

CALIFORNIA COASTAL COMMISSION

455 MARKET STREET, SUITE 300
SAN FRANCISCO, CA 94105-2219
VOICE (415) 904-5200



June 5, 2025

TECHNICAL MEMORANDUM

To: Kiana Ford, Coastal Program Analyst
Rainey Graeven, Central Coast District Supervisor

From: Jeremy Smith, P. E., Coastal Engineer
Philip L. Johnson, P.G., C.E.G., Engineering Geologist

Re: Proposed Emergency Repairs, 4820 Opal Cliff Drive, Capitola

The purpose of this letter is to respond to an application to build a pin pier wall with connecting grade beam along the eastern edge of the bluff top at the subject property.

To this end, we have reviewed the following documents:

1. Cotton, Shires and Associates, Inc., Geologic and Geotechnical Peer Review (letter), 4820 Opal Cliff Drive, Capitola, California, dated May 23, 2025;
2. Pacific Crest Engineering, Inc., Update to Geotechnical and Geologic Study, Emergency Repair Plan (letter), 4820 Opal Cliff Drive, Capitola, California, dated April 28, 2025;
3. R.I. Engineering, Inc., Pin Pier Wall and Drainage Plan, For Opal Cliff Homeowners Association (three sheets), most recent revision dated March 31, 2025;
4. Pacific Crest Engineering, Inc., Geotechnical Plan Review (letter), 4820 Opal Cliff Drive, Capitola, California, dated March 5, 2025;
5. R.I. Engineering, Inc., Structural Calculations, Emergency Pin Pier Wall 4820 Opal Cliff Drive, Capitola, CA, dated February 13, 2025;
6. Pacific Crest Engineering, Inc., Geotechnical and Geologic Study (report), 4820 Opal Cliff Drive, Capitola, California, dated November 20, 2024; and
7. Haro, Kasunich and Associates, Inc., Summary Letter of Geotechnical Evaluation of Coastal Bluff Failure Occurring in January 2023 on Neighboring Swenson Property at 4840 Cliff Drive, dated May 25, 2023.

SITE DESCRIPTION

The subject property, located at 4820 Opal Cliff Drive, includes a condominium building atop an eroding coastal bluff. The coastal bluff extends to the south and east of the condominium structure with a headland promontory feature to the southeast. We understand that a portion of the bluff on the eastern side of the property (which is on the property of 4840 Opal Cliff Drive) failed in early May of 2020 which left, at its closest point, approximately 35.5 feet of horizontal distance between the condominium structure and the bluff edge, which has since eroded to a minimum distance of approximately 28 feet.

The applicant has proposed a new 158-foot-long buried pin pier and grade beam wall reinforced with tiebacks along the eastern edge of the 4820 Opal Cliff Drive property line. The wall would include 40, 2-foot diameter piers extending 43 feet deep into the bluff. The wall would extend approximately 16.5 feet from the base of the condominium structure on the eastern side and a minimum of approximately 10 feet from the condominium structure on the southeast corner of the building.

DISCUSSION

As part of the California Coastal Commission's review of proposed armoring structures, siting and designing armoring structures as far landward as feasible is generally seen as less environmentally damaging than siting armoring structures more seaward. This is because the Coastal Act protects natural shoreline processes and aims to avoid unnecessary alteration of natural landforms. In the case of the proposed pin-pier wall, we believe that aligning the proposed wall closer to the condominium structure would be the least environmentally damaging alternative (and therefore preferred) alternative. Based on our initial review, it appears that the proposed wall could potentially be constructed as close as 8 to 10 feet from the existing structure; however, we welcome additional information from the applicant or City's geotechnical consultants as to the constructability of a more landward alignment.

We appreciate Cotton, Shires and Associates, Inc.'s (CSA's) peer-review of the proposed wall. Many of the points raised by CSA are focused on engineering questions that would have little to no impact on coastal resources at site (e.g., the angling of the proposed tiebacks), and therefore we do not see it necessary to comment on those aspects of the proposed wall. Furthermore, a wall alignment closer to the threatened residences could potentially address some of the concerns about surcharging the bluff during the wall's construction. We encourage the City to pursue modifications as necessary to improve the design in ways that minimize risks to the threatened residences at 4820 Opal Cliff Drive and minimize impacts to coastal resources. We do not recommend that the City or the applicant pursue a seawall at the base of the bluffs at the eastern edge of the project site along 4840 Opal Cliff Drive due to the coastal resource impacts that would occur during construction and by the unnecessary disruption of natural shoreline processes.

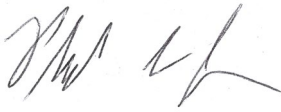
Lastly, it is our understanding that this is an initial phase to address the immediate threat to the residences at 4820 Opal Cliff Drive that avoids unnecessary coastal resource impacts and that, as the bluff fronting the proposed wall continues to erode, additional work (e.g., additional tiebacks) will likely be necessary to protect the existing structure in the long term. This kind of phasing is what the Coastal Act generally requires to protect existing structures while avoiding and minimizing impacts to coastal resources.

Please reach out if you we can be of additional assistance.

Sincerely,

A handwritten signature in black ink, appearing to read "Jeremy D. Smith".

Jeremy D. Smith, P.E. (C 95002) Coastal Engineer

A handwritten signature in black ink, appearing to read "Philip L. Johnson".

Philip L. Johnson, P.G. 6196, C.E.G. 2019, Engineering Geologist