

PRELIMINARY DRAFT LOCATION HYDRAULICS MEMORANDUM

for

**SR 5/US 1 Bridge Over Loxahatchee River/Atlantic Intracoastal Waterway
(Bridge #930005)
Project Development and Environment (PD&E) Study
From CR-A1A to Beach Road
Milepost 10.567 – 11.127
Palm Beach County, Florida**

**Financial Project ID: 428400-2-22-02
Federal Aid Number: TBD
ETDM Number: 14199**

Prepared for:



**Florida Department of Transportation
District IV
3400 West Commercial Boulevard
Fort Lauderdale, Florida 33309**

October 2016

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3400 West Commercial Boulevard

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Prepared by:

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West Palm Beach, FL 33411

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DRAFT LOCATION HYDRAULICS MEMORANDUM

I. PURPOSE

The purpose of this memorandum is to address the base floodplain encroachments resulting from the roadway improvements evaluated in the Project Development and Environment (PD&E) study. In accordance with Executive Order 11988 “Floodplain Management”, USDOT Order 5650.2, “Floodplain Management Protection”, and Federal-Aid Policy Guide 23 CFR 650A, floodplains must be protected. The intent of these regulations is to avoid or minimize highway encroachments within the 100-year (base) floodplain, and to avoid supporting land use development, which is incompatible with floodplain values.

II. BASE FLOODPLAIN

The Federal Emergency Management Agency (FEMA) Flood Insurance Rate Map (FIRM) for US-1/SR 5 (Federal Highway) Bridge over Loxahatchee River, community panel number 1251190003E, dated 06/02/1992, indicates that the project area is located in the 100-year floodplain (see Figure 1). The Loxahatchee River and portions of US 1 (SR 5) within the project limits are located within Flood Zone A7 that has a flood elevation of 6.0. The existing bridge banks at the abutments are at about elevation 5 and minor encroachment and loss of storage is anticipated. All floodplain storage losses will be compensated for by excavating swales within FDOT right-of-way within the floodplain. Additionally, there are no regulated floodway(s) within the project limits.

South Florida Water Management District (SFWMD) and FDOT design criteria for conveyance systems (e.g. culverts) that does not allow significant increases in flood stages will be met.

III. WATER QUALITY

This project will have no adverse impact to the area’s water quality. Stormwater treatment of the additional impervious areas will be treated as required by the SFWMD Environmental Resource Permit (ERP) drainage criteria.

IV. RISK ASSESSMENT

There is no change in flood “Risk” or floodplain impacts associated with this project.

The following floodplain statement is Number 4 in the FDOT PD&E Manual, tailored for this project:

“The proposed structure will perform hydraulically in a manner equal to or greater than the existing structure, and backwater surface elevations are not expected to increase. As a result, there will be no significant adverse impacts on natural and beneficial floodplain values. There will be no significant change in flood risk, and there will not be a significant change in the potential for interruption or termination of emergency service or emergency evacuation routes. Therefore, it has been determined that this encroachment is not significant.”