Hull Conservation Commission's requests in preparation of final decision on Coastal Bank Stabilization Project adjacent to 51 Harborview Rd. (from GZA Peer-Review and Conservation Commission 01-30-24 meeting notes).

1. Describe purpose, document functionality, and assess efficacy of interim measure. (See how this fits with 2-j and –p below.)
2. Meet requests as outlined in bullets within the Peer-Review (see pages 8-12), particularly:
   a. Ground water effects including addressing the assumptions used in the plan reviewed that may not be valid as discussed at the 1/30 hearing (design standards factoring a fully saturated slope) and included in the peer review.
   b. Gabion basket comments (bottom of page 8 to top of p.9) and concerns raised by CZM regarding excess weight of gabion baskets on bank stability.
   c. Comment on proposed grading (1st bullet, p. 9)
   d. Comment raised over concern that Soil Nail Structure (SNS) drainage strips can tend to clog-address how this will be mitigated/addressed. (2nd bullet, page 9)
   e. Comment to limit seepage migration from previous installation(s) (middle, p. 9)
   f. Comment to capture runoff from patio, etc. (p.9)
   g. Include existing wall in design drawings and see comment #4 below (p. 9)
   h. Address concerns about additional vegetation (coastal bank) removal (p. 9, near bottom)
   i. Incorporate discussion on 310 CMR 10 relevant performance standards (coastal banks, bottom p.9 in "Additional Comments" section and last bullet on p. 11
   j. Address "perched groundwater table" concerns (p. 10)
   k. Address how interim measure fits within the long term project (p.10)
   l. Specify design life (for all alternatives, p.10)
   m. See bullet regarding alternative that restores coastal bank and etc. (2nd bullet up from bottom p. 10), including removal of a portion, if not all, of the patio and deck within 20+ feet from the coastal bank.
   n. Address construction sequencing issue and other issued raised last bullet, bottom p. 10.
   o. Address bullet (top of p. 11) about construction logistics and constructability aspects of the SNS. Address equipment and earth loading on the sewer force main alignment and access from the beach to the embankment.
   p. Please review and comment on CZM's review of this project (1st bullet, middle p. 12)
   q. Establish bank monitoring protocol to capture short-term and long-term assessment of bank stability (last bullet, p. 12)
3. Provide a quality/qualitative alternatives analysis. The Commission (and abutters) are interested in more detail on restoring coastal bank to natural conditions (see 2-l, -o above), including but not limited to:
   - Pulling the top of the coastal bank further away from the coast,
   - Regrading to a lesser slope, and
   - Revegetation with deep-rooted salt tolerant vegetation (see CZM recommendations).
4. Address the Toe of the Coastal Bank. The Commission suggested a stabilization plan that details how this portion of the coastal bank will be included in the overall design (see 2 -f above).
5. Address the viability, practicality and constructability aspects of rebuilding the coastal bank to match adjacent existing soil and vegetation and how this approach differs in performance with the proposed SNS.

6. Summarize where soil nail technology has been applied including in coastal settings.
7. Summarize the projects completed to date on the property including any effects relative to slope failure and how the proposed project will address these effects. Also include how the proposed SNS will not have any adverse effect on the stability of the coastal bank.
8. Address how surface and groundwater will be controlled at the top of the embankment and along the slope. Also address how surface flow on the SNS itself will be controlled/captured/mitigated to prevent further erosion/washout below the SNS.
9. Address how water is prevented from migrating in the drilled holes for the soil nails and how that water will be controlled/mitigated from entering the slope face or underlying soil.
10. What measures are necessary to provide support below the SNS and below the remaining slope of the coastal bank beneath the SNS?
11. Address protective measures to prevent erosion and washout directly below the SNS and lower coastal bank slope interface.