

Attachment J02

Fort Myer Potable Water System

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J02 Fort Myer Water System

J02.1 Fort Myer Overview

Fort Myer is a U.S. Army Installation situated along a high bluff just west of the city of Washington, D.C., directly across the Potomac river and contiguous to the western boundary of Arlington National Cemetery in Arlington County, Virginia. Originally established as a bastion in the defenses of Washington during the Civil War, the Installation was known as Fort Whipple until February 1881 when it was renamed in honor of Brig. Gen. Albert J. Myer. It is currently home to the U.S. Army Fife and Drum Corps, the 3rd U.S. Infantry ("The Old Guard"), and the U.S. Army Band ("Pershing's Own"). The primary mission of Ft. Myer and the units stationed there is ceremonial.

J02.2 Water System Description

The potable water system at Fort Myer consists only of a water distribution system and no water treatment facility.

J02.2.1 Potable Water Source

Fort Myer is supplied with potable water from two independent sources; one is the District of Columbia Water and Sewer Authority (DCWASA) and the other is Arlington County, Virginia Department of Public Works. Fort Myer's potable water distribution connection to DCWASA is located on the northeastern part of the Installation by Marshall Drive. The connection to Arlington County water system is located on the western part of the Installation between Buildings 414 and 415. The water is for domestic use, irrigation, and fire suppression use. Since 2000 the primary water source is the Arlington County.

The secondary water source is connected to the Virginia Federal Water line that is maintained and billed by DCWASA and there is a six-inch line and a ten-inch water line that serves the Installation at Water Pump Station 301.

J02.2.2 Pumping Station

There is only one potable water pump house in Fort Myer. The pump station Facility # 301, is located at the Northeast part of the Installation near the connection point to the DCWASA. There are three pumps in the pump house.

#	GPM	HP	Type
1	700	45	Centrifugal, Horizontal Split,
2	700	45	Centrifugal, Horizontal Split,
3	900	70	Centrifugal, Horizontal Split,

All three pumps are of 1930 construction and have 2,300 Volt motors. The pump switchgears were upgraded in 2001. The pumps are very old and the motor voltage is unique that finding spare parts is very difficult. The pumps failed in 2000, repaired during

2001, and from that time the Installation uses water from the Arlington County only. During several days of 2002, water was received from the secondary DCWASA source. The pumps are housed in a 30' x 22' x 10' building.



Pump Station Facility 301 (Outside)



Pump Station Facility 301 (Inside)

J02.2.3 Water Storage Facility

There is one water storage tank at the Installation. The details of the tank are furnished in the following table.

Facility #	Location	Capacity Gallons	Type	Installed/Upgrade
256	Wainwright Road	500,000	Elevated Steel	1950/1998

In 1998 the tank was stripped of old paint and repainted. The tank operates at a reduced capacity of 350,000 gallons as the tank overflows beyond this capacity.

When the water source is from the County the water pressure is greater than the hydraulic grade of the tank. Therefore, the tank does not operate with the Installation distribution

system. To overcome this, the tank is manually operated to periodically drain the tank and fill it to keep the tank water fresh. When water is obtained from Washington Aqueduct Division, the tank operates with the distribution system and the tank level controls the operation of the pumps.



Elevated Water Storage Tank 256

J02.2.4 Distribution System

The potable water distribution system consists of pipes ranging in size from less than 2 inches to 14 inches in diameter. The system is comprised of Polyvinylchloride (PVC), Ductile Iron, Cast Iron, Asbestos Cement, and Copper materials.

J02.2.5 System Operation

Installation personnel operate the potable water distribution system. Currently the primary water source is Arlington County and the emergency water source is the Washington Aqueduct Division. The Arlington County supply delivers sufficient water pressure to serve the Installation's distribution system, operated at 80 to 85 psi.

Before 2000, the system was operated with water from the Washington Aqueduct Division. The Washington Aqueduct pressure is 30 to 50 psi and is not sufficient to serve the Installation. Fort Myer's potable water system needs 80 to 85 psi pressure, and so the pump station pumped the water to the water storage tank and the distribution system. The pumps were operated based on the water level at the tank. The pumps failed in 2000 and from that time the Installation uses water from the Arlington County only.

J02.2.6 Off-Installation Connections

The water system at Fort Myer is connected to the water system at Arlington Cemetery and Park services at four different locations. There is only one water meter in one of the connections. The Marine Corps complex at the Southern end of the Installation is supplied by two connection points.

J02.2.7 Water System Fixed Equipment Inventory

Table 1 provides a general listing of the major water system fixed assets for the Fort Myer water system included in the purchase. The system will be sold in a “as is, where is” condition without any warranty, representation, or obligation on the part of Government to make any alterations, repairs, or improvements. Ancillary equipment attached to, and necessary for, operating the system, though not specifically mentioned herein, is considered part of the purchased utility.

TABLE 1

Fixed Inventory
Water Distribution System Inventory

Item	Quantity	Unit	Avg. Year of Const:
PVC Pipe			
4"	1,135	LF	1973
6"	1,830	LF	1970
10"	560	LF	1970
Ductile Iron Pipe			
6"	4,051	LF	1973
8"	1,880	LF	1970
14"	890	LF	1970
Copper Pipe			
.75"	1,545	LF	1970
1"	295	LF	1970
1.25"	935	LF	1970
1.5"	970	LF	1970
2"	2,115	LF	1970
3"	880	LF	1983
Cast Iron Pipe			
1.5"	290	LF	1970
2"	440	LF	1970
4"	4,212	LF	1970
6"	2,685	LF	1973
8"	5,511	LF	1970
10"	10,129	LF	1970
Asbestos Cement Pipe			
8"	692	LF	1970
10"	3,143	LF	1970
12"	3,653	LF	1970
Galvanized Steel Pipe			
.75"	535	LF	1970
2"	440	LF	1970
3"	30	LF	1970
Services		EA	
Residential Service	41	EA	1970
Industrial Service	93	EA	1973
Main Valves			
4"	4	EA	1970
6"	31	EA	1970
8"	18	EA	1970
10"	26	EA	1970
12"	3	EA	1970

14"	1	EA	1970
Fire Hydrants	69	EA	1970
Storage Tanks			
Elevated Tank 256 (500,000 gal)	1	EA	1998
Hose Bibs	12	EA	1970
Booster Station	1	EA	1970

J02.2.8 Estimated Replacement Cost New (RCN)

For completing Schedule B-1, Sub-CLIN 0003AC, Normal Renewals and Replacements, the government has estimated the RCN of the Fort Myer water system to be \$4.1 million. This value shall be used by the Offeror IAW Clause B.6.3.3.

J02.2.9 Water Distribution System Non-Fixed Equipment and Specialized Tools Inventory

Table 2 lists other ancillary equipment (spare parts) and Table 3 lists specialized vehicles and tools included in the purchase. Offerors shall field verify all equipment and tools prior to submitting a bid. Offerors shall make their own determination of the adequacy of all equipment and tools. The successful Contractor shall provide any and all equipment, vehicles, and tools, whether included in the purchase or not, to maintain a fully operating system under the terms of this contract.

TABLE 2
Spare Parts
Water System

Qty	Item	Make/Model	Description	Remarks
Fort Myer maintains an inventory of spare parts for the water distribution system. Contents of the inventory vary as items are used and/or purchased. Availability of this inventory to the new owner will be negotiated before or during the transition period.				

TABLE 3
Specialized Equipment and Vehicles
Water System

Description	Quantity	Location	Maker
No specialized equipment or vehicles for maintenance of the Fort Myer water distribution system will be transferred to the new owner of the system.			

J02.2.10 Water System Manuals, Drawings, and Records Inventory

Table 4 lists the manuals, drawings, and records that will be transferred with the system.

TABLE 4
Manuals, Drawings, and Records
Water System

Qty	Item	Description	Remarks
Fort Myer maintains a limited collection of technical manuals, drawings, and records on the installed components of the water distribution system. This information will be transferred to the new owner during the transition period. System maps will be available in the bidders' library.			

J02.3 Current Service Arrangement

The Army-owned water system at Fort Myer receives its primary water supply from Arlington County and utilizes the Washington Aqueduct Division as a secondary water supply.

J02.4 Secondary Metering

The Installation may require secondary meters for internal billings of their reimbursable customers, utility usage management, and energy conservation monitoring. The Contractor shall assume full ownership and responsibility for existing and future secondary meters IAW Clause C.3.

J02.4.1 Existing Secondary Meters

TABLE 5
Existing Secondary Meters
Water System

Meter	Location
Bank	Building #451
Officer's Club	Building #214
Spate's Hall	Building #407
Gas Station	Building #452
Post Exchange	Building #450
Miscellaneous	Buildings #325, #330, #205, #414 and #523

J02.4.2 Required New Secondary Meters

The Installation requires the contractor to install and calibrate new secondary meters as listed in Table 6. New secondary meters shall be installed IAW Clause C.17, Transition Plan. After installation, the Contractor shall maintain and read these meters IAW Clauses C.3, H.5, and J02.5 below.

TABLE 6
New Secondary Meters
Water Distribution System Fort Myer

Meter Location	Meter Description
Fort Myer requires the successful bidder to provide and install water meters on all permanent buildings. Water meters shall also be installed on water lines leading to Arlington National Cemetery (ANC) and United States Marine Corps (USMC) Henderson Hall.	

J02.5 Submittals

In addition to the submittal requirements from Clause H.5, the Contractor shall provide the Government monthly submittals for:

1. Invoicing (IAW G.2) for the previous month's services. The Contractors invoice shall be prepared in a format proposed by the Contractor and accepted by the Contracting Officer.
2. Monthly Service Interruption Report for the previous month.
3. Meter Reading Report in support of internal billings, water usage management, and monitoring.
4. System Efficiency Report. If required by Clause C.3 the Contractors shall submit a system efficiency report in a format proposed by the Contractor and accepted by the Contracting Officer.

J02.6 Energy Savings and Conservation Projects

An Energy Saving Performance Contract (ESPC) has been awarded at Fort Myer, 18 years remains for the current contract. IAW C.3, Utility Service Requirement, there have been no projects that affect the utility privatization of the exterior electric, potable water or wastewater utility systems.

J02.7 Service Area

IAW Clause C.4, Service Area, the service area is defined as all areas within the Fort Myer boundaries.

J02.8 Off-Installation Sites

There are no off-installation sites associated with this scope.

J02.9 Specific Transition Requirements

IAW Clause C.17, Transition Plan, Table 7 lists service connections and disconnections required upon transfer, and Table 8 lists the improvement projects required upon transfer of the Fort Myer water system.

TABLE 7
Service Connections and Disconnections
Water System

Location	Description
None identified	

TABLE 8
System Improvement Projects
Water System

Project Location	Project Description
None identified	

J02.10 Potable Water System Points of Demarcation

The point of demarcation is defined as the point on the piping system where ownership changes from the Grantee to the building owner. The table below identifies the general locations of these points with respect to the building served. During the operation and maintenance transition period, concurrence on specific demarcation points will be documented during the joint inventory of facilities.

Point of Demarcation	Applicable Scenario	Sketch
Water meter or backflow device, or valve (closest apparatus to the exterior of the structure).	Water meter, backflow device, or valve is located on the service line entering the structure within 25 feet of the exterior of the structure.	
Point where the service line enters the structure.	No water meter, backflow device, or valve exists on the service line entering the structure.	

J02.10.1 Unique Points of Demarcation

The following table lists anomalous points of demarcation that do not fit any of the above categories.

Building No.	Point of Demarcation Description
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Building No.	Point of Demarcation Description
None	

J02.10.2 Plants

Description	Facility Number	State Coordinates	Other Information
None			
