



Legislation Details (With Text)

File #: 19-0592 **Version:** 1 **Name:** Benson Bayou Detention Project, Phase 1
Type: Agenda Item **Status:** Approved
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Title: Consider and take action on a resolution authorizing a professional services agreement with Lockwood, Andrews & Newman, Inc. (LAN) for design work related to the Benson Bayou Detention Project, Phase 1 (DR2006) in an amount not to exceed \$379,520 (Director of Engineering)

Sponsors:

Indexes:

Code sections:

Attachments: 1. Data Sheet, 2. Proposed Resolution, 3. Exhibit A - PSA for Benson Bayou Detention Project, Phase 1, 4. Staff Report Card on LAN, 5. CIP Project Sheet, 6. Aerial Map

Date	Ver.	Action By	Action	Result
11/5/2019	1	City Council	Approved	Pass

Consider and take action on a resolution authorizing a professional services agreement with Lockwood, Andrews & Newman, Inc. (LAN) for design work related to the Benson Bayou Detention Project, Phase 1 (DR2006) in an amount not to exceed \$379,520 (Director of Engineering)

Approval of this resolution will authorize the City Manager to enter into an agreement with LAN to determine the volume of detention necessary within the watershed for flood risk reduction while accounting for Atlas 14 based rainfalls in an amount not to exceed \$379,520.

In the aftermath of the Hurricane Harvey flooding, City Staff began working with LAN to conduct a high level Hydrologic & Hydraulic (H&H) Study of areas within the Benson Bayou Watershed and the Oaks of Clear Creek Subdivision. One of the areas of concern discussed was the deficiencies related to detention and conveyance in and along Benson Bayou which can lead to water not draining properly into the bayou. This type of issue was experienced by the residents of Oaks of Clear Creek. While Hurricane Harvey was mostly a rain event (4 to 6 feet of surge experienced), weather events that cause high surge levels (Hurricane Ike) when coupled with moderate to heavy rainfall can also exacerbate the issues along Benson Bayou.

Based on the LAN Study, City Staff created a potential drainage improvement project. This project was included as part of a list of potential drainage projects outlined on the City’s recently passed May 2019 General Obligation Bond Referendum.

For this contract, LAN will provide preliminary engineering services for drainage improvements along Benson Bayou. Because of the issues with working on Benson Bayou, Staff has worked with LAN on a Professional Services Agreement (PSA) to cover the preliminary assessments only at this time. The PSA for the preliminary engineering services will allow for:

- General project management consisting of meetings with city staff and quality assurance/quality control. The proposed cost for this activity is \$11,700.
- a Hydrologic and Hydraulic Analysis (H&H) of Benson Bayou Detention Basin. The H&H study will provide 2 options for staff to consider related to 1% events. The goal of these options will be to reduce the potential for flooding in affected neighborhoods while increasing the capacity and conveyance in Benson Bayou. The

proposed cost for this activity is \$57,215.

- a technical report that will include a discussion of the work performed, general methodology, assumptions applied during the course of study, a discussion of the study goal, the reported drainage problems, a discussion of deviations from general methodology, a high-level opinion of probable construction cost estimate, and a discussion of findings and recommendations. The proposed cost for this activity is \$23,965.

The PSA will also allow for some additional services to be performed on an as needed basis pending the options provided with the H&H study:

- additional service for the commission of 30% construction plans based on the outcome of the H&H study. The proposed allowance for this activity is a “not to exceed” amount of \$64,490.
- additional service for added surveying that may be needed due to (1) found inconsistencies with the developed model (field work may be needed to shore up initial assumptions) and (2) the design option selected based on the completed H&H. The estimated allowance for this activity is a “not to exceed” amount of \$75,000.
- additional service for geotechnical assessments. This assessment would collect data to more accurately evaluate the water table, existing slope stability within Benson Bayou, and general soil information. The estimated allowance for this activity is a “not to exceed” amount of \$40,000.
- additional service for the creation of metes & bounds descriptions and exhibits of parcels for the needed land acquisition. For the purpose of this contract, it is assumed that ROW/Easements for a maximum of 22 parcels will be needed. As you can see in the parcel map (part of PSA), the existing golf course occupies one of the parcels and then the 21 parcels are grouped together. It is anticipated that the metes & bounds work for the golf course property would be approximately \$27,500 but the remaining 21 parcels would be approximately \$1,650 each. The estimated allowance for this activity is a “not to exceed” amount of \$62,150.
- additional service for Environmental Permitting. This task is a bit of an unknown at this point. There is the potential need for USACE and TCEQ permits related to this project. At this point, Staff feels that a lower level TCEQ and USACE permit will be needed, but pending the outcome of the study, this could easily change to a USACE individual permit. Staff is recommending an allowance for this activity as a “not to exceed” amount of \$30,000.
- additional service for extra public meetings. The base PSA will allow for 1 public meeting, but depending on the results of the study, additional meetings could be warranted. The estimated allowance for this activity is up to 3 additional public meetings at \$5,000 per meeting or \$15,000.

The total anticipated cost for base services is \$92,880 and can be completed within 90 calendar days of a notice to proceed being issued. Once the base service is provided, this contract allows for the potential to add another \$286,640 worth of work as additional services. Depending on which additional service(s) is added, a time extension would be needed as the 90 days will only apply to the base services (H&H study, report, and public meeting).

Staff recommends executing this PSA as presented with the initial notice to proceed only covering the base services (\$92,880). Notice to Proceed for the noted Additional Services will be issued as needed as the project moves along.

Once the 30% construction plans are completed, needed land acquisition parcels are obtained and permitting requirements have been determined, Staff will need to work with LAN on a second PSA that would cover the final design, bidding, and construction services needed to complete the project.

Attachments:

1. Data Sheet
2. Proposed Resolution
3. Exhibit A - PSA for Benson Bayou Detention Project, Phase 1
4. Staff Report Card on LAN
5. CIP Project Sheet
6. Aerial Map

CONTRACT ORIGINATION: Professional Services Agreement with Lockwood, Andrews & Newman, Inc. reviewed

and approved by City Attorney's office.

FUNDING

{X} Funds in the amount of \$379,520 are available from Miscellaneous Capital Projects Fund 5015 with expenses charged to DR2006- PLANDESIGN-DESIGN-TS CASH. The design cost will be funded by the GO Bond sale and Misc. Capital Projects Fund 5015 will be reimbursed once bond proceeds are received.

{X} Based on available cash flow, a Budget Amendment may be required to transfer from General Fund - Fund Balance to Misc. Capital Projects Fund 5015. If needed, the transfer will be included on a future budget amendment for Council approval.

{ } Requires Budget Amendment to transfer from Account #_____ to Account #_____

{ } NOT APPLICABLE

STRATEGIC PLANNING

{X} Addresses Strategic Planning Critical Success Factor #1 - Develop & Maintain our Infrastructure

{ } NOT APPLICABLE