

CITY OF COCOA

Florida Avenue Streetscape Improvements

**SUPPORTING INFORMATION FOR
APPLICATION FOR
GENERAL ENVIRONMENTAL RESOURCE PERMIT
PER 62-330.451 F.A.C.**



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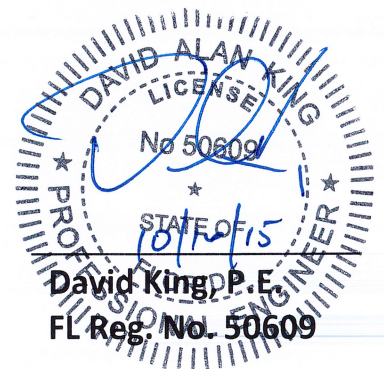


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1. Project Summary

The City of Cocoa (City) desires to construct retrofit stormwater improvements to an existing City-owned roadway in conjunction with planned streetscape improvements. The project area limits are the Florida Avenue R/W from S.R. 520 (King Street) to approximately 400 feet south of Rosa L. Jones Drive which is the City's corporate limit. The project length is approximately 2,400 linear feet.

The existing conditions is a 27 foot wide paved roadway with raised curb and gutters and existing sidewalks long the majority of both sides. The existing drainage system consists mainly of roadside curb and gutter, curb inlets and storm drainage pipes. Runoff from the portion of the project area north of Rosa Jones Drive drains directly into conveyance and discharges to the Indian River Lagoon (IRL) with no treatment. The portion of the project area south of Rosa Jones Drive drains to an existing retrofit wet pond owned by the City of Rockledge that was previously permitted as a joint project by the City of Cocoa and City of Rockledge under ERP# 80673-1. See existing conditions survey included as *Attachment A*.

The proposed streetscape improvements include maintaining the current roadway width, but narrowing the travel lanes to provide on street parking. The project is defined as a "Complete Streets" project where vehicular traffic is reduced and improvements are made for other modes of transportation (pedestrian, bicycle and transit). The streetscape improvements, alone, would not require stormwater treatment/ERP permitting. The City desires to leverage the streetscape construction to include retrofit stormwater improvements. These improvements include the use of permeable pedestrian and traffic concrete pavers. The majority of the proposed on-street parking area will include the removal of the existing asphalt and base and installation of a PaveDrain permeable paver system with 12" of gravel bedding. Approximately 950 SY of this system is proposed. The entire road width will be regraded to direct all runoff to the PaveDrain system. At 0.48 CF of storage per SF of PaveDrain system, approximately 4,104 CF of storage will be provided. The PaveDrain system will treat runoff from approximately 7.39 acres, thus providing approximately 0.153 inches of retention. See Permeable Traffic Paver Treatment Area exhibit included as *Attachment B*.

The proposed retrofit improvements will also include permeable pedestrian pavers with granular base

installed adjacent to the sidewalk for further retention and treatment of runoff from the properties along the roadway that drain towards Florida Avenue. The proposed construction plans are included as *Attachment C*.

The underlying soils is primarily fine sand and coquina having permeability rates between 13 in/hr and 20 in/hr and groundwater table found 11 ft to 12 ft below grade. See attached geotechnical report as *Attachment D*.

Information regarding the PaveDrain system is included in *Attachment E*.

2. Applicability to 62-330.451 FAC, General Permit to Counties, Municipalities and other Agencies to Conduct Stormwater Retrofit Activities

The City is constructing this project to improve an existing stormwater system and therefore complies with 62-330.451(1).

The proposed construction is for the modification of an existing system as allowed under 62-330.451(2)(b). The existing roadway/system is estimated to have been in existence since the late 1960'/early 1970's.

In compliance with 62-330.451(3), the proposed activities do not serve new/proposed development. No new/proposed development is proposed with this project.

As required in 62-330.451(5), the project's retrofit activities must result in at least one of the following:

- a) Addition of treatment capacity/reduction in pollutant loadings
- b) Addition of treatment or attenuation to an existing developed area with substandard stormwater treatment or attenuation capabilities.
- c) Removal of pollutants from previous stormwater discharges.

The addition of the permeable paver areas will provide for a reduction in pollutant loadings with

currently no treatment provided. The improvements will be an addition of treatment to a current substandard system. The existing system, having been developed prior to stormwater regulations, is substandard and the improvements will be an addition of treatment and attenuation.

As required in 62-330.451(7), the project will be implemented as a complete stand-alone project and not:

- a) Cause water quality violations
- b) Contribute to existing violation unless improvements will cause a net improvement
- c) Adversely affect function of wetlands/surface waters
- d) Adversely affect hydroperiod of wetlands
- e) Cause/contribute to flooding
- f) Add or increase chemical addition
- g) Be operated by pumps or other mechanical features
- h) Adversely affect ground water or surface water

The proposed activities will not cause any of these conditions. The IRL is currently under a BMAP. The proposed improvements will cause a net improvement to runoff from this basin. No chemical addition is proposed. No pump or other mechanical features are proposed. The improvements will have no adverse effect to ground or surface water.