Legislation Details (With Text)

File #:	2019-1005		
Type:	Consent Calendar Item	**Status:**	Agenda Ready
File created:	6/6/2019	**In control:**	Sonoma County Water Agency
On agenda:	7/9/2019	**Final action:**	
Title:	Engineering and Design Services for Vortex Tube Rehabilitation		
Sponsors:	Sonoma County Water Agency		
Indexes:			
Attachments:	1. Summary, 2. Agreement		

Date	Ver.	Action By	Action	Result
7/9/2019	1	Board of Supervisors	Approved as recommended	Pass

To: Board of Directors, Sonoma County Water Agency
Department or Agency Name(s): Sonoma County Water Agency
Staff Name and Phone Number: Carlos Diaz / 707-547-1956
Vote Requirement: Majority
Supervisorial District(s): First

Title:
Engineering and Design Services for Vortex Tube Rehabilitation

Recommended Action:
In an ongoing effort to maintain operation of the Santa Rosa Creek diversion facility and its importance to the overall Central Sonoma Watershed Project's associated flood protection benefits to the public:

A) Authorize Sonoma County Water Agency's General Manager to execute an agreement with BKF Inc. for engineering and design services for vortex tube rehabilitation through June 30, 2022, in the not-to-exceed amount of $364,972.

B) Authorize Sonoma County Water Agency's General Manager to amend the agreement provided amendments do not cumulatively increase the total cost to Sonoma County Water Agency by more than 10 percent, while retaining authorities under Resolution 04-0547, and do not substantially change the scope of work.

(First District)

Executive Summary:
The Santa Rosa Creek diversion structure was constructed in 1963 as part of the Central Sonoma Watershed Project aimed at reducing flooding within the greater Santa Rosa area. One of the primary infrastructure elements responsible for proper hydraulic function of the Santa Rosa Creek diversion structure is a culvert beneath Montgomery Drive known as the Vortex Tube. The Vortex Tube has experienced structural deterioration from abrasion by gravels and sediment being transported within Santa Rosa Creek. The work to be done under the proposed contract is required to rehabilitate the existing culvert to protect its structural integrity and prolong its useful life.

Discussion:

HISTORY OF ITEM/BACKGROUND

The Santa Rosa Creek diversion structure was constructed in 1963 as part of the Central Sonoma Watershed Project, developed through coordination between the Sonoma County Flood Control and Water Conservation District and the USDA Soil Conservation Service. The Central Sonoma Watershed Project involved a multi-year plan that was intended to improve flood protection in the Sonoma County area. The Sonoma County Flood Control and Water Conservation District, now known as Sonoma Water, was tasked with operation and maintenance of all structural measures included in the Central Sonoma Watershed Project. The Santa Rosa Creek diversion structure is a critical flood protection element of the overall project.

One of the primary infrastructure elements responsible for proper hydraulic function of the Santa Rosa Creek diversion structure is a culvert beneath Montgomery Drive known as the Vortex Tube. The Vortex Tube was designed to convey low flows within the natural channel of Santa Rosa Creek, and also designed to split high flows between Santa Rosa Creek and Spring Lake. A portion of high flows are diverted to Spring Lake for flood attenuation and storage.

In 2017, dive inspections in the vicinity of the Vortex Tube identified structural deterioration of the reinforced concrete pipe sections within the Vortex Tube. While the original design included a 3-inch wearing surface of grout placed on the inside of the concrete pipe sections, the continued bedload transport of sand, gravels, and cobbles for decades within the vortex tube has completely eroded this protective layer in places. In some locations, bedload transport had in fact worked through both the sacrificial grout and structural concrete cover of the original pipe sections exposing some of the reinforcing steel within the original precast pipe sections. Left unchecked, the continued surface erosion and exposure of the reinforcing steel could compromise the structural integrity of the culvert. The work to be done under the proposed contract is required to rehabilitate the existing culvert to protect its structural integrity.

The Project consists of securing design engineering services to develop contract documents for rehabilitation of approximately 112 linear feet of 8-foot diameter reinforced concrete pipe and replacement of approximately 21 linear feet of cast in place transitional section comprising the Vortex Tube. In addition, a bypass pipe will be designed and included within the contract documents to be located upstream of the Vortex Tube to facilitate future inspection and maintenance.

SELECTION PROCESS

On March 22, 2018, Sonoma Water and its affiliated sanitation districts (collectively “Sonoma Water”) issued a Request for Statements of Qualifications (Statements of Qualifications to 29 firms. The Statements of Qualifications was also posted on Sonoma Water and County of Sonoma Purchasing Department websites. Ten firms submitted Statements of Qualifications).

The following criteria were used to evaluate each firm:

1. Thoroughness of SOQ
2. Professional qualifications and demonstrated ability to perform the work
3. Exceptions to standard terms in the sample agreement

Based on the evaluations, the following respondents were selected for the list of qualified consultants:

1. AECom
2. BKF
3. Coastland
4. Infraterra
5. Kennedy Jenks
6. Kleinfelder
7. Mott MacDonald
8. Schaaf and Wheeler
9. West Yost
10. Woodward Curran

BKF was selected given their prior qualifications and demonstrated ability to perform similar work. Their qualifications exhibited the most experience with rehabilitation of storm drainage facilities and culverts.

Sonoma Water may seek to amend or enter into subsequent agreement(s) with Board approval if required, relying upon this competitive selection process, after the preliminary or initial work is completed for the Project.

SERVICES TO BE PERFORMED

Under the proposed agreement, BKF will develop alternate methods of rehabilitation of the deteriorated Santa Rosa creek vortex tube; design replacement of the transition cast-in-place portion of the vortex tube; define the methods for the installation of the required bypass pipe; prepare the specifications and contract drawings for rehabilitation, replacement, and bypass pipe using the preferred method.

The cost of services will not exceed $364,972; the term end date is June 30, 2022.

The agreement includes two options for Sonoma Water to extend this agreement for a period of one year each by providing written notice to BKF thirty days in advance of the expiration date of the agreement and of the first extension option.

Prior Board Actions:

None

FISCAL SUMMARY

Expenditures	**FY 19-20 Adopted**	**FY20-21 Projected**	**FY 21-22 Projected**
Budgeted Expenses	$364,972		
Additional Appropriation Requested			
Total Expenditures	$364,972		
Funding Sources			
General Fund/WA GF			
State/Federal			
Fees/Other	$364,972		
Use of Fund Balance			

Contingencies			
Total Sources	$364,972		

Narrative Explanation of Fiscal Impacts:
Budgeted amount of $364,972 is available from FY 2019/2020 appropriations for the Flood Control Zone 1A fund. No additional appropriation is required.

Staffing Impacts:			
Position Title (Payroll Classification)	**Monthly Salary Range (A-I Step)**	**Additions (Number)**	**Deletions (Number)**
N/A			

Narrative Explanation of Staffing Impacts (If Required):
None

Attachments:
Agreement

Related Items "On File" with the Clerk of the Board:
None