

Date 06/27/2024
To LFUCG Historic Preservation
Cc Specs
From Gatton Park
Subject Proposed Renovation of Stone Walls
at Gatton Park

The purpose of this memo is to summarize the issues surrounding the historic stone walls at Gatton Park and the proposed remediation to make the area safe prior to park opening in summer 2025. This summary has been prepared by Sasaki in coordination with Strand SAI for Gatton Park and it is intended to facilitate communication with LFUCG Historic Preservation.

ISSUE SUMMARY

Gatton Park on the Town Branch is currently under construction with an anticipated opening in late summer 2025. The park encompasses a portion of Town Branch creek, including areas of historic walls leading to a culvert that runs under Cox St. and Oliver Lewis Way. On the north side of the creek there are approximately 55' of wall still standing and on the south side there are approximately 95' of wall still standing. Significant portions of the wall have fallen. The existing walls are believed to be dry stacked construction and are leaning toward the creek in many places.

The full extent and condition of the walls became apparent after construction began and vegetation was cleared from the banks of the creek. The condition poses concerns for Gatton Park for several reasons, outlined below.

- The dry stacked walls that are still standing are leaning in some areas and may fall at any time.
- The portions of fallen wall are not stable and are susceptible to continued erosion from both the creek and stormwater runoff.
- On the south side of the culvert, erosion has led to a hole at the back of a concrete slab. This condition is not feasible to fix without impacting the historic wall and fallen wall below.

These issues have led Gatton Park to investigate how to create a more stable and safe condition before the park opens. The Park also seeks to create a desirable park condition that signifies a well-maintained public park. Gatton Park is committed to honoring the historic nature of the wall, though its precise status as a historic element is unclear.

Photos of the current condition are included on p. 3.

CONSIDERATIONS

Gatton Park considered many different elements when developing the proposed interventions on the historic walls, fallen walls, and the washed-out slab. The key points considered are listed below:

- Options explored included replacing only the washed-out slab, only the fallen historic walls, and/or only the standing historic walls.
- If the park pursues replacing only a portion of the wall/fallen wall, it is possible that during construction the other portions will become more unstable and further deteriorate.
- If the park leaves portions of the wall/fallen wall untouched now and they require remediation in the future, the permitting and construction process will be disruptive and costly.
- Structurally, any wall that is rebuilt needs a concrete retaining wall to be guaranteed to withstand the water velocity and volume during storm events.

- At the steep grade next to the culvert, the retaining wall either needs to step up due to the steep grade or there need to be wing walls. Wingwalls allow the wall to be a consistent height, with planting above.
- The historic stone can be salvaged and reused to build a historic stone wall in front of the concrete retaining wall.
- The amount of salvaged historic stone might not cover the full face of the concrete retaining wall. In that event, additional new stone can be brought in to complete the stone wall.

Gatton Park discussed these points both internally and with landscape architects, civil engineers, structural engineers, historic wall specialist, and employees of LFUCG. Ultimately, Gatton Park determined that the solution that creates the most stable and desirable condition for the park is to salvage the historic stone, build structural retaining wall where needed along the creek, and use the historic stone to face the new structural wall.

PROPOSED SOLUTION

The proposed solution uses a retaining wall with stone wall in front only where it is necessary due to grading adjacent to the culvert. Further away from the culvert, where there is enough space to lay back the slope this option uses channel lining stones to create a vegetated boulder revetment and embankment plantings to stabilize the banks of the creek (the same method used along the part of the creek that has already been permitted and constructed).

On the north side of the creek, the new wall would be approximately 50' to 60' long, similar to the existing 60' of existing wall still standing. On the south side, the new wall would be approximately 90'-100' long, like the existing 100' of existing wall still standing. Both new walls would be 5-6' high, with the top of their wall-caps at about elevation 920'. This is like the existing wall, which is typically 4-6' high at around elevation 920'.

In terms of reusing the existing stone, every attempt will be made for salvage and reuse. The new wall cap will be made from new stone due to its specific dimension requirements. It is unknown at this time whether new stone will be needed for the wall face.

In summary, the proposed wall described above and depicted in the attachments meets structural needs and allows us to re-use the existing stone. This is the preferred solution from a cost, constructability, and aesthetic perspective.

CULVERT HEADWALL IMPROVEMENTS

The Improving the Culvert attached diagram shows a proposal for improving the aesthetics of the existing culvert by covering it with metal panel with cutout designs and text. This would carry across to the new wing walls to visually tie them together. The panels design would incorporate the name "Town Branch of Elkhorn Creek" with images of stacked limestone, like the stone walls along the creek and in the Town Branch Commons and Gatton Park logos.

EDUCATIONAL SIGNAGE

Gatton Park intends to dedicate a large sign to information about the historic walls along Town Branch and the reconstruction that viewers see today. The preliminary location for this sign has views of both sides of the creek and the culvert and is on the main path between the dog park, playground, and pedestrian bridge.

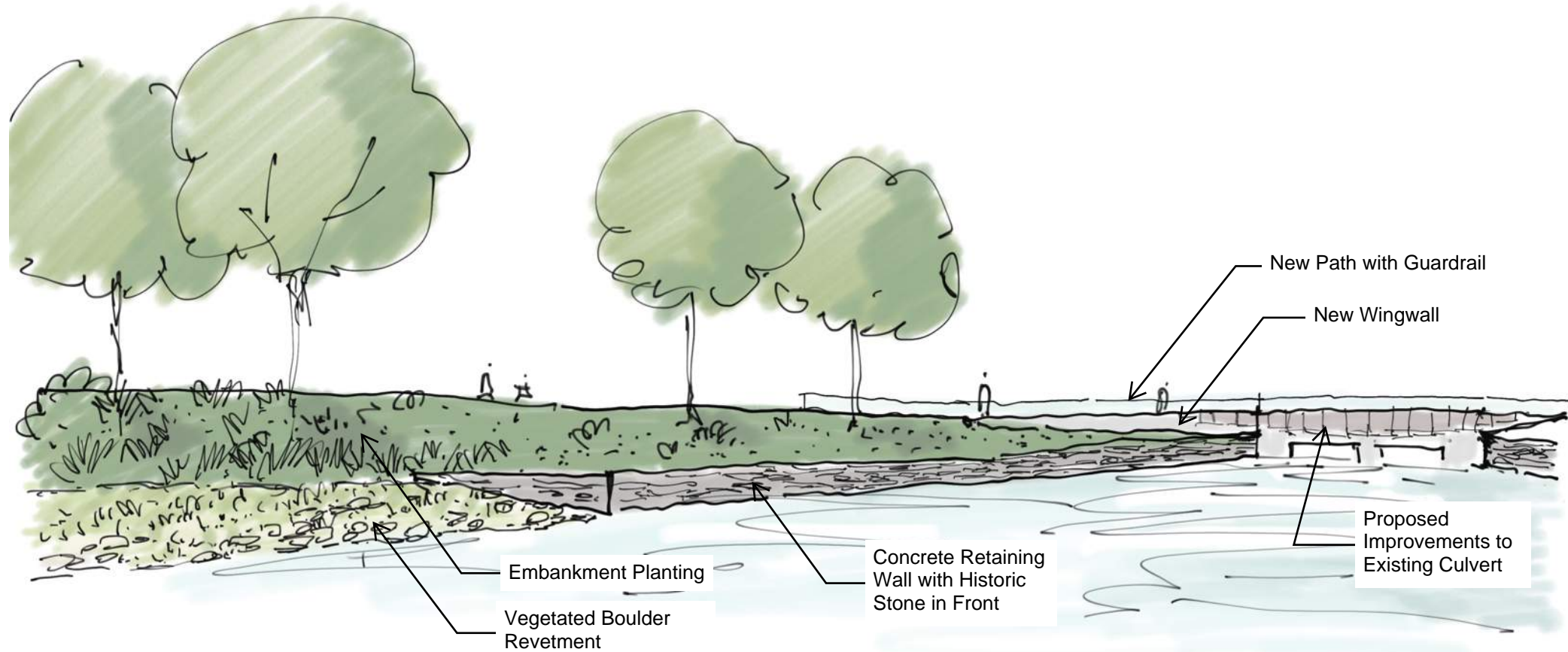
COST ESTIMATE

Streambank and Historic Wall Total – \$484,942. This includes the following:

- 55 LF steel handrail installed on top of the existing culvert headwall.
- Excavation for cast in place concrete footings and walls. Salvaging existing stone.
- Structural cast in place concrete footings and walls at the creek and wing walls adjacent to culvert, roughly 175 LF. Extents and heights as shown.
- New vegetated boulder revetment areas along the North and South sides of the stream, roughly 120 LF.
- Re-use salvaged historic stone and supplement new stone as needed to veneer the CIP walls and capstone with a dry-stack appearance.
- Steel veneer on the culvert headwall and wing walls, added text and images within the steel.

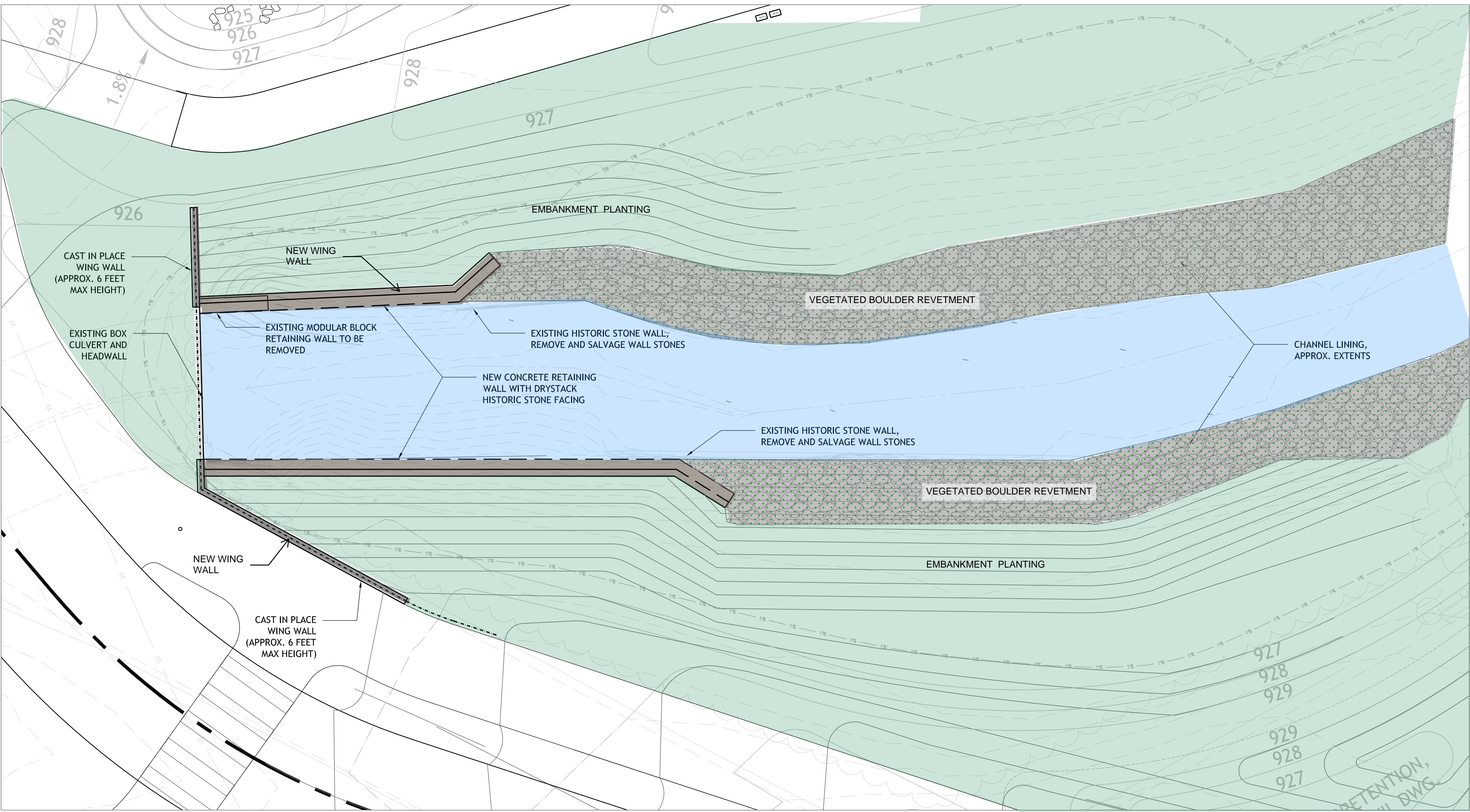


Sketch of Rebuilt Wall



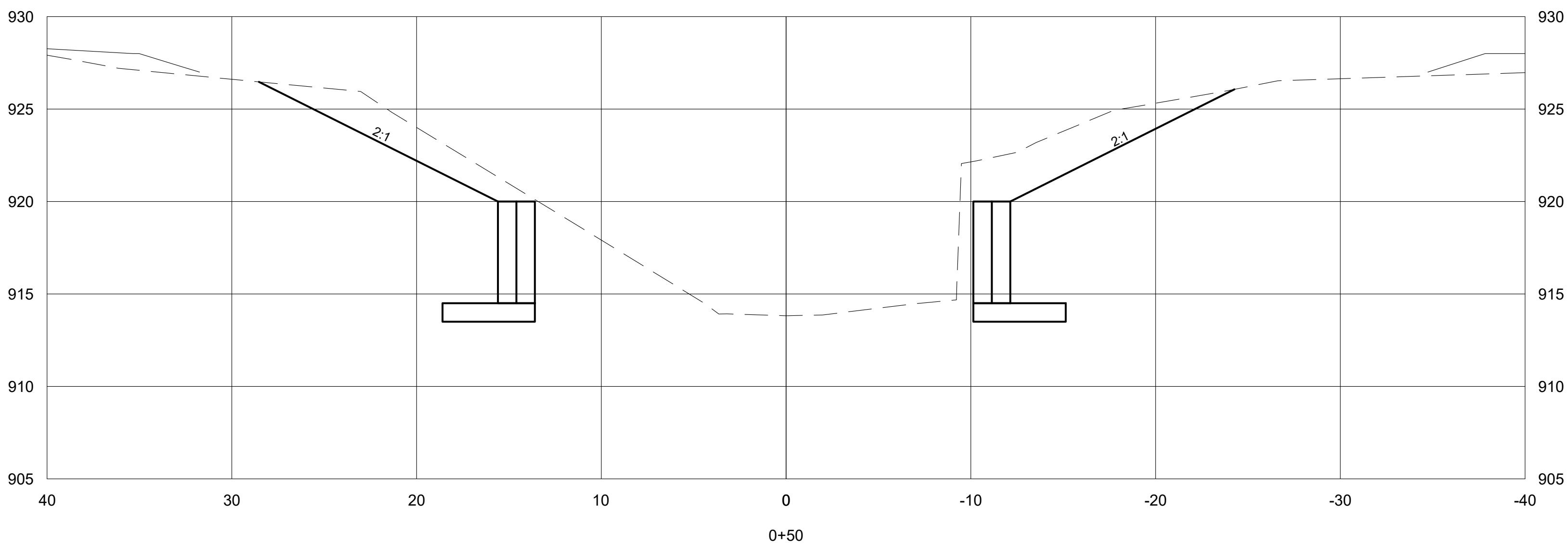
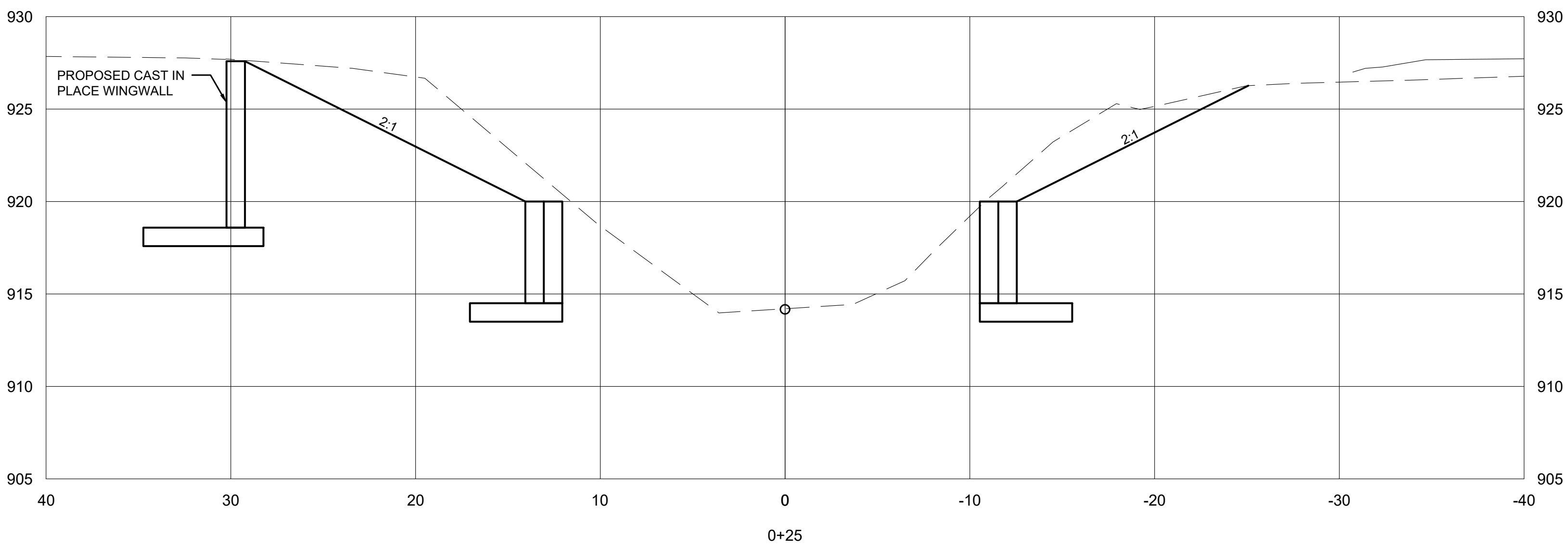
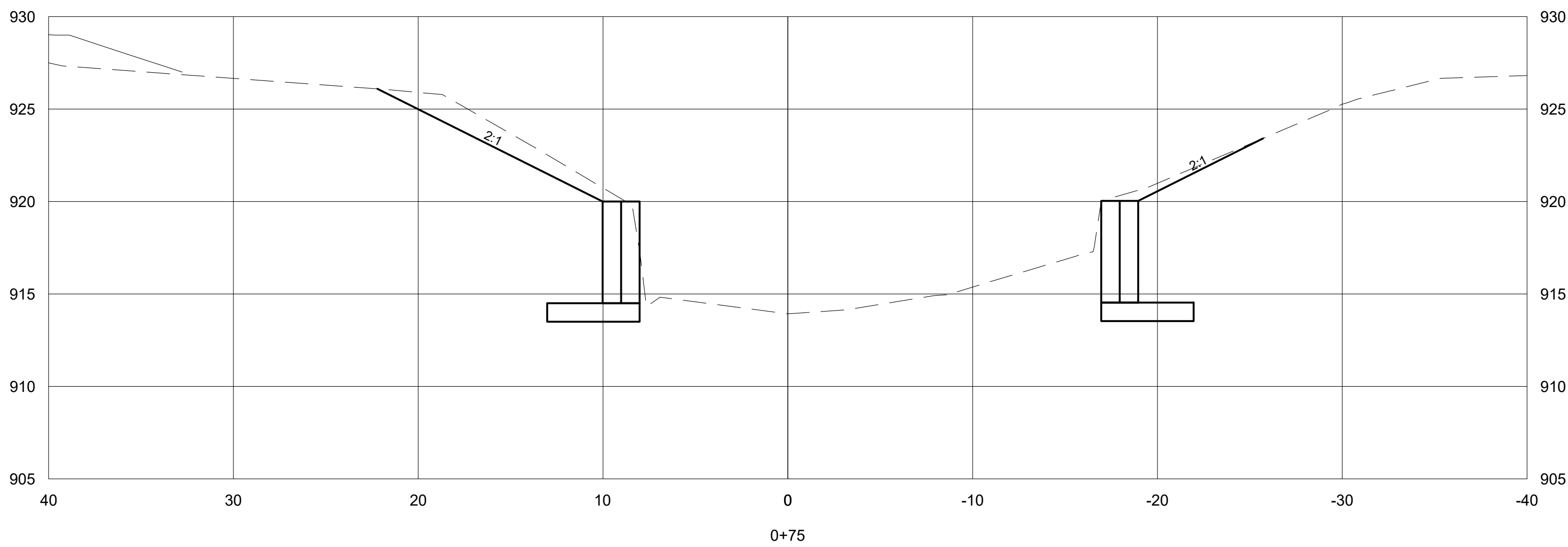
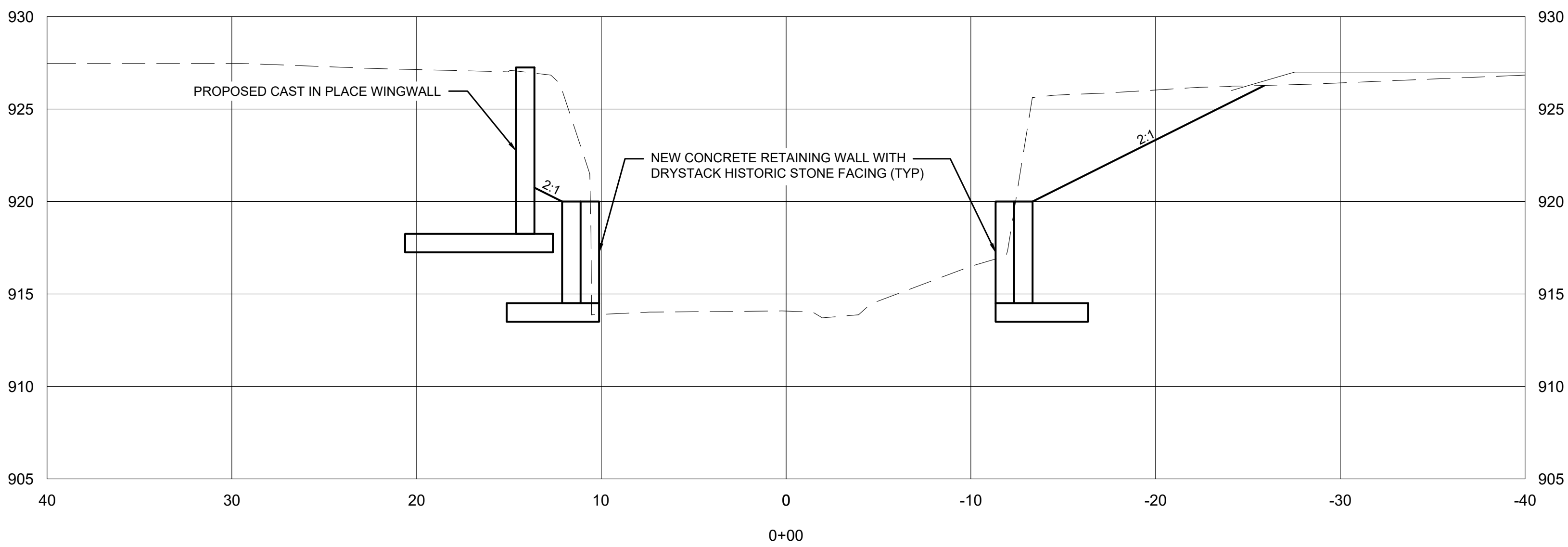
Proposed Condition: Plan, Elevations, and Typical Details

PROPOSED CONDITION PLAN



Proposed Condition: Approximate Station Elevations

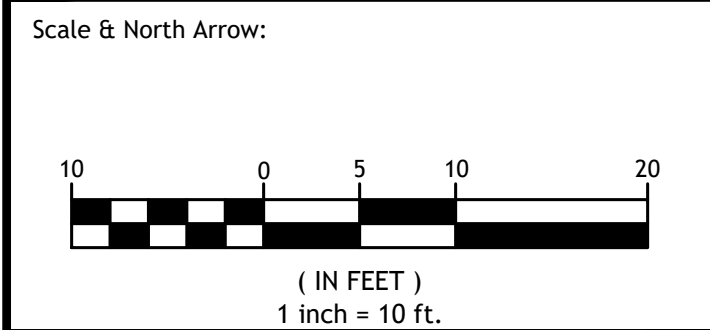
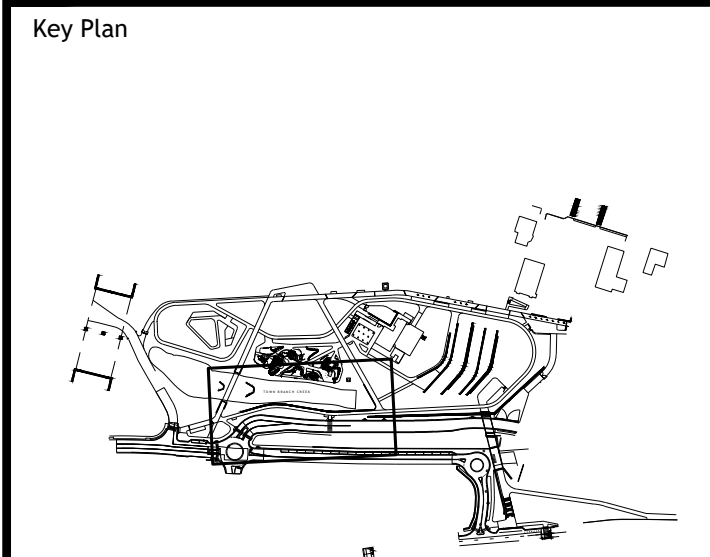
GENERAL NOTE
1. ALL CROSS-SECTIONS ARE LOOKING DOWN STATION.



No.	Description	Date
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DWG ISSUE & REVISION HISTORY

Stamp
NOT FOR CONSTRUCTION



Project Title:
TOWN BRANCH PARK
Lexington, Kentucky

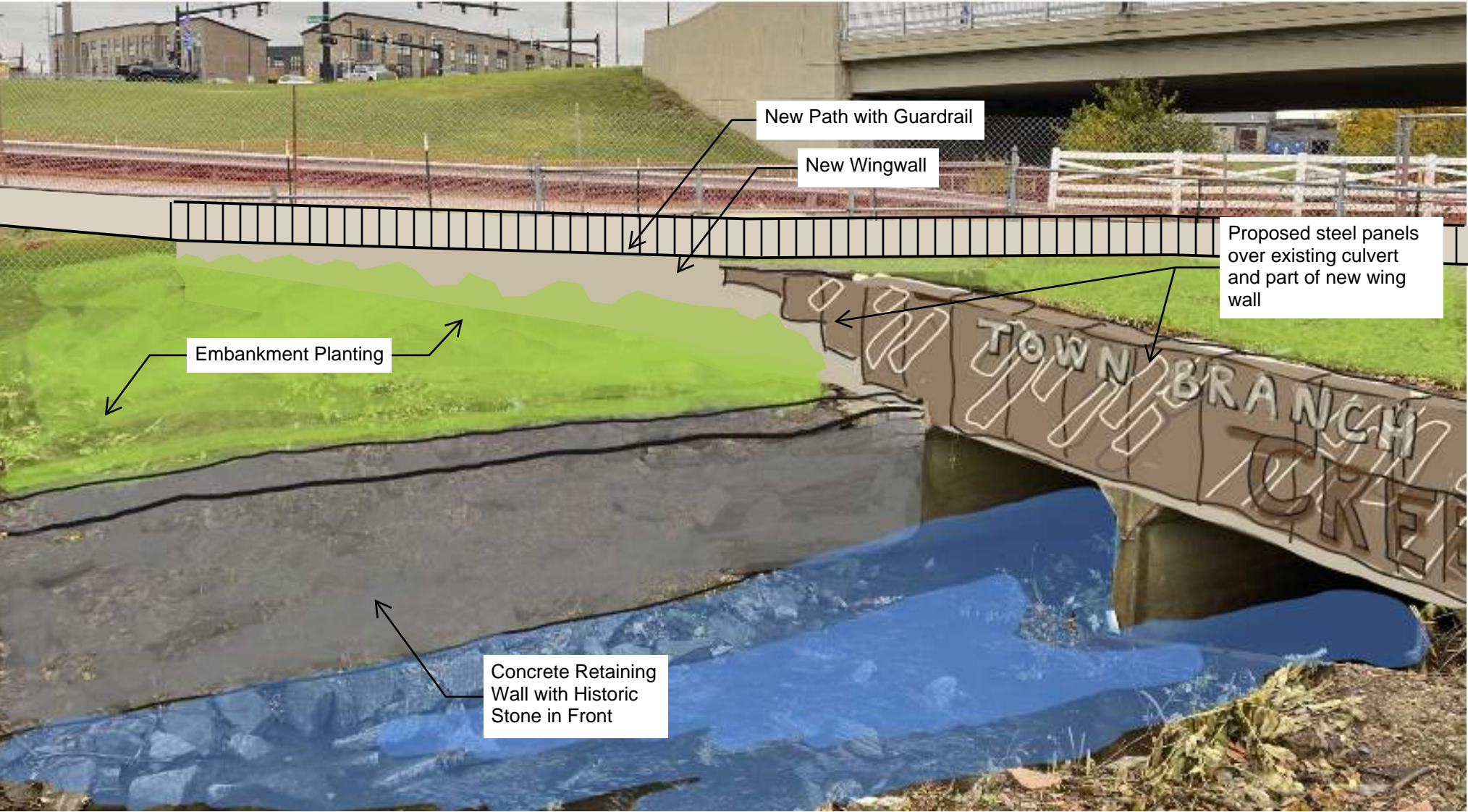
Drawing Title:
**HISTORIC RETAINING WALL
SECTIONS ALONG CREEK**
CONSTRUCTION DOCUMENTS

Project No: 08194.00 Scale: 1" = 5' - 0"
Drawn By: CES
Checked By: BMO
Approved By:
Date: 04/31/2024

Drawing No:
CX-XX

Culvert Headwall Improvements

Sketch of Proposed Improvements to the Existing Culvert and New Wing Walls



Precedent Images for Steel Cut-out Panels

Perforated Panels



Text



Application on Exterior Concrete Walls

