

DEPARTMENT OF VETERANS AFFAIRS, NATIONAL CEMETERY ADMINISTRATION
Oakland, California

PRICE SCHEDULE: The Contractor shall provide all labor, materials, equipment, tools, and supplies to complete Irrigation Pump Station Filter services at Riverside National Cemetery, 22495 Van Buren Blvd., Riverside, CA 92518.

All work shall be performed in accordance the Description/Specifications/Statement of Work, contained in this contract.

SCHEDULE OF SERVICES:

Contract Line Item	Description	Quantity	Unit	Unit Price	Total Price
001	Refurbish 'Yardney' Sand Media Filter Systems at two (2) irrigation pump stations.	1	Job	\$ _____	\$ _____
GRAND TOTAL PRICE					\$ _____

DESCRIPTION/SPECIFICATIONS/STATEMENT OF WORK

Project Title: Riverside National Cemetery – Irrigation Pump Station Filter Project

I. GENERAL SCOPE OF WORK:

The Contractor shall furnish all labor, materials, equipment refurbish (2) Yardney Sand Media Filter Systems to include replacing filtration media, cleaning tanks and under drains, installing sacrificial rods, replacing valves and all related gaskets. Lake A system consists of seven (7) filtration tanks and Lake B system consist of nine (9) filtration tanks. Work is located at Lake A and Lake B Pumping Stations, Riverside National Cemetery (RNC), located in Riverside, CA. Work includes, but not limited to removing existing media from tanks, treating under drains with muriatic acid, pressure washing interior of tanks, install new sand/gravel/garnet media, replace manway gaskets, install (1) sacrificial rod per tank, replace backwash restrictor, remove and replace actuator valves and grooved couplings. Other items as specified herein.

Unless otherwise noted, all materials shall be new. Prior to work, Contractor shall submit for approval the manufacturer's specifications on the all material being installed.

All work will be coordinated with the Contracting Officer's Representative (COR) and with the Cemetery Director/Assistant Cemetery Director. Only the Contracting Officer (CO) has the authority to make changes to the contract that affects price and/or time. Work will be conducted in such a manner to minimize the impact on the Cemetery operations. Water supply to the existing irrigation systems shall not be shut down continuously for more than 48 hours, and shall be done so at the direction of the COR.

Work on site will be accomplished between the hours of 8:00 and 4:30, Monday through Friday, except Federal Holidays.

Contracting Officer's Representative (COR):

Phillip Kallio
Department of Veterans Affairs
National Cemetery Administration
22495 Van Buren Blvd.
Riverside, CA 92518
Phone: (951) 653-8417
Fax: (951) 653-5233
Phillip.Kallio@va.gov

The work in this project includes but not limited to:

Item 1: Yardney Filter System:

1. Remove and Replace Sand/Gravel/Garnet filtration media in all existing tanks *see Note #1.
2. Treat under drains with muriatic acid *see Note #2.
3. Pressure wash under drains and interior of tanks.
4. Install sacrificial anode-20" (48" tanks)
5. Remove and install new actuator valves model 454D auto.
6. Replace manway gaskets 11"x15" (Two per tank)
7. Replace grooved couplings.
8. Replace Backwash Restrictor 2" HP

***Note #1: Prior to placing gravel aggregate, material must be prewashed on site.**

***Note #2: Upon inspection, if underdrain is found unserviceable, COR must be notified immediately.**

The following materials list is unique to the filter system and must be obtained from the manufacturer 'Yardney Water Management Systems, Inc.':

- #16 Silica Sand – 900lbs per tank #148020047
- # 3 Gravel Pack – 800lbs per tank #148055075
- Garnet 1.45 (8/12) – 600lbs per tank #148030145
- (9) each, Sacrificial Anode – Part # 143020120
- (7) each, Sacrificial Anode – Part# 250000200
- (32) each, Manway gasket – 11"x15" – Part # 105021115

- (16) each Actuator Valve 454 D Auto – Part # 340004580
- (2) Backwash Restrictor 2” HP – Part #360020250
- (32) Gasket 4” Grooved coupling – Part #108560400
- (16) Gasket 5” Grooved coupling – #108560500

General material available on open market:

- Muriatic acid

II. GENERAL REQUIREMENTS

A. General Notes

1. Prior to submission of any bid, the Bidders shall perform a thorough field survey of the existing site conditions and features. Verify at project site the exact size, clearances of all existing features being modified, relocated, extended, connected to or removed. Any site conditions which may cause significant deviation from description of the work shall be brought to the attention of the Contracting Officer (CO) or his/her Representative (COR) for clarification prior to submission of the bid. Verify dimensions of all Government-furnished and installed equipment to insure proper coordination with construction. Contractor shall bear all costs for relocation of existing utilities from failure to advise of conflict in writing prior to submission of any bid, and/or from failure to properly coordinate installations of system.
2. All utilities required for the continuous operation of all existing facilities must be maintained in service at all times except as required for new system connections.
3. Coordinate and resolve all details of the shutdown for the specific utilities, and then submit the plan to the COR two weeks in advance of proposed shutdown for acceptance. When option exists, implement options to minimize interruption of service to the facilities.
4. COR will provide technical support, de-pressurize the filtration system prior to work and re-pressurize and test system after work is completed.
5. Contractor will inspect media levels with COR present, 30 days after project completion and add additional media if necessary.
6. Contractor shall coordinate with the COR the location of temporary portable potties, material storage containers, etc. Public access to the National Cemetery shall not be impaired.
7. The Contractor shall assume sole responsibility for safety of all persons on or about the construction site, in accordance with applicable laws and codes. Guard all hazards in accordance with the safety provisions of the latest manual of accident prevention published by the Associated General Contractors of America and OSHA. Fence the construction area as necessary to prevent public access to the work site.
8. The Contractor shall provide all MSDS for all required material used in this project.

9. The Contractor shall guarantee that all work done under this contract will be free from faulty materials or workmanship for a period of one year after the date of Final Acceptance by the Government. The Contractor hereby agrees to repair or replace all defects or imperfection appearing in the work done under this contract to the satisfaction of the Government at no additional cost to the Government.
10. Matters related to safety, and any actions of the Contractor, shall meet all safety requirements of Riverside National Cemetery Safety Officer, Department of Veterans Affairs, OSHA, and the State. It is incumbent upon the Contractor to be familiar with these requirements. "Safety" shall also include the Contractor having a safety representative who maintains regular and routine contact with the Safety Officer at RNC. Contractor shall provide training of the contractor's and subcontractor's workers as necessary to meet these requirements.
11. Repair and replace any existing structure to existing condition when altered or damaged by the construction at no additional cost to the Government.
12. Completion Time: Thirty (30) calendar days from date of issuance of Notice to Proceed (NTP).

III. MATERIALS

A. Filtration Media

1. Gravel #3 – (Crushed 5/8-inch)
 - a. Crushed, finely-graded, washed, predominantly siliceous, kiln-dried gravel for use in industrial and municipal water filtration.
 - b. UL Certified in accordance with ANSI/NSF Standard 6.1 Drinking Water Systems; AWWA Standard B100-09.
 - c. Characteristics: Color-yellow brown; Bulk Density-100 lbs/ft³; Specific Gravity-3.80; Grain shape-angular; Solubility-Insoluble; Hardness-7.0-8.0 Mohs.

<u>Sieve Size</u> (U.S. Standard)	<u>Percent Passing</u>
3/4"	97
5/8"	48
1/2"	3

2. Garnet 1.45 – (8/12)
 - a. High density garnet for use in industrial and municipal water filtration
 - b. UL Certified in accordance with ANSI/NSF Standard 6.1 Drinking Water Systems.
 - c. Characteristics: Color-dark brown; Bulk Density-140 lbs/ft³; Specific Gravity-3.80; Grain shape-angular; Solubility-Insoluble; Hardness-7.0-7.5 Mohs.

<u>Sieve Size</u> (U.S. Standard)	<u>Percent Retained</u>
No. 6	0
No. 7	0.9
No. 8	17.2
No. 10	60.7
No. 12	17.6
No. 14	2.8
No. 16	0.3
No. 18	0.5

<u>Symbol</u>	<u>Name</u>	<u>Percentage</u>
SiO ₂	Silica Dioxide	36%
Fe ₂ O ₃	Iron Oxide	31.1%
CaO	Calcium Monoxide	26.0%
Al ₂ O ₃	Aluminum Oxide	2.9%
MgO	Magnesium Monoxide	1.0%
MnO	Manganese Monoxide	1.0%
TiO ₂	Titanium Dioxide	1.0%

3. Silica Sand -- (#16)

- a. Crushed, finely-graded, washed, predominantly siliceous, kiln-dried sand for use in industrial and municipal water filtration
- b. UL Certified in accordance with ANSI/NSF Standard 6.1 Drinking Water Systems; AWWA Standard B100-09.
- c. Characteristics: Color-light brown; Bulk Density-100 lbs/ft³; Specific Gravity-2.67; Grain shape-angular; Solubility-Insoluble; Hardness-7.0-7.5 Mohs.

<u>Sieve Size</u> (U.S. Standard)	<u>Percent Passing</u>
No. 16	99
No. 18	88
No. 20	65
No. 25	32
No. 30	7
No. 35	2
No. 40	1

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