



STAFF REPORT

TO: Board of Commissioners

FROM: Andrea Lueker, Harbor Manager
Chris Munson, Facilities Manager
Natalie Teeter, Planner/Analyst

DATE: November 17, 2020

SUBJECT: **Avila Pier Repair Plan**

Recommendation / Proposed Motion

- Provide direction to the Avila Pier Property Committee

Policy Implications

- None at this time

District Major Objective/Goal

Not applicable.

Fiscal Implications / Budget Status

The current fiscal year budget allocates \$1,310,000 to the Avila Pier Rehabilitation capital project.

Alternatives Considered

- None at this time.

Background

Since June 2015, Avila Pier has remained closed to the public. Minor repairs completed in April 2019 allowed for the pier to be reopened up to Bent 58. Since its partial reopening, staff have worked with contractors, regulatory agencies, community representatives, and granting agencies toward the pier's full rehabilitation and reopening.

Findings from the Avila Pier Updated Condition Assessment were discussed at the January 28, 2020 Board Meeting. The Board authorized the execution of a contract with Moffatt & Nichol, not to exceed \$80,200, to complete Repair Plans that include a long-term maintenance plan.

Moffatt and Nichol provided the Avila Pier Repair Plan and it is included for Board review. The long-term maintenance plan and cost estimates are currently being finalized.

Discussion:

The plan calls for the repair of 49 load bearing piles. As requested by the Board, the pile repairs have been numerically prioritized and have been divided into three phases. This will allow the project to be split up if there is a shortfall of funding.

- Phase 1 – 10 piles
- Phase 2 – 20 piles
- Phase 3 – 19 piles

The repair plan calls for 3 different types of pile repair and includes an alternative option to drive piles conventionally. The different methods are necessary since the wrap and grout method cannot be used in all instances because there is no longer a pile in place. The repair types are as follows:

- Type A – The pile itself is not repaired. The pile cap (above the piles) is reinforced with two 4"x12" boards on opposite sides for 20'. This repair is to be used when there is no salvageable pile remaining. It will redistribute the load to the surrounding pier and piles.
- Type B – The pile will be wrapped with a fiberglass jacket and grouted. This will be used when a pile is in poor condition but is intact from the sea floor to the bottom of the pier.
- Type C - A new section of pile is spliced in, then wrapped and grouted. This will be done when a portion of the pile is missing, but a stub in good condition remains. The stub will be cut and prepared underwater. A new section of pile will be inserted above it and jacked into place. The jacks will be replaced with wood blocks and the pile will be wrapped and grouted like the Type B repair.

| PHASE | TYPE A | TYPE B | TYPE C | TOTAL |
|--------------|---------------|---------------|---------------|--------------|
| 1 | 2 | 5 | 3 | 10 |
| 2 | 6 | 6 | 8 | 20 |
| 3 | 1 | 18 | 0 | 19 |
| TOTAL | 9 | 29 | 11 | 49 |

The repair plan includes an alternative for pile driving. This was included so the District would have the option of conducting some of the repairs internally in the event of a budget shortfall. Two notable situations where this may be needed or preferable are for the Type C repair and the installation of batter piles (a type of pile provided when the vertical pile cannot resist horizontal load effectively, typically grouped with a vertical pile to increase lateral capacity, constructed at an angle and bolted to the adjacent vertical pile). The initial estimates for the Type C repair are approximately \$50,000 per pile. With eleven Type C repairs, it would cost over \$500,000 for those alone. The batter piles were not included in the repair plan, but 17 were identified as missing or severely damaged. It is not possible to repair them, they would need to be replaced with conventional pile driving. While replacement of the batter piles is not structurally necessary for load capacity, they add additional lateral support to limit sway. Pile driving may also be necessary for the fender piles (a pile that protects the dock wall,

wharf or landing from the impact of vessels) that help guard the landing, but has not been assessed at this time.

Pile driving was included as an option in the Coastal Development Permit (CDP) application for the project. Due to the existence of the hydrocarbon plume, a contingency plan was created in cooperation with CA Department of Fish and Wildlife Office of Spill Prevention and Response and the Regional Waterboard to identify how pile driving can be performed safely. The Coastal Development Permit and Contingency Plan are currently under review by the Coastal Commission.

The forthcoming estimates will also include costs to replace the decking of the trestle (roadway or narrow portion) of the pier. The decking in this portion is generally in fair condition but is worn and has sizeable gaps between the planks. One of the conditions of the grants is to enhance ADA accessibility. This can be done by replacing the decking and eliminating the gaps, or by filling the gaps in a 5-foot wide corridor, the length of the pier. Some hesitation has been voiced regarding the closure of the gaps since their intended purpose was to reduce upward force from waves during storms. In discussions with Moffatt and Nichol, while the gaps and uplift brackets may help some, they have not been deemed as necessary and are not used on any other piers Moffatt and Nichol have engineered/viewed. Moffatt and Nichol further noted that a few more decking boards may become uplifted without the gaps, but the gaps would not be necessary to prevent pier failure. Stainless steel screws are to be used instead of nails which should minimize the uplift of deck boards. An additional modification is the use of 4"x12" decking instead of 3"x12" decking. This will not only add some strength but will match the dimensions of Harford Pier and the stringers, making material orders interchangeable.

Other components that will need to be addressed are the landing, restrooms, bait shack, and other deteriorated portions of the pier such as railing, hardware, stringers, and pile caps. Staff is also seeking quotes to replace the lights on the pier. Plans for the landing repair were put on hold until the status of the Division of Boating and Waterways Tier 1 grant is known. While initial authorization of the Tier 1, \$200,000 grant has been approved, formal awarding has not yet happened.

The project has been awarded \$1.25 million by the Wildlife Conservation Board and \$10,000 by the Avila Beach Community Foundation. The Coastal Conservancy is scheduled to propose a \$250,000 grant for the Avila Pier Rehabilitation at the November 19th meeting. The Friends of Avila Pier is actively seeking donations.

With the final estimates, updated grant status, and direction from the Board; the Avila Pier committee can discuss what improvements should be prioritized and provide recommendations to the Board for consideration. Staff will create bid documents based on the direction of the Board once the CDP has been acquired.

Recommendation:

Receive the Repair Plan and review the staff report. Provide guidance for Avila Pier Committee and ask staff questions or clarifications.