



## THE CITY OF KEY WEST

Post Office Box 1409 Key West, FL 33041-1409 (305) 809-3700

### EXECUTIVE SUMMARY

**TO:** Jim Scholl, City Manager

**FROM:** Jay Gewin, Utilities Manager  
Doug Bradshaw, Senior Project Manager

**DATE:** November 22, 2010

**SUBJECT:** Approval of a Work Order from Douglas N. Higgins Utilizing the City's General Services Contract for Construction of the Pump Station F Force Main Upgrade on Glynn Archer Dr. in the Amount of \$844,775 (includes 10% contingency)

### ACTION STATEMENT:

This request is to approve a Work Order from Douglas N. Higgins to construct the Pump Station F Force Main in the amount of \$844,775 (includes 10% contingency) pursuant to the City's General Services Contract with Douglas N. Higgins

### BACKGROUND:

During hurricanes or extreme rain events, the City's wastewater collection system is susceptible to dramatic flow increases through the sewer pump stations. In areas of lower elevation, there is a chance that there could be sewer overflows in this type of weather event.

In order to alleviate this concern, the City first conducted a hydraulic analysis of the capacity of the sewer collection system and the WWTP. The City is therefore planning wastewater improvements designed to increase capacity of the collection system.

The City's current wastewater collection system routes sewage flow through an extended chain of pump stations stretching from the Airport, all the way around the island eventually passing through one 30" pipeline to the WWTP. Therefore if flooding or severe rains results in an overflow at a sewer pump station at a lower elevation, it can impact the lift stations in the chain behind it, thereby potentially backing up the sewer system throughout the island.

The City therefore seeks to complete these improvements to minimize the chance of any health risk to our residents by reducing the potential for sewer overflow and giving the City better operational flexibility in the operation of our wastewater collection system.

*Key to the Caribbean – Average yearly temperature 77° F.*

**PURPOSE & JUSTIFICATION:**

When the City constructed the second deep injection well at the WWTP site, it abandoned what had been a 30" outfall pipeline. The goal of this project is to utilize that abandoned pipeline so that the WWTP is able to accept additional flow into the facility.

The added benefit of utilizing the abandoned pipeline is that it will enable flow from the Sigsbee Force Main and its linked pump stations to pass directly to the WWTP. This flow would no longer have to be pumped through Pump Stations D and DA. This will therefore significantly lessen the chances of one flooded pump station bottleneck negatively impacting the entire City. Many more non-flooded areas under this plan would now have the ability to pump directly into the WWTP without having to pass through a flooded location. This will also improve a flooded pump station's ability to process sewage flow since the volume of material from the other pump stations currently pumping into it will be lessened.

As part of this capacity expansion project, the City is planning on utilizing the upcoming North Roosevelt Boulevard construction to increase the size of the Sigsbee force main. Once the Sigsbee force main work is complete, the City plans on installing new pumps, a generator, control panel, and a force main from Pump Station F connecting with the new Sigsbee force main.

The possibility that the ACOE may fund up to 65% of the construction and construction administration costs of this project if the City can expedite construction coupled along with the need to avoid digging up the street after the upcoming Glynn Archer Dr. street project has led us to the decision to install the force main from the Pump Station F project now. The remainder of the Pump Station F project will be completed once the North Roosevelt Project, which will include a new sewer force main, is done.

The General Services Contract was awarded to both Douglas N. Higgins and Charley Toppino and Sons per Resolution 10-319 and 10-320 respectively. Both firms were asked to submit a Work Order based on the scope of the work and the review of the plans. Staff along with CH2M Hill has reviewed both submittals and found it consistent with the rates established in the General Services contract. The review did determine inconsistencies between the Work Orders. Staff discussed these issues with Douglas N. Higgins and determined that the inconsistencies were based on interpretation of where an item would fall under the General Services contract. Staff requested and received confirmation that Douglas N. Higgins had reviewed the plans and specifications and are able to complete the project per their Work Order submitted (see attached letter).

The 10% contingency has been added to this project because of the subsurface conditions that have been known to cause construction problems in this area in the past. Contractor may encounter landfill debris and/or swampy/mucky conditions that will require removal and disposal of the material and over excavation of the trenches. These subsurface conditions are very difficult to determine prior to construction.

**OPTIONS:**

1. The City could award this Work order to Douglas N. Higgins in the Amount of \$844,775 (includes 10% contingency) under the competitively-bid General Services contract. Doing so would allow the force main work to be completed before the Glynn Archer Dr. street project begins, and would show the City as being responsive to the ACOE request for expedited construction for grant reimbursement.

2. The City may elect to bid this project independently. This option is not recommended because it would delay the construction past the start date for the Glynn Archer Dr. street project. The delay could also jeopardize grant funding from the ACOE.
3. The City could choose to postpone the project indefinitely. This option is not recommended due to the availability of ACOE grant funding, and because it could result in having to dig up a newly renovated Glynn Archer Dr. street project.

**FINANCIAL IMPACT:**

Douglas N. Higgins will perform construction services in compliance with this Work Order utilizing the terms of the General Services Contract. The cost is not to exceed \$844,775 (includes 10% contingency) and is budgeted in account number 401-3503-535-65/SE1101. Funds are available within the Pump Station F/Capacity Expansion project that is included in the sewer capital plan.

**RECOMMENDATION:**

Staff recommends option # 1, the authorization of this Work order from Douglas N. Higgins in the Amount of \$844,775 (includes 10% contingency) utilizing the General Services Contract.