

ATTACHMENT J21

Randolph AFB Water Distribution System

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J21 Randolph AFB Water Distribution System

J21.1 Randolph AFB Overview

Randolph AFB, located 17 miles east-northeast of San Antonio in Bexar County, Texas, is an Air Education and Training Command (AETC) installation that functions primarily as a training base, command headquarters, and personnel support center. The host command is the 12th Flying Training Wing (12 FTW), which conducts pilot instructor, navigator, and advanced instrument training in a variety of aircraft. Randolph AFB also hosts a number of tenant units, including:

- HQ AETC
- HQ USAF Recruiting Services
- HQ 19th Air Force
- HQ Air Force Personnel Center
- Air Force Management Engineering Agency
- Air Force Services Agency
- Air Force Legal Services Agency and Air Force Judiciary Central Circuit
- Air Force Audit Agency
- Air Force Office of Special Investigations
- Naval Civilian Personnel Data System Center
- Defense Civilian Personnel Management Service

Randolph AFB occupies 2,894 acres and contains approximately 691 buildings.¹ Two parallel runways bound the Base to the east and west, and approximately 270 functional aircraft are assigned to the 12 ATW. Randolph AFB is surrounded by developed communities: Universal City and Converse to the north and west, and Schertz to the south and east.

The Base has a total population of approximately 19,000, including military personnel, civilian employees and support personnel, and dependents. The Base also serves nearly 20,000 retirees in the greater San Antonio area.

Randolph AFB has recently experienced an increase in personnel and expanded mission responsibilities resulting from Base Realignment and Closure (BRAC) actions. The Base's flying operation is also expected to increase as the new Joint Primary Aircraft Training System (JPATS) aircraft begin replacing the current T-37 aircraft in 1999; combined operations of both aircraft are planned for Randolph AFB through 2010.

The Base has been almost fully developed, with little available space for expansion. Key projects planned for Randolph AFB may increase the total square footage of buildings on Base by less than 1 percent.

¹ The nonresidential structures include offices, industrial maintenance and repair facilities, flight operations structures, and community service facilities (e.g., schools and clinic). The housing units include detached single residences, duplexes, townhouses, dormitories, Visiting Officers' Quarters (VOQs), Visiting Airmens' Quarters (VAQs), and Temporary Lodging Facilities (TLFs).

J21.2 Water Distribution System Description

J21.2.1 Water Distribution System Fixed Equipment Inventory

The Randolph AFB water distribution system consists of all appurtenances physically connected to the distribution system from the point in which the distribution system enters the Installation and Government ownership currently starts to the point of demarcation, defined by the Right of Way. The system may include, but is not limited to, pipelines, valves, fire hydrants, storage facilities, exterior backflow devices, pumps, and meters. The actual inventory of items sold will be established in the Bill of Sale at the time the system is transferred. The following description and inventory is included to provide the Contractor with a general understanding of the size and configuration of the distribution system. The Government makes no representation that the inventory is accurate. The Contractor shall base its proposal on site inspections, information in the technical library, other pertinent information, and to a lesser degree the following description and inventory. Under no circumstances shall the Contractor be entitled to any service charge adjustments based on the accuracy of the following description and inventory.

Specifically excluded from privatization are:

- Irrigation systems
- Swimming pool water treatment

J21.2.1.1 Description

The water distribution system at Randolph AFB is supplied by five water wells completed into the Edwards Aquifer. The pumps on these wells range in size from 40 to 125 horsepower (hp) and their capacities range from 400 to 1,250 gallons per minute (gpm). Table 1 presents well pump sizes and capacities for all wells at Randolph AFB.

TABLE 1
Well Specification Data
Water Distribution System, Randolph AFB

Well Identification No.	Pump Capacity (gpm)	Pump Horsepower (hp)
1	400	40
2	1,460	125
7	668	100
10	1,460	125
11	1,159	100

Three of these wells are currently in service and are connected to two elevated 500,000-gallon storage tanks (Building 100 and Building 864). These tanks supply the distribution system. The system is monitored through the energy monitoring control system (EMCS).

Limited treatment in the form of chlorination for disinfection and fluoridation for health enhancement occurs at the well head. Standard chlorination equipment consisting of two 150-pound (lb) cylinders mounted on a scale that has automatic switchover capability is connected to inline educators that control the flow of gaseous chlorine as it is injected into the flow stream. Fluoridation equipment is similar to that used for chlorination.

The distribution system consists primarily of cast iron pipe that dates back to the 1930s. Some pipe replacement has occurred, but it has been limited to areas within the circle surrounding the Taj Mahal. The replacement pipe is polyvinyl chloride (PVC) C900 pipe.

Average water pressures range between 45 and 50 pounds per square inch (psi). Fireflow tests have resulted in residual pressures below the minimum pressure required by state criteria (35 psi). System isolation valves are poorly arranged and often allow two or more fire hydrants to be out of service when closed. Furthermore, dead-end lines exist within the system that require frequent flushing to prevent water quality degradation.

The Air Force will retain its Edwards Aquifer water rights. The contractor is purchasing the pumping systems and distribution system only. The golf course irrigation system will be retained by the Air Force and is not included in the purchase of this utility.

J21.2.1.2 Inventory

Table 2 provides a general listing of the major water distribution system fixed assets for the Randolph AFB water distribution system included in the sale.

TABLE 2
Fixed Inventory
Water Distribution System, Randolph AFB

Item	Size (in)	Quantity	Unit	Weighted Year of Construction
PVC Pipe	2.00"	8,800	lf	1994
	8.00"	14,710	LF	1994
	10.00"	2,880	LF	1994
	12.00"	4,850	LF	1994
Ductile Iron Pipe	0.50"	200	LF	1935
	0.75"	2,150	LF	1935
	1.00"	2,940	LF	1935
	1.25"	1,480	LF	1935
	1.50"	2,620	LF	1935
	1.75"	130	LF	1935
	2.00"	12,780	LF	1935
	2.50"	650	LF	1935
	3.00"	2,360	LF	1935
	4.00"	5,160	LF	1935
	6.00"	1,580	LF	1935
	8.00"	34,600	LF	1935
	10.00"	14,130	LF	1935
	12.00"	26,580	LF	1935
Cast Iron Pipe	2.00"	1,835	LF	1935
	3.00"	1,470	LF	1935
	4.00"	1,770	LF	1935
	6.00"	65,650	LF	1935
	8.00"	53,604	LF	1935
	10.00"	1,100	LF	1935
	12.00"	1,810	LF	1935
	14.00"	3,780	LF	1935
Copper Pipe	16.00"	930	LF	1935
	6.00"	500	LF	1935

Item	Size (in)	Quantity	Unit	Weighted Year of Construction
Steel Pipe	2.00"	970	LF	1935
	3.00"	1,300	LF	1935
Asbestos Cement Pipe	4.00"	0	lf	1965
	8.00"	600	LF	1965
	12.00"	3,170	LF	1965
	16.00"	610	LF	1965
Gate Valve W\ Boxes, Cast Iron (")	2.00	9	ea	1935
	3.00	13	ea	1935
	4.00	4	ea	1935
	6.00	103	ea	1935
	8.00	122	ea	1935
	10.00	2	ea	1935
	12.00	15	ea	1935
	14.00	5	ea	1935
	16.00	693	ea	1935
Fire Hydrants		254	ea	1935
Water Wells		5	ea	1935
Chlorination/Flouridation Facility		5	ea	1994
Elevated Storage Tanks (Total Capacity)	2	1,000,000	gal	1935
Backup Generator		1	ea	
Cathodic Protection System for Water Towers		2	Ea	1935

J21.2.2 Water Distribution System Non-Fixed Equipment and Specialized Tools

Table 3 lists the other ancillary equipment (spare parts) and **Table 4** lists specialized vehicles and tools included in the sale. Offerors shall field verify all equipment, vehicles, and tools prior to submitting a bid. Offerors shall make their own determination of the adequacy of all equipment, vehicles, and tools.

TABLE 3
Spare Parts
Water Distribution System, Randolph AFB

Qty	Item	Make/Model	Description	Remarks
No spare parts are included in the privatization of this utility system.				

TABLE 4
Specialized Vehicles and Tools
Water Distribution System Randolph AFB

Description	Quantity	Location	Maker
No specialized vehicles and tools are included in the privatization of this utility system.			

J21.2.3 Water Distribution System Manuals, Drawings, and Records

Table 5 lists the manuals, drawings, and records that will be transferred with the system.

TABLE 5
Manuals, Drawings, and Records
Water Distribution System, Randolph AFB

Qty	Item	Description	Remarks
1	CD	Utility System Drawings	Water Distribution System

J21.3 Specific Service Requirements

The service requirements for the Randolph AFB water distribution system are as defined in the Section C, *Description/Specifications/Work Statement*. The following requirements are specific to the Randolph AFB water distribution system and are in addition to those found in Section C. If there is a conflict between requirements described below and Section C, the requirements listed below take precedence over those found in Section C.

- The Contractor shall provide daily meter readings for all wells IAW Paragraph J21.6.
- The Contractor shall provide monthly meter reading reports IAW Paragraph J21.6, and that meet the following requirements:

The Contractor shall keep meter books with monthly consumption and demand (if applicable) for each meter reading. Meter books shall also include building address or facility number, meter number, previous month readings, current month readings, multipliers for each meter, total monthly consumption, points of contact for meter questions, and procedure for converting meter reads into consumption (including multipliers). The Contractor shall coordinate with the Government to determine the format for meter books to be delivered.

- The Contractor shall own and maintain all obstruction lighting on water towers. The government shall retain ownership of airfield beacon lighting. The government will maintain all beacon lighting and associated equipment. IAW the Right of Way, the Contractor shall allow the Government access to all beacon lighting mounted on buildings or water towers.
- The Contractor shall enter into a Memorandum of Understanding with the Randolph Air Force Base Fire Department for fire protection of all facilities included in the purchase of the utility. The Contractor shall abide by Randolph AFB fire protection requirements. The Contractor shall maintain the fire alarm system for all facilities included in the purchase of the utility. The Contractor shall permit Fire Department personnel access to their facilities to perform fire inspections and emergency response.
- IAW Paragraph C.9.8, *Exercises and Crisis Situations Requiring Utility Support*, the Contractor shall provide support as directed by Randolph Air Force Base Civil Engineer Control Center for exercises and crisis situations.
- The Contractor shall coordinate any change to the water distribution system that may affect fire protection with the Base Fire Department.
- The Contractor shall coordinate replacement or changes to fire hydrants with the Base Fire Department.
- The Contractor shall perform flow testing and maintenance of fire hydrants and water lines in accordance with National Fire Protection Association standards.
- The Contractor shall provide chlorination and fluoridation as part of the distribution service. Chlorination and fluoridation treatment shall be IAW with Texas Administrative Code, TAC 290.101 through 290.120 (Drinking Water Standards)

- The Contractor shall operate, maintain and test the Base water system in accordance with TNRCC regulations. The Contractor shall provide the Contracting Officer with a copy of any and all testing information and reports submitted to the TNRCC.
- The Contractor shall maintain and operate the cathodic protection systems for the water storage tanks.
- The Contractor shall maintain Air Force marking on water tanks and shall coordinate with the Base Civil Engineer before painting any water tanks.
- IAW the Right of Way, the Contractor shall allow the Government access to operate and maintain any communication equipment and other Government equipment on water tanks.
- Utility Resources Coordinator – Monthly voucher and/or billing statement with meter consumption and charges of each meter are needed to certify payment to DFAS-SA. A listing of all meters and building numbers is needed to consolidate consumption and charges for monthly consolidating reports to each customer. The voucher/bill should reflect meter reads, service dates, calculation of payment, multiplier, demand (kW), peak charges and any special/specific charges accrued for the month.

J21.4 Current Service Arrangement

Randolph AFB currently obtains water from Edwards Aquifer wells located on base. The Air Force however, may enter into agreements in the future to purchase potable water from other sources.

Current peak water demand at Randolph AFB Base is approximately 51 million gallons (MG) per month. Current peak demand is at or slightly exceeds the distribution system capacity.

J21.5 Secondary Metering

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

J21.5.1 Existing Secondary Meters

Table 6 provides a listing of the existing (at the time of contract award) secondary meters that will be transferred to the Contractor. The Contractor shall provide meter readings once a month for all secondary meters IAW Paragraph C.3 and J21.6 below.

TABLE 6
Existing Secondary Meters
Water Distribution System, Randolph AFB

Building	Building Description	Meter No.
28		n/a
58	COMBS	9803902
146		n/a
290	New Meter	

Building	Building Description	Meter No.
316		31936577
386A		60017807
386B		60017806
395		P3955807
472A		60017811
472B		60017812
500		170633
546		31935220
585		70010626
597A		60015273
597B		60015275
606		60016784
655		60016781
676		47594196
692A		60006447
692B		60015274
705A		60015277
705B		31858302
743		1422236
747		1880690
826A		60015268
826B		60015276
1005		60002039
1039		n/a
1038	Bxter	99354317
1071		29795423
1073		25766645
1074		1118320
1075		28542163
1075		28542359
SEGUIN		n/a
1225	High School	787468

J21.5.2 Required New Secondary Meters

The Contractor shall install and calibrate new secondary meters as listed in **Table 7**. New secondary meters shall be installed IAW Paragraph C.13, Transition Plan. After installation, the Contractor shall maintain and read these meters IAW Paragraphs C.3 and J21.6 below.

TABLE 7
 New Secondary Meters
 Water Distribution System, Randolph AFB

Meter Location	Meter Description (kgal)
11	5th St Deli
146	Elementary School
220	Post Office
220	DAPS
290	Credit E
500	O'Club
500	O'Club
500	O'Club

Meter Location	Meter Description (kgal)
663	Naval Personnel
663	Defense Personnel
676	Daedalian
870	Bowling Alley
1039	New Enlisted Club
1074	Eisenhower Bank
499	Eisenhower Bank ATM
1300	GC Clubhouse
1300	GC Clubhouse
1350	GC Cart Maint.
Cable TV	
Totals	
100	Base Theater Pad 100 AZ
100	Base Theater
200	Class VI Cooler
200	Class VI
200	Class VI
200	Class VI
200	Clothing Sales
1038	Bxtra
201	AAFES Storage
202	Cleaners
202	Alterations
237	BX Admin
468	Burger Bar
499	Barber Shop
1071	Shoppette
1073	Main BX
	Military Family Housing (MFH)

Note: MFH shall be master metered per housing area.

J21.6 Submittals

The Contractor shall provide the Government submittals for the following:

1. Invoice (IAW G.2). The Contractor’s monthly invoice shall be presented in a format proposed by the Contractor and accepted by the Contracting Officer. Invoices shall be submitted by the 25th of each month for the previous month. Invoices shall be submitted to:

Name:

Address:

Phone number:

2. Outage Report. The Contractor’s monthly outage report will be prepared in the format proposed by the Contractor and accepted by the Contracting Officer. Outage reports shall include the following information for Scheduled and Unscheduled outages:

Scheduled: Requestor, date, time, duration, facilities affected, feedback provided during outage, outage notification form number, and digging clearance number.

Unscheduled: Include date, time and duration, facilities affected, response time after notification, completion times, feedback provided at time of outage, specific item failure, probability of future failure, long term fix, and emergency digging clearance number.

Outage reports shall be submitted by the 25th of each month for the previous month. Outage reports shall be submitted to:

Name: Randolph Energy Manager

Address:

Phone number:

- 3. Meter Reading Report.** The monthly meter reading report shall show the current and previous month readings for all identified secondary meters. The Contractor's monthly meter reading report will be prepared in the format proposed by the Contractor and accepted by the Contracting Officer. Meter reading reports shall be submitted by the 15th of each month for the previous month. Meter reading reports shall be submitted to:

Name: Randolph Energy Manager

Address:

Phone number:

- 4. Well Meter Reading Reports.** The daily readings shall be submitted in a format coordinated with the Government using the latest version of Microsoft Word or Excel. Daily reading shall be submitted by 1300 hrs of the next day. Meter reading shall be submitted to:

Name: Randolph Energy Manager

Address:

Phone number:

J21.7 Water Conservation Projects

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

- None

J21.8 Service Area

IAW Paragraph C.4, Service Area, the service area is defined as all areas within the Randolph AFB boundaries.

J21.9 Off-Installation Sites

No off-installation sites are included in the sale of the Randolph AFB electrical distribution system.

J21.10 Specific Transition Requirements

IAW Paragraph C.13, Transition Plan, **Table 8** provides a listing of service connections and disconnections required upon transfer.

TABLE 8
Service Connections and Disconnection's
Water Distribution System, Randolph AFB

Location	Description
South west side of the base in the vicinity of building 54.	Randolph AFB has a new Control Tower scheduled for construction during the Jul 2000 – Jul 2001 time frame. This project will require connections to all appropriate utility systems. However; the Contractor who is constructing the new control tower has the responsibility to make these connections. The Utility Privatization Contractor will be required to provide project support such as temporary outages, so the connections can be accomplished.

J21.11 Government Recognized System Deficiencies

Table 9 provides a listing of system improvements that the Government has planned. The Government recognizes these improvement projects as representing current deficiencies associated with the Randolph AFB water distribution system. If the water distribution system is sold, the Government will not accomplish these planned improvements. The Contractor shall make a determination as to its actual need to accomplish and the timing of any and all such planned improvements. Capital upgrade projects shall be proposed through the Capital Upgrades and Renewal and Replacement Plan process and will be recovered through Schedule L-3. Renewal and Replacement projects will be recovered through Sub-CLIN AB.

TABLE 9
System Deficiencies
Water Distribution System Randolph AFB

Project Identifier/Location	Project Description
West industrial area of the base along 5 th Street West	TYMX991039C, Replace Water Valves 5 th Street West. Rebuild Well No. 1