



February 23, 2022

Barry Kloptosky
Operations Manager
Grand Haven CDD
2 North Village Parkway
Palm Coast, FL 32137

RE: *Pond 14 and 13 Bank Erosion*

Dear Mr. Kloptosky:

Kimley-Horn provided performed on 02/22/2022 to review the bank condition of Pond 14 at 25, 27, 29, 43, 45, 47, and 57 Osprey Circle and the bank condition of Pond 13 at 11 Egret Drive.

The observations from this visit are as follows

1. 25, 27, 29 Osprey Circle: The bank behind these properties was fully vegetated with grass ground cover and various landscaping including cordgrass. The slope angle to the surface water varied significantly and appeared to exceed 2H:1V (Horizontal run to Vertical rise ratio) in several areas. Vertical drop-offs exceeding 10" were observed along the entire littoral zone. The mitered end pipe section that straddles 27 & 29 is undermined due to the bank erosion.
2. 43, 45, 47 Osprey Circle: The bank behind these properties was fully vegetated with grass ground cover and various landscaping including cordgrass. The slope angle to the surface water varied significantly and appeared to exceed 2H:1V in several areas. Vertical drop-off exceeding 10" were prevalent along the littoral zone of 43 and 57 but were not observed at 45.
3. 57 Osprey Circle: The bank behind this property was fully vegetated with unkempt ground cover and cordgrass. The slope angle to the surface water varied significantly and appeared to exceed 2H:1V in several areas. Vertical drop-off exceeding 10" were observed along the littoral zone but were not prevalent.
4. 11 Egret Drive: The bank behind this property was fully vegetated with grass ground cover and planted cordgrass. The littoral zone exceeded 2H:1V but did not have significant vertical drop-offs; however, the littoral zone was completely barren and the exposed earth was non-cohesive and highly unstable. Failure of this bank is imminent.

The conclusions and recommendations from this visit are as follows:

1. The bank slopes at all areas visited exceed acceptable criteria for safety (3H:1V max or 10" vertical drop) and should be repaired. A coquina rip-rap installation similar to what was installed at 9 and 11 Osprey Circle should sufficiently address the safety issue and prevent further erosion. The repair at the mitered pipe end between 27 and 29 Osprey Circle should include a grout injection to fill the void space underneath the pipe.

Please contact me at 352-415-1897 or david.sowell@kimley-horn should you have any questions or need additional information.

Sincerely,

KIMLEY-HORN



David C. Sowell, P.E.

DCS/jmb

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