PRINCIPALS:

Charles C. Isiminger, P.E. Darwin C. Stubbs, P.E.

Isiminger & Stubbs Engineering, Inc.

COASTAL • ENVIRONMENTAL • MARINE Celebrating 32 Years in Business

PRINCIPALS:

Mark A. Powell, P.E. Matthew D. Butler, P.E.

September 20, 2024

Town of Palm Beach 360 South County Road Palm Beach, FL 33480

Re: Bulkhead Observation and Future Plans Lake Worth Frontage 2 Four Arts Plaza, Palm Beach, FL Town of Palm Beach Palm Beach County, Florida

Ladies and Gentlemen:

This is in response to the Town's questions regarding the bulkhead and the future redevelopment of the property. We have observed the existing bulkhead which has an exposed height between 7 and 9 ft. and believe that any redevelopment of the property which raises the grades would necessitate the complete replacement of the bulkhead. The existing wall appears to be a gravitytype wall which is common along the shoreline of Palm Beach where the Lake Trail is present. A substantial wall overpour may be possible but would be difficult to construct because the standard practice is to trench into the rock on the waterward side of the bulkhead to greatly reduce the potential for soil leakage. Our field observations indicate that the natural rock layer varies between 2' and 5' below existing grade on the waterside of the existing bulkhead which means that trenching would be extremely difficult.

Based on current Town policy, the bulkhead will likely have to be raised to +5.0' NAVD. The replacement bulkhead will likely consist of interlocked steel sheet pile with a reinforced concrete cap. The wall would be either cantilevered or tied back with an anchor system that could consist of either conventional deadman, helical anchors, or soil/rock grouted anchors.

Sincerely,

RING, INC. ISIMINGER & STUBBS ENGINEERING, INC. Registry #8114 2024.09.20 10:43:12 -04'00' This item has been digitally signed and sealed by Mark A. Powell, P.E. on the date adjacent Mark A. Powell, P.E. No. 65673 to the seal. Printed copies of this document are not License No. 65673 considered signed and sealed and the signature must be verified on any electronic copies. 24096.TPB.01 Gabriel Marquez cc:

• North Palm Beach • Florida 33408 P.O. Box 14702 • 649 U.S. Highway 1, Suite 9 Phone: 561-881-0003 • Fax: 561-881-8123 • Email: hq@coastal-engineers.com