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June 21, 2025

City of Capitola
420 Capitola Ave,
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Subject: Response to Cotton, Shires, and Associates Comments dated 5/28/2025 for Bluff Retreat Mitigation at 4820 Opal Cliff Drive, Capitola, CA, APN 034-463-01, 02, 03 and 04

Geologic and Geotechnical Peer Review – Samuel Nolan of Cotton, Shires, and Associates

1. Terrace Deposit Thickness – The previous Geotechnical Consultant, HKA, drilled the adjacent property and encountered 23.5 feet of terrace deposits. The current Geotechnical Consultant, PCE, reported 24 feet of terrace deposit material at the site. However, they recommend a retained height of 19 feet for design. The Geotechnical Consultant should clarify their recommended retained height, and justification if less than 24 feet, and their recommended depth to embedment material.

   Response: The calculations have been revised so that the wall is retaining the full 24 feet. See Structural Report included in this resubmittal.

2. Purisima Formation – We note that this repair does not appear to address an apparent weak bedrock plane that the previous failure(s) mobilized on. The recommended 10-foot embedment depth into the Purisima formation may not intersect this weak plane. The current and previous Geotechnical Consultants both indicated that the initial bedrock failure occurred along bedrock discontinuities. The Geotechnical Consultant should discuss and consider the benefits of extending the pin piers below their projection of this weak bedrock plane.

   Response: See response by Pacific Crest Engineering.

3. Structural Design – We have the following comments on the recommendations and structural design:

   a. Existing Foundations – The Geotechnical and Civil/Structural Consultants should evaluate if the proposed tiebacks will intersect or convey stresses to existing condominium building foundation.

      Response: See response by Pacific Crest Engineering.

   b. Property Line Constraints – The project team should consider how the Contractor will access the site and build structure without impacting the adjacent property.

      Response: Please refer to the June 18, 2025 letter from SEC for the contractor's response to this comment. The wall has been moved 6'-6" toward the subject building so that the tiebacks can be installed without equipment encroaching on the neighboring property.

   c. Tieback Overburden and Passive Capacity – The Geotechnical and Civil/Structural Consultants should evaluate if the limited overburden (roughly 4 to 5 feet) is sufficient to develop full tieback capacity given the 12-foot unbonded length and the 10-degree declination. The Geotechnical and

Civil/Structural Consultants should also evaluate if tie beam will have adequate passive resistance to resist the tieback.

Response: The geotechnical engineer addresses the tieback capacity and unbounded length with a 25 degree inclination. The grade beam is structurally connected to the piers with rebar dowels; passive resistance will be transferred from the grade beam into the piers for resistance.

d. Drill Rig Surcharge – The Geotechnical and Civil/Structural Consultants should also evaluate if the drill rig and tieback rig loads will trigger bluff failures during construction.

Response: See response by Pacific Crest Engineering in addition to the June 18, 2025 letter from SEC for the contractor's response to this comment.

Additional comments responses from the 6/13/2025 meeting with City of Capitola and Cotton Shires below.

- *Vertical loading on piers checked against skin friction resistance. See structural report.*
- *Survey updated with revised property lines and closed property boundaries along Monterey Bay.*

If there are any further comments or questions regarding the above responses, please feel free to contact our office.

Sincerely,
RI Engineering Inc.

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