



*Florida Department of Transportation*

RICK SCOTT  
GOVERNOR

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Fort Lauderdale, FL 33309

ANANTH PRASAD, P.E.  
SECRETARY

## MEMORANDUM

**DATE:** April 10<sup>th</sup>, 2014

**TO:** Min-Tang Li

**FROM:** Jim Richardson, Diver/Bridge Inspector

**COPIES:** T. Reynolds, H. Kinda, B. Wang, R. McQuarrie, J. Danielsen.

**SUBJECT:** Proposed Storm Water Drainage System Transfer to the City of Hallandale Beach

Districts 4 & 6 Dive Teams and Broward Operations Support Personnel were dispatched on 04/07/2014 and 04/08/2014 to Atlantic Shores Blvd in the City of Hallandale Beach to conduct multiple penetration dives for an interior visual inspection of the storm water drainage system in support of a possible jurisdiction transfer from the Florida Department of Transportation's District-4 to the City of Hallandale Beach.

### **Notes & Findings:**

1. The inspection began at the east end outfall and finished at the west end intersection of Atlantic Shores Blvd and US-1. (Approximately 4,800 feet of drainage pipe was inspected.)
2. The outfall and headwall had moderate to heavy marine growth and an area was cleaned of marine growth with no visible detrimental affects to the structure noted.
3. The interior piping at the outfall area had moderate to heavy marine growth and this marine growth progressively diminished to zero marine growth as the inspection continued west.
4. Where the interior piping had marine growth random areas were cleaned with no visible detrimental effects to the structure noted.
5. Multiple measurements were taken just inside the pipes access points, at the 2<sup>nd</sup> joint, mid-pipe then again at the end of the diver's umbilical's (approximately 325 linear feet in each direction from the access points) noting the amount of aggradation of sediment.
  - a. At the outfall area there was 2.5 feet of aggradation of sediment/shale.
  - b. Typically there was up to 2.5 ft of aggradation of sediment at all access points.
  - c. At 1,800 feet west of the outfall the piping had a typical 6 inches of aggradation of sediment.
  - d. At 3,000 feet west of the outfall the aggradation of sediment was reduced to 0 inches in the mid-pipe sections.

6. There was minimal trash and debris throughout the structure.
7. Access covers and storm grates were in good repair.
8. All through piping and outfalls that intersected this drainage system were inspected with no visible detrimental effects noted.

If you have any questions or please feel free to call me at 954-777-4164.

**Best Regards,**



**Jim Richardson**