

Fiscal Sustainability Plan Checklist- Gateway Drive Stormwater Improvements

Project No. SW062440 Project Sponsor: City of Pompano Beach

Does the FSP apply to the entire system? Yes No

If no, will the sponsor address additional components of the system in phases?

Yes No

Does the FSP include an inventory of critical assets that are part of the treatment works?

Yes No

Does the FSP include an evaluation of the condition and performance of inventoried assets or asset groupings? Yes No

Does the FSP include a certification that the assistance recipient has evaluated and will be implementing water and energy conservation efforts as part of the plan?

Yes No

Does the FSP include a plan for maintaining, repairing, and, as necessary, replacing the treatment works and a plan for funding such activities? Yes No

Has the FSP been implemented or is there a resolution stating when the plan will be implemented? Yes No

The City has signed a certification stating that it will implement the FSP before the final loan disbursement.

ACCEPTANCE:

Project Manager: _____ Date:

Section Administrator: _____ Date:

Effective Date: _____



The City of Pompano Beach
Gateway Drive Stormwater Improvements
Project #SW062440
Fiscal Sustainability Plan

April 2022



B-2 CANAL OUTFALL AT GATEWAY DRIVE



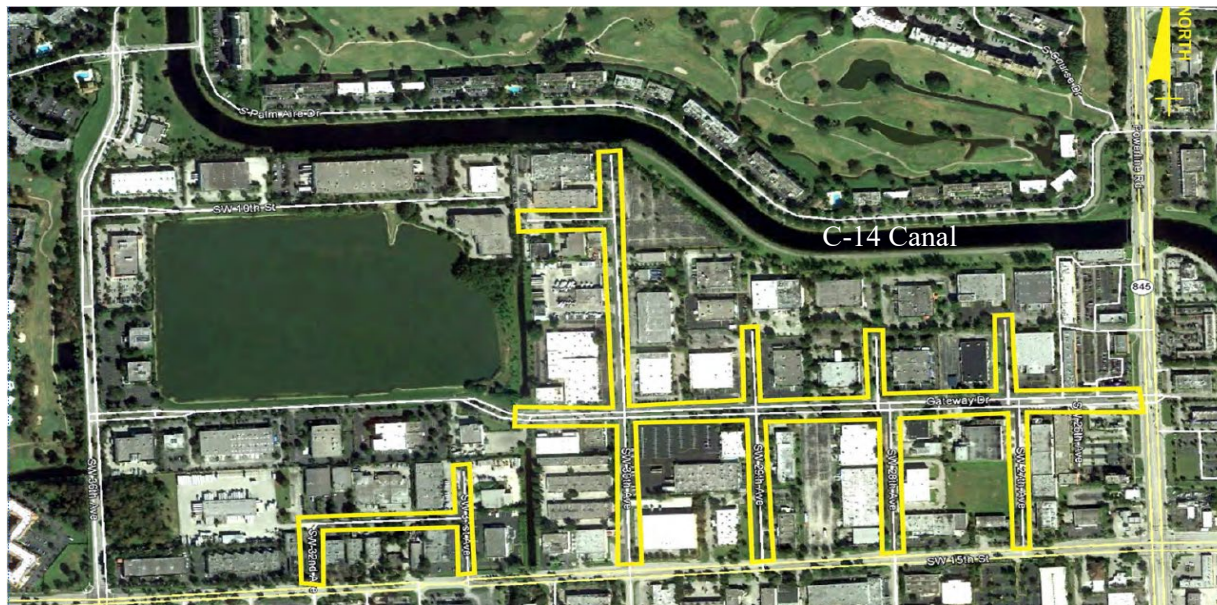
Section 1 – Introduction

This Fiscal Sustainability Plan has been prepared for the Gateway Drive Stormwater Improvement Project for the City of Pompano Beach. The purpose of this plan is to assist the City with overall fiscal planning for the long-term management of their new stormwater system associated with this project. This Fiscal Sustainability Plan applies to new stormwater system constructed under this project.

PROJECT PURPOSE:

Based on the City’s Stormwater Master Plan (2013), Study Area 6 Gateway Drive- Industrial/Business Park area was identified as an area with minimal amount of drainage improvements. The area experiences widespread minor roadway flooding with the duration of the roadway flooding being the primary problem to be addressed. The City of Pompano Beach operates and maintains its own stormwater system within City ROW to provide flood control and water quality treatment within the area.

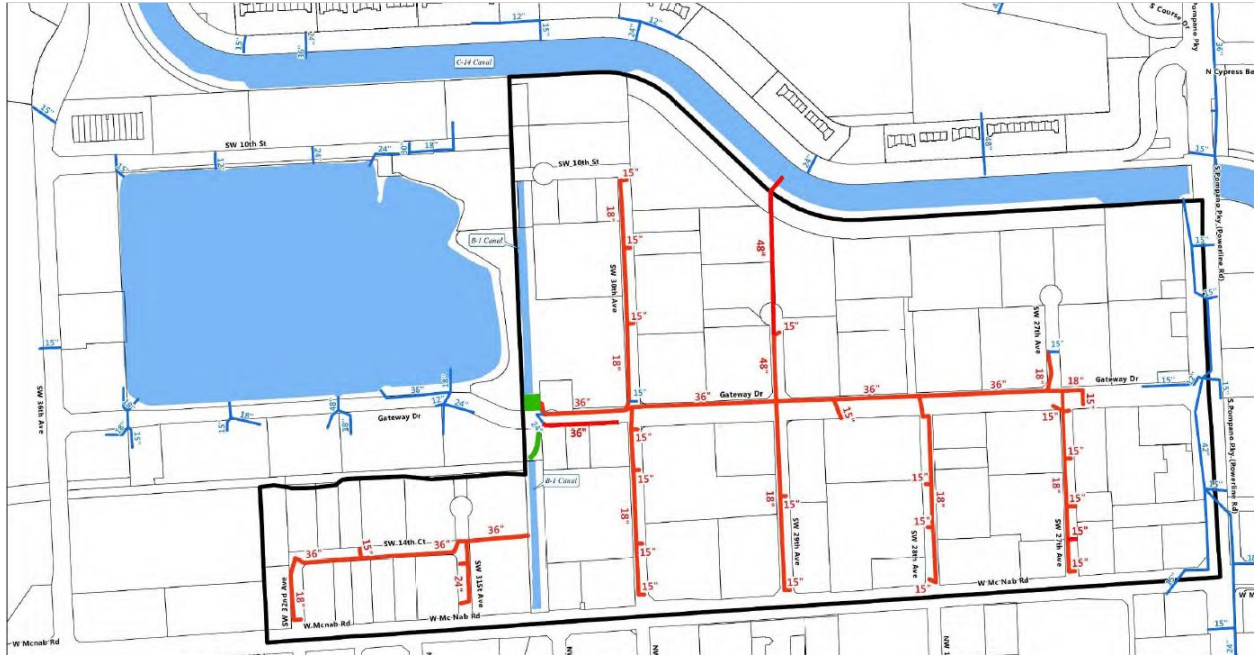
The project area is bounded on the north by the C-14 Canal, on the east by Powerline Road, on the south by McNab Road and on the west by the B-2 Canal, plus the properties along SW 32nd Avenue, SW 14th Court and SW 31st Avenue. See Map below:



PROJECT AREA MAP

STORMWATER SYSTEM IMPROVEMENTS:

The recommended Stormwater Improvements in the project area (Selected Alternative 4A),



PROJECT IMPROVEMENTS

This alternative includes a new 48-inch outfall pipe runs along SW 29th Avenue to the C-14 Canal. Alternative 4A shown above proposes to install a drainage inlet and pipe system within the area, provide a new positive outfall connection to the C-14 Canal and provide a upsized positive outfall connections at the two discharge points to the B-2 Canal. The proposed system will provide piped connections to one of the outfalls to the B-2 Canal and these outfalls will be upsized from 18-inch to 36-inch pipe. A new 48-inch outfall connection will be provided extending from the system on Gateway Drive, north along SW 29th Avenue to the C-14 Canal. Stormwater improvements include the removal of some smaller diameter drainage pipe and drainage structures and replacement; installation of a 36-inch RCP trunk line extending along Gateway Drive to the proposed 36-inch outfall at the B-2 Canal. A 36-inch trunk line along SW 14th Court to the proposed 36-inch outfall at the B-2 Canal. Installation of the new 48-inch outfall pipe to the C-14 Canal; canal bank regrading and restoration at the proposed (3) outfalls; proposed 18-inch and 15-inch drainage pipe and inlets along the cross streets; restoration including open cut pavement repair, driveway apron replacement in areas disturbed by construction; swale regrading and other miscellaneous restoration. The purpose of this system improvement alternative is to provide a drainage collection system with a positive drainage outfall, to provide water quality treatment within the proposed swales, to reduce the duration of the roadway flooding and to meet the discharge limitation. These improvements provide moderate improvement to the level of roadway flooding across the entire Gateway Drive study area. Improvement to the flood duration is also provided for the entire project area.

SECTION 2 – STORM WATER INVENTORY- ASSETS

The Gateway Drive Stormwater Improvements included the installation of the following stormwater infrastructure assets within the public right of way areas throughout this project:

- Concrete Drainage Structures (85) includes 3 with PRB's
- RCP – Drainage Pipe (10,345 LF)
- New and restored Roadway Swale Areas (13,300 SY)
- Replace (1) existing 18-inch outfall pipe at B-2 Canal with a 36-inch pipe and install (2) new Outfalls with (1) proposed 36-inch outfall pipe at B-2 Canal north of Gateway Drive and (1) 48-inch outfall pipe at C-14 Canal north of SW 29th Ave.

Please refer to **Exhibit 1** – Stormwater Infrastructure Inventory within this report for a detailed breakdown of the new stormwater system constructed for the Gateway Drive Stormwater Improvement Project.

SECTION 3 – STORMWATER RETAINAGE AND RUN-OFF

In regard to any water conservation efforts, the proposed stormwater improvements within the Gateway Drive project were designed to increase the quantity of stormwater runoff kept on-site within newly constructed roadway swale areas. This will improve the stormwater quality within the Project. The swales will allow stormwater runoff to permeate through the pervious surfaces and aggregates, which in turn recharges back into the groundwater.

The proposed stormwater system improvements within the Gateway Drive Project increases stormwater retainage with the new roadway swale areas and will provide additional storage capacity for the stormwater runoff which will lessen the amount of stormwater reaching the outfalls that discharge into the canals.

SECTION 4 – STORMWATER MAINTENANCE PLAN

The existing stormwater system management requires continued maintenance operations and effort by the City to verify that the stormwater system will be at full capacity while complying with all the associated regulations and requirements. The operation and maintenance of the stormwater system is a continued effort, which includes the inspection of drainage structures, cleaning of drainage structures and piping, the removal and replacement of any damaged drainage structures, the replacement of collapsed or failed piping, the removal of any soils/sediments, trash, and debris from the system, and annual compliance with regulatory programs. A consensus operations and maintenance plan is necessary to limit flooding issues throughout the City especially during rainfall events.

Maintenance of storm water piping, culverts, and drainage structures on an annual basis is necessary to remove any sediment and debris from the stormwater system. Sediments can build up over time within the drainage structures, pipes, and culverts if the drainage system does not get cleaned. The buildup of sediments and debris within the drainage pipes and culverts can reduce the flow capacity of the pipe, and reduce the discharge capacity, which will increase the potential of flooding within the right-of-way areas during a rainfall event. The accumulation of sediments and debris within the pipes and culverts can also impact the water quality at canals, lakes, rivers, and ditches when the accumulated pollutants are transported in the stormwater runoff and discharges at the outfalls directly into the bodies of water. Maintenance at the stormwater outfalls is necessary on a yearly basis.

Periodic inspection of drainage structures is necessary to identify locations within the stormwater system that need to be addressed. According to the requirements of the NPDES Permit, all components of the stormwater system must be inspected to verify that all components are operational. The new requirements of the NPDES Permit specify that the City inspects 10% of all drainage structures within the stormwater system each year. The City must also process and submit a yearly NPDES compliance report to the Florida Department of Environmental Protection for the structural controls and components of the stormwater system. The City has also developed Standard Operating Procedures (SOPs) which have been developed to provide guidance on the frequency of inspections and maintenance activities related to the stormwater management system. The City must continue to inspect and report all inspection activities in order to fulfill the requirements of the NPDES Permit.

The City’s Stormwater Management Utility provides funding for the operations and maintenance program for the existing stormwater management system. The Utility is mandated to clean drainage structures drainage pipe and culverts, repair damaged drainage structures, remove and replace collapsed drainage piping, remove debris and sediments from the stormwater system, and inspect the drainage structures. The Stormwater Management Utility documents and records their performance measures each Fiscal Year which is shown in the Table below.

Stormwater Management Utility Performance Measures			
Performance Measures	FY2015	FY2016	FY2017
Structure Cleaning (EA)	1,656	1,998	1,849
Pipe Cleaning (LF)	92,118	102,660	102,073
Structure Repairs (EA)	45	75	14
Pipe Replacement (LF)	180	0	100
Debris Removal (TN)	264	417	554
Inspections (EA)	1,845	2,182	2,107

As part the City’s annual stormwater maintenance program for the stormwater system that is noted above, the City will perform inspections and maintenance of the newly constructed stormwater system within the Gateway Drive project. Operations and maintenance of the new stormwater system within Gateway Drive will be a continual work effort. This effort which will include the inspection of drainage structures, cleaning trash, sediment, and debris from drainage structures and piping, the repair of damaged drainage structures, the removal and replacement of collapsed piping, the removal of sediments and debris from the stormwater system, and the annual compliance with regulatory programs.

Please refer to **Exhibit 1 on page 7** – Stormwater Infrastructure Inventory within this report for a detailed breakdown of the new stormwater infrastructure implemented under the Gateway Drive Stormwater Improvement Project along with the associated replacement costs.

EXHIBIT 1 - STORMWATER INFRASTRUCTURE INVENTORY

INFRASTRUCTURE CATEGORY	INFRASTRUCTURE DESCRIPTION	QUANTITY	UNIT	ACCEPTANCE DATE	EXPECTED SERVICE LIFE	END OF SERVICE LIFE	EXPECTED REPLACEMENT COST	FUNDING SOURCE	ALTERNATE FUNDING SOURCE
STORMWATER PIPING	12" RCP Drainage Pipe	45	LF	May 2022	30 years	May 2052	\$2,700	Utility Stormwater Fees	Utility Stormwater Fees
STORMWATER PIPING	15" RCP Drainage Pipe	1,200	LF	May 2022	30 years	May 2052	\$84,000	Utility Stormwater Fees	Utility Stormwater Fees
STORMWATER PIPING	18" RCP Drainage Pipe	4,100	LF	May 2022	30 years	May 2052	\$348,500	Utility Stormwater Fees	Utility Stormwater Fees
STORMWATER PIPING	30" RCP Drainage Pipe	530	LF	May 2022	30 years	May 2052	\$68,900	Utility Stormwater Fees	Utility Stormwater Fees
STORMWATER PIPING	36" RCP Drainage Pipe	2,700	LF	May 2022	30 years	May 2052	\$405,000	Utility Stormwater Fees	Utility Stormwater Fees
STORMWATER PIPING	48" RCP Drainage Pipe	975	LF	May 2022	30 years	May 2052	\$170,625	Utility Stormwater Fees	Utility Stormwater Fees
STORMWATER PIPING	14" x 23" ERCP Drainage Pipe	470	EA	May 2022	30 years	May 2052	\$47,000	Utility Stormwater Fees	Utility Stormwater Fees
STORMWATER PIPING	19" x 30" ERCP Drainage Pipe	85	EA	May 2022	30 years	May 2052	\$10,625	Utility Stormwater Fees	Utility Stormwater Fees
STORMWATER PIPING	24" x 38" ERCP Drainage Pipe	200	EA	May 2022	30 years	May 2052	\$30,000	Utility Stormwater Fees	Utility Stormwater Fees
STORMWATER PIPING	29" x 45" ERCP Drainage Pipe	40	EA	May 2022	30 years	May 2052	\$7,200	Utility Stormwater Fees	Utility Stormwater Fees
STORMWATER STRUCTURES	Type C Drainage Inlet w/Casting	46	EA	May 2022	30 years	May 2052	\$174,800	Utility Stormwater Fees	Utility Stormwater Fees
STORMWATER STRUCTURES	Type E Drainage Inlet w/Casting	9	EA	May 2022	30 years	May 2052	\$52,200	Utility Stormwater Fees	Utility Stormwater Fees
STORMWATER STRUCTURES	Type E Drainage Inlet w/Casting & PRB	1	EA	May 2022	30 years	May 2052	\$6,800	Utility Stormwater Fees	Utility Stormwater Fees
STORMWATER STRUCTURES	8' Diameter Manhole w/Casting	1	EA	May 2022	30 years	May 2052	\$11,500	Utility Stormwater Fees	Utility Stormwater Fees
STORMWATER STRUCTURES	7' Diameter Manhole w/Casting	3	EA	May 2022	30 years	May 2052	\$28,500	Utility Stormwater Fees	Utility Stormwater Fees
STORMWATER STRUCTURES	6' Diameter Manhole w/Casting	5	EA	May 2022	30 years	May 2052	\$40,000	Utility Stormwater Fees	Utility Stormwater Fees
STORMWATER STRUCTURES	6' Diameter Manhole w/ PRB	1	EA	May 2022	30 years	May 2052	\$8,600	Utility Stormwater Fees	Utility Stormwater Fees
STORMWATER STRUCTURES	5' Diameter Manhole w/Casting	3	EA	May 2022	30years	May 2052	\$19,500	Utility Stormwater Fees	Utility Stormwater Fees
STORMWATER STRUCTURES	5' Diameter Manhole w/Casting & Inlet	9	EA	May 2022	30 years	May 2052	\$67,500	Utility Stormwater Fees	Utility Stormwater Fees
STORMWATER STRUCTURES	5' Diameter Manhole w/Casting & PRB	1	EA	May 2022	30 years	May 2052	\$7,200	Utility Stormwater Fees	Utility Stormwater Fees
STORMWATER STRUCTURES	4' Diameter Manhole w/Casting	6	EA	May 2022	30 years	May 2052	\$36,000	Utility Stormwater Fees	Utility Stormwater Fees
TOTAL							\$1,627,150	2021 prices	