

ATTACHMENT J03**Carlisle Barracks Water System**

Table of Contents

J03.1 Carlisle Barracks Overview	J03-1
J03.2 Water System Description	J03-1
J03.3 Current Service Arrangement	J03-4
J03.4 Secondary Metering	J03-4
J03.5 Submittals	J03-4
J03.6 Energy Savings and Conservation Projects	J03-5
J03.7 Service Area	J03-5
J03.8 Off-Installation Sites	J03-5
J03.9 Specific Transition Requirements	J03-5

List of Tables

1	Fixed Inventory, Water System Area	J03-3
2	Spare Parts, Water System	J03-3
3	Specialized Equipment and Vehicles Water System	J03-3
4	Manuals, Drawings, and Records, Water System	J03-3
5	Existing Secondary Meters Water	J03-3
6	Service Connections and Disconnections, Water System	J03-6
7	System Improvement Projects, Water System	J03-6

J03 Carlisle Barracks Water System

J03.1 Carlisle Barracks Overview

Carlisle Barracks is the home of the U.S. Army War College and the U.S. Army Military History Institute and was founded in 1757. Carlisle Barracks is a small post, four fifths of a mile long and half a mile wide, containing 217 total acres. In addition to the main post, Carlisle Barracks includes family housing units at the nearby Stanwix Apartment area. A typical student body consists of 290 senior officers.

J03.2 Water System Description

The Carlisle Barracks potable water system consists of all appurtenance physically connected to the system from the point in which the Government ownership currently, starts to the point of demarcation defined by the real estate instruments. Generally, the point of demarcation will be the building footprint. The system may include, but is not limited to the water treatment plant, the storage tanks and the distribution lines including service laterals. The following description and inventory is included to provide the Offeror with a general understanding of the size and configuration of the distribution system. The inventory is assumed to be approximately 90 percent complete. The Offeror shall base the proposal on site inspections, information in the bidder's library, other pertinent information, and to a lesser degree the following description. Under no circumstances shall the successful Contractor be entitled to any rate adjustments based on the accuracy of the following description and inventory.

J03.2.1 Water System Fixed Equipment Inventory

The potable water system's normal supply source consists of a natural spring, referred to as CU-SP-19, and located under the Water Treatment Plant (WTP). The spring is rated at 2.5 million gallons per day. Normal water usage for the Installation ranges from 300,000 to 350,000 gallons per day. An interconnection with the Borough of Carlisle water distribution system serves as the emergency source. Four Crane Deming centrifugal pumps, each rated at 400 gpm against 200 feet head, pump water from the sump to a common manifold that supplies four Hungerford and Terry ion exchange softening units. The softening units operate in parallel and are typically operated eight to ten hours each day. Their operation, in conjunction with the raw water pumps, is initiated by low level in the finished water storage tanks and is automatically shut down when the tanks are full. A portion of the pumped spring water bypasses the softeners and is controlled by manually adjusting a bypass valve.

While the centrifugal pumps are rated at 400 gpm, the actual flow from each pump is reportedly around 250 gpm. Each pump suction pipe is five feet in height, including check valve and strainer, and reaches within four inches of the bottom of the sump. Each pump motor is constant speed, rated at 30 HP, 1750 RPM, 208 volts and 48 AMPS. A 115 kW Cummins natural gas generator located at the WTP provides backup emergency power for these pumps. The emergency generator was replaced in 1989.

The discharge pressure from each softener is around 65 psi. Reportedly, only a slight increase in loss of head occurs across the softener media before they are washed. The softeners are generally washed with raw water; although finished water can be brought back for washing. The resin is always regenerated following a backwash. The whole procedure takes approximately one hour.

Three chemicals are fed at the WTP, fluoride (hydrofluosilicic acid), condensed inorganic phosphate blend and chlorine. Each chemical feed system operates automatically in conjunction with the operation of the pumps and softeners. The system is also equipped with a backup chlorinator. The chlorine residual is checked daily at the heat plant, which is on the far side of the post from the WTP, and is generally found to be greater than 1.5 ppm.

Treated water is stored in two elevated storage tanks, with capacities of 100,000 and 200,000 gallons. The larger elevated storage tank was built around 1935 and the smaller tank was built around 1927. Both tanks were repainted and upgraded to meet AWS standards in 1994. Lead based paint has been removed from both tanks.

The potable water distribution system was initially installed in the 1920s. The existing system has been modified considerably throughout the years with individual sections of the system having undergone rehabilitation such as cleaning, repairing, lining and total replacement, if needed. The main valves were replaced in 1986 and at that time the piping looked very good.

The distribution system has approximately 41,100 linear feet of transmission mains and lateral lines. Mains are comprised of sizes from two to twelve inches in diameter and various types of material. The original piping was ductile iron; cast iron and some transite; however, PVC has been used for replacement piping. Smaller line sizes, two inches and smaller, supply individual structures from the lateral lines. The system includes main valves, post indicator valves and fire hydrants.

Irrigation piping serving the golf course is not reflected in the accompanying inventory. The golf course now uses potable water for irrigation; however, plans are being developed to dig wells for the golf course irrigation supply.

J03.2.1.2 Inventory

Table 1 provides a general listing of the major collection system fixed assets for the Carlisle Barracks 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	Size	Quantity	Unit	Approximate Year of Construction
Pipe	2'	1,056	Linear Feet	Various
	4'	6,250	Linear Feet	Various
	6'	17,800	Linear Feet	Various
	8'	12,850	Linear Feet	Various
	10'	1,600	Linear Feet	Various
	12'	1,600	Linear Feet	Various
Main Valves		95	Each	Various

Isolation Water Valves at building		150	Each	Various
Post Indicator Valves		15	Each	Various
Fire Hydrants		66	Each	Various
Building Services		247	Each	Various
Storage Tanks	100,000	1	Gallons	1935
	200,000	1	Gallons	1927
Water Treatment Plant	2,500,000	1	Gallons / Day	1988

J03.2.2 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
None Identified				

TABLE 3
Specialized Equipment and Vehicles
Water System

Description	Quantity	Location	Maker
None Identified			

J03.2.3 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
	None Identified		

J03.3 Current Service Arrangement

The Army owned water system at Carlisle Barracks produces its potable water from a natural spring (CU-SP-19). Emergency water can be purchased from the Borough of Carlisle.

J03.4 Secondary Metering

The Base 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.

J03.4.1 Existing Secondary Meters

TABLE 5

Existing Secondary Meters
Water System

CARLISLE BARRACKS SECONDARY METER LIST

Meter	Meter No.	Bldg Number	Location/Remarks
Water	9506737	253 Med Sup.(Rear)	Outside wall
Water	50960398	208B	
Water	50960396	214B	
Water	9506736	630 Dog Kennel	
Water	9506738	627 N.Vet Clinic	
Water	51074628	614	
Water	51074643	113A	
Water	51074630	101B Forbes Ave	
Water	51074327	101A Forbes Ave	
Water	51074639	32 Flower Rd.	
Water	60192701	36	Basement crawl space
Water	51074626	6A Garrison Lane	
Water	51074642	5B Garrison Lane	
Water	26069310	116 C-Bay	Cubic Ft.
Water	51232881	444 A & B Bouquet	NEW COUNTER
Water	51232882	445 A & B Bouquet	
Water	9506739	450 Ambulance Left	
Water	9506740	450 Ambulance Right	
Water	98045671	911 GOLF BARN	
Water	56298066	901 Golf House	
Water	13044682	844 PX	NEW START

Water	7231192	851 Commissary Wh.	Boiler Room
Water	9504135	842 PX Laundry	Antique Shop closet
Water	9702882	842 Credit Union	Antique Shop closet
Water	50960394	582 Sumner Rd	
Water	48108647	851 Commissary Store	
Water	51074638	599 Butler Rd	
Water	50960393	569 Craig Rd	
Water	50960397	561 Craig Rd	

J03.5 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.

J03.6 Energy Savings and Conservation Projects

IAW C.3, Utility Service Requirement, the following projects have been implemented by the Government for energy conservation purposes:

?? None

J03.7 Service Area

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

J03.8 Off-Installation Sites

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

J03.9 Specific Transition Requirements

IAW Clause C.17, Transition Plan, **Table 6** lists service connections and disconnections required upon transfer, and **Table 7** lists the improvement projects required upon transfer of the Carlisle Barracks Water system.

TABLE 6

Service Connections and Disconnections
Water System

Location	Description
None Identified	

TABLE 7
System Improvement Projects
Water System

Project Location	Project Description
None Identified	

Water Distribution 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.

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.	

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
["None" if appropriate]	Text description of point of demarcation
<p align="center"><i>“User Note: Examples May include: High Security Area, Weapons Storage, Irrigation systems, fire suppression systems, etc.”</i></p>	

Plants and Towers

Description	Facility Number	State Coordinates	Other Information
Water Towers			
<p><i>“User Note: This table should include any parcels of land that the Grantee will need to be granted exclusive use under the right-of-way. This land should be described according to a state coordinate system.”</i></p>			