

Key Largo Wastewater Treatment District Board of Commissioners Meeting Agenda Item Summary

Meeting Date:
March 16, 2021

Agenda Item Number: L-1

Agenda Item Type:
Information / Presentation

Agenda Item Scope:
Review / Discussion

Recommended Action:
Discussion

Department:
Engineering

Sponsor:
Ed Castle

Subject:
Coating of Concrete Structures at WWTP

Summary of Discussion:

Staff previously presented an item to the Board at the March 2nd meeting requesting consideration of an ITB to procure bids for coatings of concrete structures at the WWTP. As the technical details of the work developed, it was suggested that coating of the ancillary above-ground components that are attached to the structures be added to the scope. To that end, the Bid Form has been modified to reflect an allowance for coating of above-ground ancillaries like piping, mounting brackets, etc. We have also added an allowance for concrete repairs on the structures. Little concrete damage is expected, but some defects will only become apparent after removal of existing coatings. +

<u>Reviewed / Approved</u>	<u>Financial Impact</u>	<u>Attachments</u>
Operations: _____	\$ 632,500.00	1. WEC memo 2. Draft Bid Form
Administration: _____	Expense	
Finance: _____	Funding Source:	
District Counsel: _____	Rate Revenue	
District Clerk: _____	Budgeted:	
Engineering: _____	Yes	

Approved By: _____
General Manager

Date: 3-11-2021



MEMORANDUM

To: Peter Rosasco, General Manager
From: Edward R. Castle, PE
Date: March 11, 2021
Re: Coating of WWTP Concrete Structures

The FY21 budget includes a capital cost for coating of certain concrete tanks and structures at the WWTP. The WWTP construction was finished approximately 10 years ago. The coatings on the SBRs, Effluent EQ tank, headworks structure, digester and the Operations Building are showing signs of deterioration and are losing the protective ability required for the harsh environment at the WWTP.

As WEC and KLWTD staff continued to work on refining the scope of work for this project, we examined the structures. It was noted that there are many pipes, supports, brackets, etc. that are above ground and attached to the concrete structures that are to be coated. There is large-diameter ductile iron pipe, smaller diameter PVC pipe, electrical conduits, light poles, handrails, etc. attached to the structures. Most of these ancillaries have not been re-coated since the plant was built.

The DI pipe fittings are showing rust where the fasteners and joints are located and are showing chalking of the existing coatings. There is also unprotected PVC that can be damaged by UV exposure. Metal pipe hangars, mounting brackets and other metal items are also showing corrosion.

It is staff's opinion that these ancillaries should be prepped and coated along with the concrete structures to which they are attached. Staff also believes that as the concrete structures are blasted, there may be areas of concrete degradation that need to be addressed. Since it is difficult to quantify these items, the attached bid form shows an allowance for concrete repairs and an allowance for prepping and coating above-ground ancillaries attached to the structures.

With an allowance, any work against those funds would be done at time and materials rate. The cost of materials as documented with receipts, along with the manhours spent on the work, will be recorded and will be used to determine the appropriate payment for those items.

The allocations are suggested as a total of \$35,000 for concrete repair and \$35,000 for prepping and coating the above-ground ancillaries. Although the allocations are spread across the entire scope of work, staff suggests that the Board allow the General Manager to re-distribute the allowances between structures as needed, so long as the total allocations are not exceeded.

The proposed Bid Form for the project showing the allocations is attached.

Proceed; to achieve substantial completion of the work within 180 calendar days of the date of the Notice to Proceed; and to achieve final completion within **30** calendar days from substantial completion. See also Supplementary Condition, Appendix 2 & 3, SC-12.02.C-E.

- 6. To accept the provisions of the Agreement as to liquidated damages in the event of failure to complete the work on time.

1.03 Bid Schedule

The Bidder hereby agrees to perform all work as required by the Contract Documents for the following Prices. All work required to be performed by the Contract Documents is to be included within the following Pay Items, inclusive of furnishing all manpower, equipment, materials and performance of all operations relative to construction of the project. Work for which there is not a Pay Item will be considered incidental to the Contract and no additional compensation will be allowed.

1.04 List of Subcontractors

List the subcontractors, if any, that the Bidder proposes to use to perform a portion of the work with a value of more than one half of one percent of the total Bid. Prior to award, the Bidder must provide evidence of each subcontractor's valid business license, and evidence of each subcontractor's valid certificate of competency or registration under Ch. 489, Fla. Stat.

If the Bidder fails to list a subcontractor or lists more than one subcontractor for the same portion of work and the value of that work is more than one half of one percent of the total Bid, the Bidder shall be considered to have agreed to perform that portion of the work without the use of a subcontractor and to have represented the Bidder to be qualified to perform that work. The Bidder shall not remove or replace subcontractors listed in the Bid subsequent to the lists being made public at the Bid opening, except upon good cause shown.

Subcontractor Name	Business Location	Work to be Performed	Percentage of Base Bid

Use additional sheets, if necessary.

1.04(a) Additive Alternate

Additive Alternates (commonly referred to as add alternate), are defined in the project

description as well as in the bid from. An add alternate item is denoted on the bid form with the words "(Add Alternate Item)" in the line item description. Add alternate items shall be awarded solely at the discretion of the District and are not guaranteed should a contract be awarded for the items included in the base bid. The District may accept the Add Alternate bid at any time before final completion of the project.

If the Bidder does not wish to bid on Add Alternate items then the words "NO BID" shall be stated in the cost and total cost section of the bid form. If the Bidder wishes to bid on Add Alternate items then the "Combination Total" section of the bid filled out.

ITEM NO.	DESCRIPTION	UNITS	Quantity	UNIT COST	TOTAL COST
	General Conditions				
A-1	Mobilization	LS	1		
A-2	Bonds and Insurance	LS	1		
General Conditions Sub-Total (Sum of A-1 through A-2)					
	SBR # 1				
B-1	Prepare SBR 1 for Blasting	LS	1		
B-2	Blasting exterior of Structure	LS	1		
B-3	Allowance for Concrete Repairs	LS	1	\$5,000.00	
B-4	Allowance for Prep and Coat of Above Ground Ancillaries (piping, metal brackets, railings, etc.) to be removed and replaced or coated in place)	LS	1	\$5,000.00	
B-5	Apply Coatings to Structure	LS	1		
B-6	Inspect, test and touch up Coatings	LS	1		
B-7	Site Restoration	LS	1		
SBR #1 Sub-Total (sum of B-1 through B-7)					
	SBR #2				
C-1	Prepare SBR 2 for Blasting	LS	1		
C-2	Blasting exterior of Structure	LS	1		
C-3	Allowance for Concrete Repairs	LS	1	\$5,000.00	
C-4	Allowance for Prep and Coat of Above Ground Ancillaries (piping, metal brackets, railings, etc.) to be removed and replaced or coated in place)	LS	1	\$5,000.00	
C-5	Apply Coatings to Structure	LS	1		
C-6	Inspect, test and touch up Coatings	LS	1		
C-7	Site Restoration	LS	1		
SBR #2 Subtotal (Sum of C-1 through C-7)					

ITEM NO.	DESCRIPTION	UNITS	Quantity	UNIT COST	TOTAL COST
	SBR #3				
D-1	Prepare SBR 3 for Blasting	LS	1		
D-2	Blasting exterior of Structure	LS	1		
D-3	Allowance for Concrete Repairs	LS	1	\$5,000.00	
D-4	Allowance for Prep and Coat of Above Ground Ancillaries (piping, metal brackets, railings, etc.) to be removed and replaced or coated in place)	LS	1	\$5,000.00	
D-5	Apply Coatings to Structure	LS	1		
D-6	Inspect, test and touch up Coatings	LS	1		
D-7	Site Restoration	LS	1		
SBR #3 Sub-Total (Sum of D-1 through D-7)					
	Effluent Equalization Tank				
E-1	Prepare Reuse Tank for Blasting (tank and roof)	LS	1		
E-2	Blasting exterior of Structure (tank and roof)	LS	1		
E-3	Concrete Repairs Allowance	LS	1	\$5,000.00	
E-4	Allowance for Prep and Coat of Above Ground Ancillaries (piping, metal brackets, railings, etc.) to be removed and replaced or coated in place)	LS	1	\$5,000.00	
E-5	Apply Coatings to Structure	LS	1		
E-6	Inspect, test and touch up Coatings	LS	1		
E-7	Site Restoration	LS	1		
Effluent Equalization Tank Sub-Total (Sum of F-1 through F-7)					
	Digester Tank				

ITEM NO.	DESCRIPTION	UNITS	Quantity	UNIT COST	TOTAL COST
F-1	Prepare Digester for Blasting	LS	1		
F-2	Blasting exterior of Structure	LS	1		
F-3	Allowance for Concrete Repairs	LS	1	\$5,000.00	
F-4	Allowance for Prep and Coat of Above Ground Ancillaries (piping, metal brackets, railings, etc.) to be removed and replaced or coated in place)	LS	1	\$5,000.00	
F-5	Apply Coatings to Structure	LS	1		
F-6	Inspect, test and touch up Coatings	LS	1		
F-7	Site Restoration	LS	1		
Digester Tank Sub-Total (Sum of F-1 through F-7)					
	Headworks				
G-1	Prepare Headworks for Blasting	LS	1		
G-2	Blasting exterior of Structure	LS	1		
G-3	Allowance for Concrete Repairs	LS	1	\$5,000.00	
G-4	Allowance for Prep and Coat of Above Ground Ancillaries (piping, metal brackets, railings, etc.) to be removed and replaced or coated in place)	LS	1	\$5,000.00	
G-5	Apply Coatings to Structure	LS	1		
G-6	Inspect, test and touch up Coatings	LS	1		
G-7	Site Restoration	LS	1		
Digester Tank Sub-Total (Sum of G-1 through G-7)					
	Additive Alternate-Operation's Building				
H-1	Prepare Operation's Building for Blasting	LS	1		
H-2	Blasting exterior of Structure	LS	1		
H-3	Allowance for Concrete Repairs	LS	1	\$5,000.00	
H-4	Allowance for Prep and Coat of Above Ground Ancillaries (piping, metal brackets, railings, etc.) to be removed and	LS	1	\$5,000.00	

ITEM NO.	DESCRIPTION	UNITS	Quantity	UNIT COST	TOTAL COST
	replaced or coated in place)				
H-5	Apply Coatings to Structure	LS	1		
H-6	Inspect, test and touch up Coatings	LS	1		
H-7	Site Restoration	LS	1		
Digester Tank Sub-Total (Sum of H-1 through F-H)					
TOTAL PROPOSED BASE BID COST (SUM OF A-7 THROUGH G-7)					
PROPOSED ADDITIVW ALTERNATE BID COST (SUM OF H-1 THROUGH H-7)					
TOTAL PROPOSES BID INCLUDING BASE BID + ADDITIVE ALTERNATE					

1.05 Miscellaneous Requirements and Affirmations

- A. Bid must be on the Bid Form.
- B. I have attached the required Bid Security to this Bid.
- C. I have attached the required Statement in connection with the Trench Safety Act.

1.06 RESPECTFULLY SUBMITTED, signed and sealed this ___day of _____, _____.

Contractor

By (Signature) Date

Printed Name and Title

Business Address

City State Zip Code

(CORPORATE SEAL)

Telephone No. Facsimile No.

ATTEST:

By (Signature) Date

Printed Name and Title

END OF FORM