



CITY OF FORT BRAGG

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COUNCIL COMMITTEE ITEM SUMMARY REPORT

MEETING DATE: May 8, 2019
TO: Public Works & Facilities Committee
FROM: Tom Varga, Public Works Director
AGENDA ITEM TITLE: Receive Report and Provide Recommendation to City Council
Regarding Bid Requests for Glass Beach Stairs Replacement
Project

ISSUE:

City staff is preparing for City Council review and direction on a construction bid package plus a construction management Request for Proposals (RFP) to replace the Glass Beach Stairs. The Glass Beach Stairs Replacement Project scope includes replacement of the previously-removed cable stair access to the Glass Beach in the Noyo Headlands Park with a concrete stair set elevated on four sets of piers. The project would also include construction of a concrete stair bulwark at the western terminus of the stairs on the beach. The piers and bulwark would be tied into bedrock and is intended to provide safe beach access and protect the public access stairs from pounding by logs in high seas. This design would also protect the stairs from soil movement along the cliff face. Design for this project was completed by an engineering consultant (I.L. Welty & Associates) in 2017.

ANALYSIS:

In 2015, the City repaired the cable stairs to address damage caused by high visitor use and winter storms. In fall of 2016, the City removed the stairs permanently as they had eroded again due to high use and winter storm damage. City Council directed staff to proceed with a new design for the stairs that would withstand high surf conditions and the heavy pounding that the stairs receive from logs in the surf. On January 9, 2017, City Council authorized a contract with I.L. Welty & Associates in an amount not to exceed \$32,807 to complete a geotechnical analysis and prepare engineered plans and specifications to replace the Glass Beach Stairs. I.L. Welty developed a project design (Attachment 1) and an Engineer's Estimate of \$190,000 for the replacement stairs. In the spring of 2017, the City secured a Coastal Development Permit (CDP 1-17) and Design Review Permit (DR 1-17) to replace the previously-removed cable stairs with a concrete stair design.

At the 2018 Mid-Year Budget review, City Council provided direction to staff to seek out a less expensive alternative design solution. In August 2018, City staff cleared paths to the beach through the undergrowth in the area around Glass Beach in order for a geotechnical engineer to examine the site and provide guidance on possible alternative access locations. The paths that were explored are illustrated in the photo below:



The geotechnical engineer (SHN) determined that Alternative 2 offered a number of advantages over the existing site and Alternative 1, namely:

1. The slope of this access is less steep.
2. There is a natural bench about half way down the slope that will provide a stop and rest location for trail users.
3. The three large boulders at the toe of the slope and the off shore monuments provide natural protection to the bottom of the stairs from storm surge and pounding logs.

This engineer suggested that gabion baskets could be used to build the stairs. It was originally thought that gabion basket stairs could be constructed by a crew from a local conservation/fire camp run by the California Department of Corrections and Rehabilitation - CDCR (Parlin Fork or Chamberlin Creek). CDCR crews can save the City considerable cost. However, CDCR conservation/fire crews statewide have been reassigned to forest fuel reduction and fire suppression activities for the foreseeable future. Additionally, the original cost projections for gabion basket stairs underestimated the total length of the stairs with the revised alignment. The combination of losing the labor of CDCR crews and the increased materials and construction costs of the gabion baskets makes the costs for this alternative roughly the same as replacement concrete stairs. Finally, a sizable cliff collapse occurred a few hundred feet south of the proposed stairway location in a geologic formation similar to that found at the Glass Beach. Stairways placed on the surface or shallowly built into the soil (e.g. gabions or wooden structures) are at risk of being carried away by future cliff collapses.

Gabion stairs placed in an alternate location is also not consistent with the CDP previously-approved for concrete replacement stairs in the original stairway location. An amendment to the CDP would be necessary for any project other than a replacement at the location of the old stairs.

Wooden stairs were also considered as an alternative. Some basic design would be needed to accomplish this option. More significantly, wooden stairs share the same shortcomings of gabion stairs.

The City could release a Notice Inviting Bids to build concrete stairs in early June to install concrete stairs where the cable stairs used to be, as well as an RFP for construction management. Once the bids are received, and construction costs are firmly established, Council could decide whether or not to proceed with the project and install the stairs with a construction manager to oversee the project. The City secured a one-year extension for the CDP that approved the stair replacement, and so long as work begins prior to March, 2020, no further environmental review or permitting would be necessary to begin the project. Depending on the responses to the bids, the replacement concrete stairs could be completed during the 2019 construction season.

Proceeding with either the gabion basket or wooden stairs alternatives would delay the project since design and engineering would be required before a request for bids could be released and permit amendments would need to be obtained for a new project. Installation of alternative stairs could not occur in this construction season, and cost savings would probably not be realized.

RECOMMENDATION:

Provide a recommendation to City Council regarding the release of a bid package for Glass Beach Stairs replacement.

ATTACHMENTS:

1. Project Plans