



July 11, 2025

Christy Ferguson  
Town Manager  
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**SUBJECT: Draft Summary Report Questions and Comments Response**

Dear Ms. Ferguson,

Please find HDR's responses (italicized font) to the received questions and comments below.

Section 2.4, pg. 5 – Did the Town direct HDR to use the 2023 geotech report? I thought the Town provided the information and HDR found it acceptable for use instead of doing the geotechnical task. Please clarify and revise accordingly.

*The Town's understanding is correct; the Town supplied the report as a potential geotechnical data resource and HDR determined the report was suitable for use during this preliminary design phase. The report will be clarified accordingly.*

Table 2-1, pg. 3 – Should King tides be considered vs. MHHW or are the King tides addressed in Table 2-2 (pg. 7) in the Peak Offshore Wave Height?

*The MHHW/MLLW tidal information in Table 2-1 and Table 2-2 were used for general understanding of site conditions during this preliminary design phase. The preliminary design's water level that was associated with the design wave condition was established by referencing the NOAA 50-year exceedance probability event which comprehensively incorporates storm and tide considerations. Coastal projects customarily use MHW/MLW or MHHW/MLLW for tidal datum representations, however, we can also show the HAT/LAT (highest astronomical and lowest astronomical tide elevations) to additionally indicate potential king tide conditions for context. The reports will have the HAT/LAT included to help provide this context.*

Section 4.3, pg. 12 – Please provide the details/elements that make up the 7.3M NTE construction cost number so the cost drivers can be seen.

*The cost drivers for the \$7.3M NTE amount are as follows: \$0.2M for demolition, \$3.3M for the pier structure, \$2.4M for the work trestle, and \$1.4M for contingency. This information will be added to the summary report.*

Table 5.1, pg. 14 – I would anticipate partial deck rehab to occur more frequently after the first 10 years due to the cumulative damage of the remaining boards – thoughts?

*In general, rehab work will indeed cumulatively increase in frequency across the lifespan of the structure. The 20% replacement of decking value provided is the average replacement rate across the two planned decking rehab events. The actual frequency would more resemble a distribution that is 10% of decking replaced after year 10, 30% of decking replaced after year 20, and then full replacement after year 30. This distribution can be updated in the Life Cycle Financial Model (Figure 4-1 in the Life Cycle Plan), however this update will not alter the overall annualized life cycle cost amount. We will confirm whether the Town wants to see this update reflected in the Life Cycle Financial Model at the 7/15 Board meeting.*

Table 5.1, pg. 14 – Please tell me what is envisioned for addition of bracing for pile caps.

*The addition of bracing for pile caps is noted to be different from the pile cap bracing initially provided in the construction design. This rehabilitation activity would consist of adding or splicing timbers to either side of a pile cap in order to strengthen any deteriorated caps.*

Section 5.2, pg. 16 – Some method of construction for pile replacement should be assumed as this will be a significant cost element for the in water piles. Consideration should be given to the ability to reach some of the in water piles with a crane. Consider discussing this with Edwards Crane or B&B Crane (Shallotte).

*The Life Cycle Model will be updated such that the pile replacements will include a shore-driven and barge-driven methodology (i.e., not building a second trestle) that is applied to the assumed 10% of onshore-based and 50% of offshore-based pile replacement breakdown.*

Section 5.2, pg. 16 – Does the 38% pile replacement in the table equate to the 10% land/50% in water replacements in Table 5.1, pg. 14?

*Correct.*

#### Appendix B Basis of Design Comments

Section 1.5, pg. 2 – Please note that the pier house was demolished.

*This will be updated accordingly.*

Section 2.4.1, pg.4 – Is the highest astronomical tide (HAT) equivalent to a king tide?

*The HAT is the largest predicted king tide event; every king tide will not necessarily reach the HAT elevation.*

Section 2.8, pg. 6 – Please see the most recent Annual Beach Monitoring report (Feb 24) table 2.1 for a comprehensive summary of total sand placements (5.2M CY) and revise accordingly.

*This will be updated accordingly.*

Section 3.1, pg. 6 – Revise to reflect the pier house was demolished.

*This will be updated accordingly.*

Section 3.2, pg. 7 – Will the covered area at the end of the pier interfere with casting? Some folks use long rods with 2 feet or more line at the end of the rod to cast.

*The current 30 ft x 30 ft size of the covered structure at the end of the pier is very preliminary and such considerations were not yet incorporated (but will certainly be included in later design phases). We anticipate discussing the size and general design of this covered structure during the 7/15 Board meeting.*

Section 6.1.4, pg.13 – Does the deck height of 19 feet negate the advantage of using grating to reduce uplift forces, or will the deck boards be “break away”? Do other design elements/considerations preclude the use of grating? What elements are considered “break away”?

*Grating, either continuous or intermittent, can be included if desired by the Town. The current design philosophy would be for the connections of the deck boards to "break away" if uplift forces reached a certain threshold so as to not induce excessive load on the joists and connected substructure members. It is simpler from a maintenance perspective to replace deck boards than it is to replace joists or substructure members. Excessive loadings on the substructure may also result in permanent deformation of the pier substructure, resulting in the pier no longer maintaining a straight shape. Other items that would be designed as "break away" include the railing. There are no features that preclude the inclusion of grating if desired by the Town.*

#### Appendix C Life Cycle Analysis Report Comments

Section 1.1, pg. 3 – Update to reflect the pier house was demolished.

*This will be updated accordingly.*

Section 3.3.5, pg. 4 – For funding purposes, a line for Reactive Work needs to be included in some fashion. Note the town could set up a special fund similar to the canal dredging fund to address reactive work. Possibly it could be included in Table 4.3 (pg. 7) and in the Summary report body.

*We would like to further discuss this question with the Board at the upcoming 7/15 meeting. We will propose an estimation method on a “unit repair” type basis that will help provide the Town with context to make an informed decision on how the Town would like to approach such a contingency fund.*

I would like HDR to provide a high-level summary of expected operating cost components, such as: Personnel (i.e., will resources be needed collect entry fees or perform other duties associated with operation of the pier); Utilities (i.e., electrical, water, other?); Insurance (i.e., vandalism, fire, liability); Other operating costs?

*We would like to further discuss this question with the Board at the upcoming 7/15 meeting. This task would need to be included within a separate scope of work that has allocated project budget specifically to these investigations.*

If any additional questions arise before the upcoming Board of Commissioners meeting (7/15), please feel free to send them and we will have answers prepared for the meeting. We look forward to discussing the proposed preliminary design and draft report at the meeting.

Sincerely,  
HDR Engineering, Inc. of the Carolinas



William Fuller, EI  
Project Manager