

DATE: April 29, 2022
TO: Bolinas Lagoon Advisory Council
FROM: Veronica Pearson, Sr. Ecological Restoration Planner
SUBJECT: Agenda Item #6 : Bolinas Lagoon Wye Wetlands Project

DISCUSSION

Bolinas Lagoon Wye Wetlands Background

On September 29, 2017 staff presented to the BLAC the draft conceptual designs for the Bolinas Lagoon North End Project. Based on the concept designs and findings of the report, the BLAC recommended that the Board of Supervisors proceed with the Bolinas Lagoon Wye Wetlands Project (Project), which focuses actions on lands owned and managed by Marin County. It is also necessary for the implementation of any future sea level rise adaptation actions that could occur on National Park Service lands. On February 13, 2018, The Board of Supervisors approved Marin County Parks (Parks) proceeding with the Bolinas Lagoon Wye Wetlands Project.

During the summer of 2019, Parks requested proposals for the design of the Project and WRA, Inc. was selected. Soon after, a technical advisory team (TAC) was formed that consists of regulatory agencies and technical experts to provide guidance on the design as it moves from a 10% conceptual through 100% design documents. On October 16, 2020, staff presented the 30% design to your Council. We also presented the designs to the Bolinas Community Public Utility District in December of 2020, at which time staff received many positive comments on the design from the public, and a request for additional consideration of bicyclists that may be traveling from Olema-Bolinas Road to Fairfax-Bolinas Road. In response to the request, Parks has completed revised traffic counts and looked at potential intersection configurations that may be warranted with this information. It was determined that the current intersection control is appropriate based on Caltrans guidance documents. Staff also consulted with Caltrans and the Marin County Bicycle Coalition (MCBC) regarding this issue. Caltrans provided verbal support that a jug-handle for bicyclists was acceptable. The jug-handle would allow for bicyclists to wait until it is safe to cross State Route 1.

Additional work on the design of the project was delayed for approximately nine months as we sought a Coastal Permit for subsurface work that was needed to determine the design of the bridge. The Coastal Permit was approved in August of 2021. In October of 2021, an archeological sub-surface investigation and geotechnical study were conducted. Based on the sub-surface studies, it was determined that additional studies were needed to determine fault locations. Currently this work is being conducted and is needed to refine the known location of fault lines in relation to the bridge. In order to make progress on

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other aspects of the design, the draft 60% plan set was completed and has been distributed for comment to the Department of Public Works, Bolinas Community Fire District, Caltrans, the Bolinas Community Public Utility District, and other regulatory agencies via the TAC.

Draft 60% Design

The design to date continues to draw from the visioning work in the Bolinas Lagoon North End Conceptual Design Report with the project goal of re-establishing and rehabilitating hydrologic, geomorphic, and ecologic processes; improving habitat connectivity; increasing the resiliency of wetlands to SLR; and improving habitat for special-status species. To meet the Project goals, Parks would remove the Crossover Road (Fairfax-Bolinas Road); reconfigure the intersection between Olema-Bolinas Road and Highway 1; and improve the road crossing. This would be accomplished by installing a 60-foot span bridge south of the existing Olema-Bolinas Road/State Route 1 intersection and redirecting Lewis Gulch Creek (LGC) under the new crossing. An additional culvert would be added as well to the south of the new crossing to allow for runoff from the hills to the west to continue to drain into the lagoon's delta. Portions of Olema-Bolinas Road would be elevated to meet the new crossing and elevate it out of the floodplain. The created channel would be sized to allow for the channel to self-form and connect to its floodplain. Large woody debris would be recruited and placed along the channel and on the floodplain.

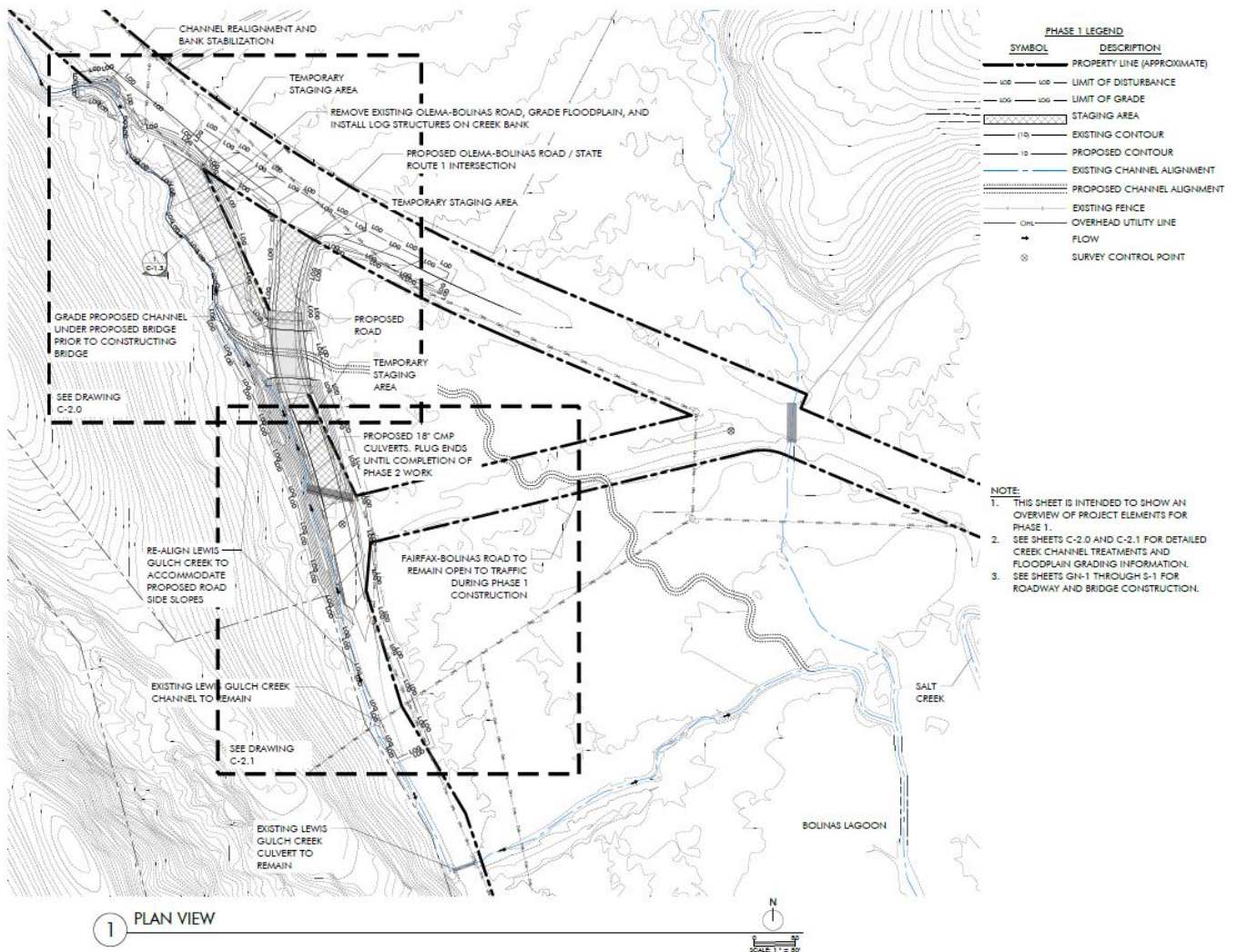


Figure 1: Bolinas Lagoon Wye, Year 1 Construction Elements, Sheet C-1.0

Since you last saw the plans, minor modifications have been incorporated to increase the size of the floodplain above the bridge, improve the sight lines near Wilkins Ranch within the Caltrans right-of-way by removing soil and grassland and replacing it with coarse aggregate. Pavement would also remain near the intersection of Fairfax-Bolinas Road and the Crossover Road to create a jug-handle that could accommodate bicyclists that are waiting to cross State Route 1. These improvements are shown on plan sheets PD-1 and L-3 and will be further refined in the next design documents.

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Additionally, the plan set now includes a phased two-year construction plan. Plan sheet C-1.0 (Figure 1) shows the elements for construction in year one that focuses on Lewis Gulch Creek and infrastructure improvements to the area north of the Crossover Road. This would include the new intersection for Olema-Bolinas Road and State Route 1, installing the bridge, and elevating Olema-Bolinas Road onto the new bridge crossing. The new channel for Lewis Gulch Creek would also be constructed north of the Crossover Road and would include bioengineering along the left bank at the Olema Bolinas/State Route 1 intersection and adding log structures for aquatic habitat. Construction in year one would begin during the summer and end prior to the commencement of the rainy season. During the winter, Lewis Gulch Creek would continue to flow in a roadside ditch along Olema-Bolinas Road and a sandbag wall would prevent the old channel from occupying the new channel until the completion of year two construction. During construction of the bridge on Olema-Bolinas Road, all traffic would be directed onto the Crossover Road, and temporary improvements would be made to the Crossover Road to improve circulation near the intersections.

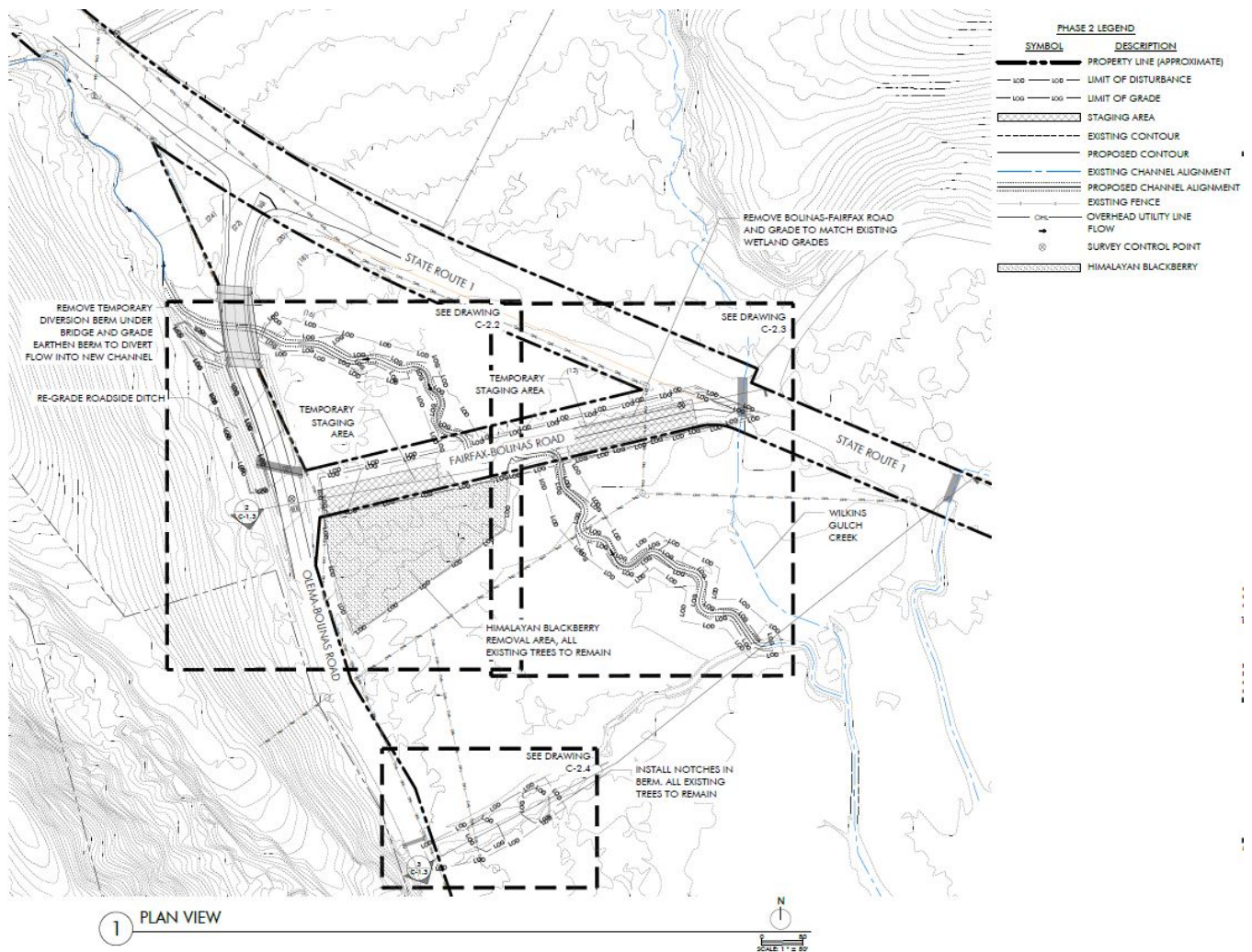


Figure 2: Bolinas Lagoon Wye, Year 2 Construction Elements, Sheet C-1.0

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Plan sheet C-1.1 (Figure 2) shows the project elements that would be constructed in the second year, during which Olema-Bolinas Road would be open to traffic north of the Crossover Road, while the Crossover Road is being removed. The new channel for Lewis Gulch Creek would be constructed south of the Crossover Road, and habitat improvement would be implemented that includes removal of non-native invasive species, adding large wood to the floodplain, and improving hydrologic connectivity near Wharf Creek. Plantings would occur during the winter after the second year of construction and would include follow up maintenance and infill planting in years that follow. All road improvement within the project area would improve the site's resiliency to future impacts of climate change that include up to 5.5 feet of sea level rise, and a 100-year flood event. The 60% design has a revised cost estimate for construction of approximately \$7 million in 2024 dollars. This includes a 30% cost contingency.

Next Steps

The design team will continue to refine the designs and specifications. Parks continues to engage with several regulatory agencies on our TAC about future steps needed for federal and state regulatory compliance and CEQA and NEPA review. Parks is the CEQA lead, and the United States Army Corps of Engineers will be the NEPA lead. The revised 60% designs will be used for CEQA review, for which WRA, Inc is preparing an Initial Study. Currently special studies are being drafted to determine the potential impacts to the bridge due to a potential seismic and tsunami event. Based on findings in these studies, the bridge designs will be updated. Parks hopes to have a draft Initial Study for public review by late summer or early fall of 2022. If it is completed by late summer, Parks staff may request a special BLAC meeting to review the findings. To date, \$2.5 million has been secured for future construction of the project and Parks is seeking additional funds for construction.

Attachments:

1. DRAFT Bolinas Lagoon Wye Wetlands 60% Design Documents
2. DRAFT Bolinas Lagoon Wye Wetlands Basis of Design Report