

DEP AGREEMENT NO. R1928  
CHANGE ORDER NO. 001

GRANTEE

City of St. Augustine  
75 King Street  
St. Augustine, FL 32084

DEP Agreement No. **R1928** as entered into on the 10<sup>th</sup> day of October 2019, is hereby revised as follows:

1. **Attachment 3, Grant Work Plan, Project Timeline** is hereby deleted in its entirety and replaced with the following, due to the Corona Virus Outbreak:

**PROJECT TIMELINE**

| Task No. | Task Title                                                          | Deliverable Due Date | Task Amount  |
|----------|---------------------------------------------------------------------|----------------------|--------------|
| 1        | Retrofit 10 existing stormwater outfalls with new tide check valves | 06/30/2020           | \$155,641.00 |

All other terms and conditions of the Agreement shall remain unchanged.

CITY OF ST. AUGUSTINE

STATE OF FLORIDA DEPARTMENT  
OF ENVIRONMENTAL PROTECTION



Jessica Beach, Grantee Grant Manager

Date:

3/27/2020

\_\_\_\_\_  
Whitney Gray, DEP Grant Manager

Date: \_\_\_\_\_

**STATE OF FLORIDA  
DEPARTMENT OF ENVIRONMENTAL PROTECTION  
GRANT WORK PLAN  
DEP AGREEMENT NO.: R1928**

**ATTACHMENT 3**

**Project Title:** Stormwater Outfall Resiliency Retrofit

**Grantee Contact Information:**

Organization Name: City of St. Augustine

Authorized Signer for the Organization: John Regan, P.E.

Title: City Manager

Address: 75 King Street (Physical), P.O. Box 210 (Mailing)

City: St. Augustine

Zip Code: 32084 (Physical) 32085-0210 (Mailing)

Area Code and Telephone Number: (904) 825-1006 (City Manager) or (904) 825-1040 (Public Works)

E-mail Address: [cosa@citystaug.com](mailto:cosa@citystaug.com) or [PublicWorks@citystaug.com](mailto:PublicWorks@citystaug.com)

**Grant Manager Contact Information:**

Organization Name: City of St. Augustine

Name: Jessica Beach

Title: Professional Engineer

Address: 75 King Street (Physical), P.O. Box 210 (Mailing)

City: St. Augustine

Zip Code: 32084 (Physical) 32085-0210 (Mailing)

Area Code and Telephone Number: (904) 209-4227

E-mail Address: [jbeach@citystaug.com](mailto:jbeach@citystaug.com)

**Fiscal Agent Contact Information:**

Organization Name: City of St. Augustine

Name: Jessica Beach

Title: Professional Engineer

Address: 75 King Street (Physical), P.O. Box 210 (Mailing)

City: St. Augustine

Zip Code: 32084 (Physical) 32085-0210 (Mailing)

Area Code and Telephone Number: (904) 209-4227

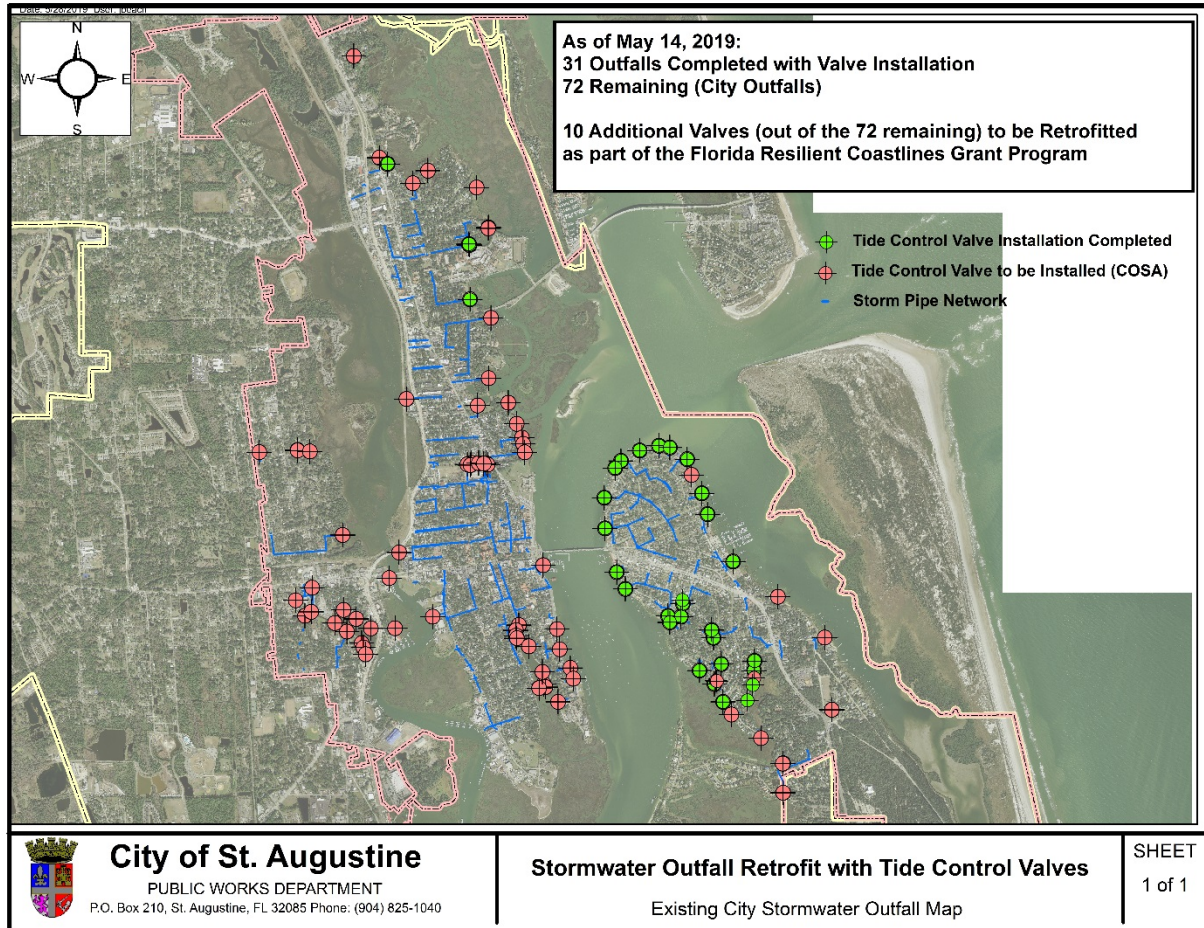
E-mail Address: [jbeach@citystaug.com](mailto:jbeach@citystaug.com)

**FEID No.:** 59-6000420

**Attachment 3, DEP Agreement #: R1928**

1 of 5

**PROJECT LOCATION:** City of St. Augustine – City Limits (see map)



## WORK PLAN

- 1. Project Summary:** The City intends to retrofit 10 stormwater outfalls with tide check valves to eliminate nuisance tidal flooding within the City.
- 2. Project Description:** The City was part of a pilot study that conducted a coastal vulnerability assessment coupled with a strategic adaptation plan (Coastal Vulnerability Assessment, City of St. Augustine, 2016; Florida Community Resiliency Initiative Pilot Project Adaptation Plan for City of St. Augustine, 2017). As part of the Coastal Vulnerability Assessment, there were three types of coastal flooding analyzed. Out of the three types of flooding evaluated, nuisance flooding has the largest potential to impact St. Augustine in the near term. Based on the analysis, it was predicted that an additional 500 acres of land will be vulnerable to nuisance flooding with 1 foot of sea level rise. Currently, the City of St. Augustine experiences nuisance tidal flooding between 12-16 times per year during lunar or king tides, with additional flooding during Nor'easter conditions. This would increase based on the coastal vulnerability assessment if no action is taken to mitigate for this impact. The Strategic Adaptation Plan identified a number of actions that the City could take to address the future coastal vulnerabilities. One such action was to target upgrades to the City's stormwater management system. More specifically, to target

upgrades to the pipes through which stormwater flows. The City began targeting retrofits of the existing stormwater pipe system with the installation of new tide check valves which prevents the backflow of tidal water into the storm pipe network (which can cause the nuisance flooding). The City has approximately 103 stormwater outfalls within the City limits. The first phase of this program was in the Davis Shores community, where the City received cost share funding from the St. Johns River Water Management District to implement the project. Starting in 2017 through March 2019, the City has successfully retrofitted 27 stormwater outfalls where the SJRWMD provided cost-share funding for 22 of the 27 retrofits. The City also received cost share funding from the St. Johns River Water Management District for the retrofitting of the Macaris stormwater outfall, which includes one 30-inch and one 66-inch stormwater pipe to be retrofitted. That project is currently scheduled for completion by the end of September 2019. The City has also installed two other tide check valves in other areas within the City for a total of 31 stormwater outfalls retrofitted with the new valves. Currently, there are 72 remaining stormwater outfalls within the City limits that may be in need of retrofitting with the tide check valves. The City also has a Stormwater Outfall Resiliency Retrofit Master Plan being developed to help prioritize the retrofitting of the remaining stormwater outfalls. Although the Master Plan is not yet completed, there is enough data available that the City can select 10 outfalls of the remaining 72 that are in need of retrofitting as part of this grant proposal. As such, the City is proposing to complete the retrofitting of 10 additional stormwater outfalls within the City limits with the grant funding.

**3. Project Need and Benefit:**

- a. Explain the demonstrated need, which the project addresses.

As explained in the Project Description, the recently completed Coastal Vulnerability Assessment identified nuisance flooding as having the largest potential to impact St. Augustine in the near term. Based on the analysis, it was predicted that an additional 500 acres of land will be vulnerable to nuisance flooding with 1 foot of sea level rise. Currently, the City of St. Augustine experiences nuisance tidal flooding between 12-16 times per year during lunar or king tides, where additional flooding can occur during Nor'easter conditions. This project will select 10 additional stormwater outfalls out of the remaining 72 outfalls within the City to be retrofitted with a tide check valve. This will eliminate current or potential nuisance flooding associated with the storm outfall.

- b. Explain how the proposed project meets the purpose of one or more of the Goals and/or Priority Areas.

The City of St. Augustine was one of three communities in the Community Resiliency Initiative Pilot Projects administered through the Florida Department of Economic Opportunity (DEO) and funded by the National Oceanic and Atmospheric Administration (NOAA). The overall effort from this pilot project was to assess community vulnerability to projected increases in coastal flooding and develop strategies to improve resilience to the associated impacts. The Strategic Adaptation Plan that came out of the pilot project effort identified that the City should target upgrades to its existing stormwater management system. One type of upgrade is the retrofitting of the existing stormwater outfalls with tide check valves to prevent tidal water from back-flowing into the stormwater system and causing nuisance flooding. The City has begun the implementation of this resiliency retrofit and has plans to continue with these efforts to target the remaining 72 stormwater outfalls for retrofits. This next phase that would be funded by this grant would enable the City to complete an additional 10 retrofits of the existing stormwater outfalls. This type of project

directly aligns with the recommendations from the Strategic Adaptation Plan to make the City more resilient to coastal flooding.

- c. Discuss how the project is feasible and can be completed by the Deadline of April 30, 2019.

The City has recently completed the retrofitting of 27 stormwater outfalls in Davis Shores. The 10 additional outfalls to be retrofitted through this grant, is based on the time and costs that the City tracked as part of the SJRWMD cost share grant. The City believes that 10 additional outfalls can be reasonably retrofitted by the grant deadline.

4. **Budget Summary:** Allowable budget categories and costs for this project are listed in the table below.

| FIXED PRICE     | Grant Amount Requested |
|-----------------|------------------------|
| AGREEMENT TOTAL | \$ 155,641.00          |

- A. **Provide an explanation on what methods were used to determine the amount you are requesting:** The requested grant amount was based on grant costs with SJRWMD and installation of valves under that program. The average cost to install one valve is \$15,564.10. This includes City labor costs, materials & equipment costs, and valve costs. The City has self-performed a majority of the valve installation, keeping the costs minimized. Therefore, to install 10 valves, the estimated total cost is \$155,641, the amount being requested for the grant.

5. **Project Timeline:** All tasks are to be completed and submitted no later than the Deliverable due date listed in the table below. Request for any change must be submitted prior to the current deliverable due date listed in the project timeline. Request are to be sent via separate email to the Department's Grant Manager, with the details of the request being made and the reason for the request.

#### PROJECT TIMELINE

| Task No. | Task Title                                                          | Deliverable Due Date | Task Amount  |
|----------|---------------------------------------------------------------------|----------------------|--------------|
| 1        | Retrofit 10 existing stormwater outfalls with new tide check valves | 04/30/2020           | \$155,641.00 |

6. **Performance Measure:** The Department's Grant Manager will review the deliverables to verify that they meet the specifications in the Grant Work Plan and this task description, to include any work being performed by any sub-contractor(s). Upon review and written acceptance by the Department's Grant Manager of all deliverables under this task, the Grantee may proceed with payment request submittal. All deliverable documents must be provided in an electronic downloadable format.
7. **Consequences for Non-Performance:** The Department will reduce each Task Funding Amount by 5% for every day that the Deliverable(s) is not received on the specified due date in the most recent Project Timeline, for the Agreement. Should a Change Order or Amendment be requested on the date of or after the most current Deliverable Due Date, the 5% reduction of that Task Funding Amount will be imposed until the date of the requested change is received, via email by the Department.

- 8. Payment Request Schedule:** Grantee may submit a request for the Task Funding Amount to be paid using the Exhibit C, after all Deliverables for that Task have been approved by the Department. Request(s) for payment must include the Exhibit A showing 100% completion of that Task and must be submitted within 45 days of the Deliverable Due Date.

**Or**

Grantee may submit one request for the Grant Amount Awarded, by using the Exhibit C, after the project is 100% completed. The request for the Grant Amount Awarded, must include an Exhibit A showing 100% completion for all Tasks, and must be submitted within 45 days of the Deliverable Due Date.

## **TASKS & DELIVERABLES**

### **Task # 1**

**A. Title:** Retrofit 10 existing stormwater outfalls with new tide check valves

**B. Description:** The City will select 10 existing stormwater outfalls (out of the remaining 72 stormwater outfalls) that are in need of retrofitting with a new tide check valve. The City will field evaluate each of the selected outfalls to determine pipe condition, outfall condition and identify any necessary preparation and/or repair work that would be needed to accommodate the new tide check valve. The City will perform any necessary preparation work on the stormwater pipe and associated outfall. The City will take internal diameter pipe measurements per the specifications from the manufacturer (Tideflex and/or WaPro). The City will then order the size of valves needed for the 10 stormwater outfall locations from the manufacturer (Tideflex and/or WaPro). If any additional point repairs, pipe lining, outfall rehabilitation, pipe extensions, or upstream inlet retrofits are needed, the City will perform that work in preparation for the valve installation. In some limited cases, the City may need to subcontract out for this additional work (such as in the case for pipe lining or an upstream inlet retrofit). Upon receipt of the ordered valves, the City will begin installation of the valves. The City typically installs a new headwall with cement riprap bags at each outfall location as needed to provide for ease of future access and to ensure that each outfall has positive drainage.

**C. Deliverable:** Deliverables to be submitted as part of Task #1 shall include the following:

- 1) Signed statement from a Florida Licensed Professional Engineer indicating construction has been completed in accordance with the design.
- 2) Executive summary identifying the selected outfalls for retrofitting based on the field evaluation.
- 3) Grantee's labor and material costs for the project, will be submitted with documentation to include but not limited to invoices and timesheets.
- 4) Invoices with proof of payments to vendors for any valves purchased, materials and/or equipment costs needed to perform the preparation work and valve installation.
- 5) Final project summary that will include before and after photos for each outfall location where the retrofit is completed.