



Item No. 2 Town of Atherton

CITY COUNCIL STAFF REPORT – STUDY SESSION

**TO: HONORABLE MAYOR AND CITY COUNCIL
GEORGE RODERICKS, CITY MANAGER**

FROM: ROBERT OVADIA, PUBLIC WORKS DIRECTOR

DATE: JANUARY 22, 2025

SUBJECT: UPPER ATHERTON CHANNEL STABILIZATION PROJECT

RECOMMENDATION

It is recommended that the Council review and provide feedback regarding conceptual repair solutions for the Upper Atherton Channel Stabilization Project.

BACKGROUND

The Town's Townwide Drainage Study Update in 2015 identified a variety of drainage improvements required throughout the Town. The relining of the side slopes and bottom of the deteriorated portions of the channel west of Alameda de las Pulgas were identified as Tier I priority projects. The project outlined in the Drainage Study Update were as follows:

II1 – Reline Channel Slopes, Atherton Channel, Phase I

- Restore the sides of the channel. Assumed that the total channel length of 1000 lineal feet is in need of repair.
- Channel to be repaired excludes sections where other channel improvement projects are identified.
- Extend the life expectancy of the channel.
- This project would be phase I of two phases. Phase I would restore channel areas most needing improvement upstream of Alameda de las Pulgas. Phase II was identified as the segment from Alameda de las Pulgas, downstream to El Camino Real.
- To identify specific locations most needing improvements, a condition assessment of the existing channel is recommended prior to design of channel improvements.

JJ1 – Reline Channel Bottom, Atherton Channel, Phase I

- Reline the bottom of the channel where deteriorated and regrade as necessary. Assume that the total channel length of 1000 lineal feet is in need of repair.
- Channel areas to be repaired excludes sections where other channel improvement projects are identified.

- This project would be phase I of two phases. Phase I would restore areas most needing improvement upstream of Alameda de las Pulgas. Phase II was identified as the segment from Alameda de las Pulgas, downstream to El Camino Real.
- To identify specific locations most needing improvements, a condition assessment of the existing channel is recommended prior to design of channel improvements.

In January of 2023, the creek channel sustained additional damages and erosion due to the history rain events that happened that month.

The City Council approved a professional services agreement with Tetra Tech, Inc. on July 14th, 2024, to develop potential channel repair solutions for Atherton Channel west of Alameda de las Pulgas.

ANALYSIS

Tetra Tech has completed its initial site walks and data collection including topographic survey of the channel. The site walks included an assessment of channel construction type, areas where repairs are needed to preserve the channel. They have developed a conceptual design on how to provide needed repairs and additional protections for the channel.

The inspection of Upper Atherton Channel revealed several key issues related to erosion, structural deterioration, and vegetation growth within the channel. These findings are critical to understanding the current state of the channel and will serve as the foundation for developing effective stabilization and mitigation strategies. By addressing these problem areas, the Town of Atherton can prevent further damage to the creek and surrounding infrastructure, while also improving the long-term resilience of the waterway.

The general findings from the inspection are summarized as follows:

- The construction of the channel varies significantly along the length of the evaluation areas and includes the following:
 - Natural (soft sides and bottom) and may include vegetation
 - Natural sides and protected bottom (concrete or rip-rap) and may include vegetation
 - Protected sides (rip-rap, sacked concrete, shotcrete or concrete) and protected bottom (rip-rap or concrete)
- There were areas of significant deterioration noted and included the following types of damage:
 - Erosion of earthen bank material, particularly along outside bends of the creek.
 - Over-steepened earthen slope banks
 - Soft soils on the banks in some locations
 - Significant trees and vegetation growing within the channel at many locations. In some places, the trees and roots are providing erosion resistance along the banks. In other locations, trees have caused damage to the channel lining
 - Deterioration of sacked concrete.

- Spalled, cracked and or damaged concrete lining
- Displaced/eroded rip-rap areas
- Flanking and undermining of concrete invert in some locations.
- Erosion along invert causing vertical cuts at toe up to 2 feet deep.

Tetra Tech prepared a preliminary layout plan to provide a visual overview of key findings in the channel as well as the proposed method/options of repair or mitigations. It includes photos of the sample damaged areas and typical details showing the various options of repair and protection. These repair and protections include items such as the use of rip-rap, log crib walls, brush mattress slope protection, gabion baskets and concrete and secrete linings. The design options are intended to provide the most natural protections possible within available easement areas while still affording protection from future flooding events. The various repair areas are still being defined.

Additional detailed survey information will be collected for certain repair areas to further the design and will include plotting of the channel easements.

Staff is requesting feedback on the proposed design solutions to address existing damage and repairs to the channel. Upon conceptual approval from the Town, Tetra Tech will then conduct additional detailed survey data collection for certain repair areas to further the design and will include plotting of the channel easement. As the design is furthered, Tetra Tech will then initiate coordination with the different regulatory agencies, that have jurisdiction over the channel to obtain the needed approvals and permits required for the project. This process may alter the methods of protection to comply with various regulatory agency requirements and will lead to a complete set of construction documents for a future construction project to implement the design. Design cost estimates shall be provided at each milestone step along the way, starting with the 30% Conceptual Drawings. Environmental requirements will also be developed in consultation with the regulatory agencies based on the proposed repair scopes.

FISCAL IMPACT

None at this time.

GOAL ALIGNMENT

This Report and its contents are in alignment with the following Council Policy Goals:

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- Goal Area B – Preserve Small Town Character and Quality of Life
- Goal Area F – Be Forward-Thinking, Well-Managed, and Well-Planned
- Goal Area G – Emergency Preparedness – Be Prepared

POLICY FOCUS

The Council's policy focus should be on the need to maintain public infrastructure as well as implementing drainage improvement projects outlined in the Town's Drainage Master Plan.

PUBLIC NOTICE

Public notification was achieved by posting the agenda, with this agenda item being listed, at least 72 hours prior to the meeting in print and electronically. Information about the project is also disseminated via the Town's electronic News Flash and Atherton Online. There are approximately 1,200 subscribers to the Town's electronic News Flash publications. Subscribers include residents as well as stakeholders –to include, but be not limited to, media outlets, school districts, Menlo Park Fire Protection District, service providers (water, power, and sewer), and regional elected officials.

COMMISSION/COMMITTEE FEEDBACK/REFERRAL

This item has not been before a Town Committee or Commission

ATTACHMENTS

1. Upper Atherton Channel Concept Plan
2. Upper Atherton Channel Photo Log