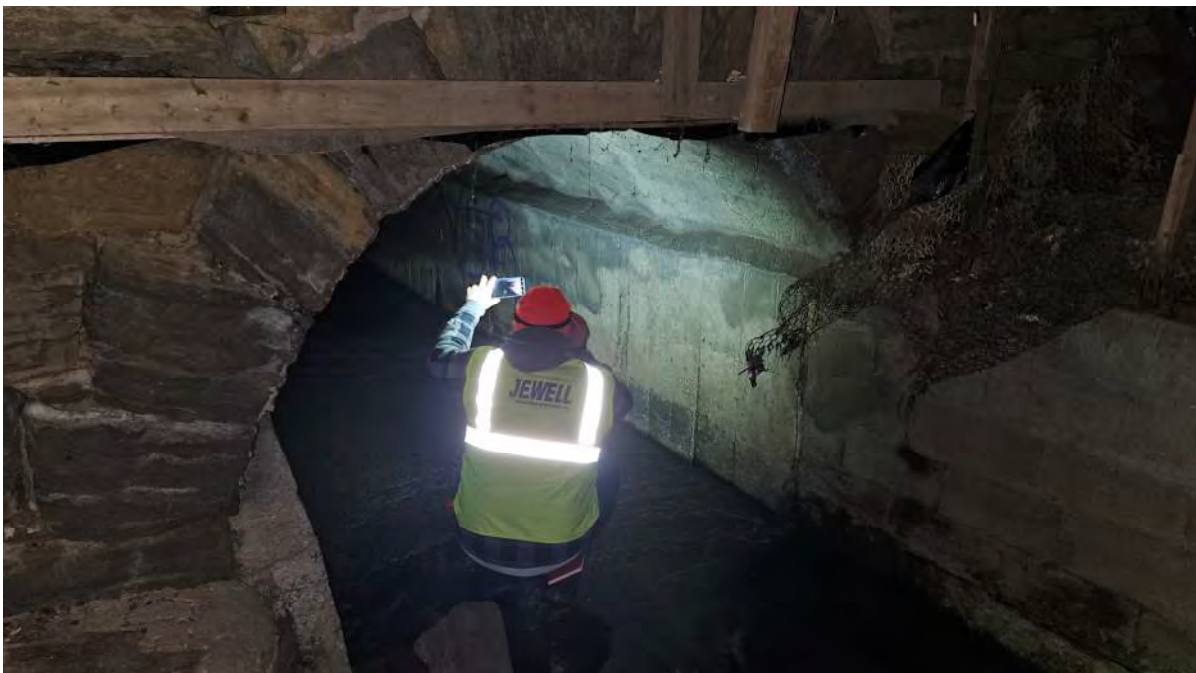


Photo showing entrance to outlet culvert



Photo looking down outlet culvert



Photo looking south at the southwest corner of the foundation



Photo of the entry culvert



Photo of the south exterior elevation showing a widening gap between the subject building and adjacent building to the west.