

ATTACHMENT J25

Sheppard AFB Water Distribution System

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J25 Sheppard AFB Water Distribution System

J25.1 Sheppard AFB Overview

Sheppard AFB, located immediately north of Wichita Falls in Wichita County, Texas, is an Air Education and Training Command (AETC) installation that conducts technical, medical, field, and pilot training. The host command is the 82nd Training Wing (82 TRW), the largest of the four AETC technical training wings. The Base's primary tenant is the 80th Flying Training Wing (80 FTW), which trains pilots under the Euro-NATO Joint Jet Pilot Training (ENJJPT) Program.

Sheppard AFB occupies 5,719 acres and contains approximately 1,120 buildings with a total of 8.6 million square feet.¹ Four parallel runways bound the Base to the northeast, and approximately 220 functional aircraft (T-37s and T-38s) are assigned to the 80 FTW.

The Base has a total population of approximately 24,000, including military personnel, civilian employees and support personnel, students, and dependents. Sheppard AFB's annual payroll is approximately \$315 million (combined military and civilian), and the Base contributes significantly to the local economy through civilian employment, contracting, and purchases from local businesses.

J25.2 Water Distribution System Description

J25.2.1 Water Distribution System Fixed Equipment Inventory

The Sheppard 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 the water distribution system privatization are:

- Irrigation systems

¹ The nonresidential structures include offices, industrial maintenance and repair facilities, and community service facilities such as Sheppard Hospital. The housing units include detached single residences, townhouses, Visiting Officers' Quarters (VOQs), Visiting Airmens' Quarters (VAQs), and Temporary Lodging Facilities (TLFs).

J25.2.1.1 Description

Potable water is supplied to Sheppard AFB through a 20-inch transmission main to satisfy domestic, irrigation, and industrial requirements. Most of the pipelines are made from ductile iron pipe, although a portion of the system consists of pipe made from polyvinyl chloride (PVC).

The water distribution system consists of approximately 312,000 linear feet (lf) of piping, two 500,000-gallon steel storage tanks at the ground surface, one 1.5-million-gallon steel storage tank at ground surface, one elevated 500,000-gallon steel storage tank, and one pump station. The diameters of the distribution mains vary from 2 to 20 inches. Potable water enters the Base through a 20-inch transmission main located near the main entrance. Potable water flows into the ground storage tanks that, in turn, provide water to the pump station. The pump station forces the water into the elevated steel storage tank, which establishes water pressure for the entire Base. This tank is the tallest water tower in Texas, at more than 250 feet in height. Pressures vary between 90 pounds per square inch (psi) at the base of the elevated tank to less than 40 psi in areas surrounding the Base hospital.

Water treatment is done by the City of Wichita Falls. The Base does not add chlorine or fluoride to the water.

Operation of the storage tanks and pump station is monitored through the use of a supervisory control and data acquisition (SCADA) system (will not transfer under this contract). This system provides visual/graphical data regarding water elevation in storage tanks, system pressure, and pump status to system operators located in the Emergency Management Control Station (EMCS).

The system pressure for the Base is generally good. It averages between 55 and 60 psi under most conditions. However, a zone of low pressure exists around the Base hospital, with water pressures typically less than 40 psi in the area. The cause of the low pressure had not yet been determined, but might be attributable to insufficient flow caused by partial valve closure, insufficient pipeline size, or inadequate looping. This problem is considered to be local and is not indicative of Base wide system inadequacies.

J25.2.1.2 Inventory

Table 1 provides a general listing of the major water distribution system fixed assets for the Sheppard AFB water distribution system included in the sale.

TABLE 1
Fixed Inventory
Water Distribution System Inventory Sheppard AFB

Item	Size (in)	Quantity	Unit	Weighted Year of Construction
PVC Pipe	0.5	360	lf	1994
	0.75	1,630	lf	1994
	1	800	lf	1994
	1.25	15,100	lf	1994
	1.5	32,330	lf	1994
	2	11,660	lf	1994
	2.5	7,550	lf	1994
	3	3,410	lf	1994
	4	7,850	lf	1994

Item	Size (in)	Quantity	Unit	Weighted Year of Construction
	6	4,760	lf	1994
	12	2,000	lf	1994
	14	980	lf	1994
Ductile Iron Pipe	4	5,940	lf	1980
	6	85,140	lf	1980
	8	70,100	lf	1980
	10	16,000	lf	1980
	12	12,200	lf	1980
	14	9,700	lf	1980
	16	7,930	lf	1980
	18	320	lf	1980
	20	1,700	lf	1980
Steel Pipe	2	1,040	lf	1960
	2.5	14,250	lf	1960
Cast Iron Gate Valve	4	56	ea	1994
	6	291	ea	1994
	8	152	ea	1994
	10	28	ea	1994
	12	37	ea	1994
	14	8	ea	1994
	16	22	ea	1994
	18	6	ea	1994
	20	1	ea	1994
Fire Hydrants (4.5-inch Valve Size)		375	ea	1968
Above-Ground Storage Tanks (Total capacity in gal)		2,500,000	gal	1981
		500,000	gal	1986
Potable Water Pump Station (Total hp)		3,150	hp	1985
Effluent Pipeline		13,400	lf	1990
Water Tank Cathodic Protection System		4	ea	1990
Pumps		4	Ea	
Emergency Diesel Pumps		2	Ea	
Engine Data Detroit Model 10647000 – 1500 rpm, Diesel powered				
Alternator Data – Peerless Model 6AD16 1/2				

PVC = Polyvinyl chloride EA = Each
 GAL= Gallon HP = Horsepower
 LF = Linear Feet

J25.2.2 Water Distribution System Non-Fixed Equipment and Specialized Tools

Table 2 lists other ancillary equipment (spare parts) and **Table 3** 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 2
 Spare Parts
Water Distribution System Sheppard AFB

Qty	Item	Make/Model	Description	Remarks
2	Axe handle			
1	Wood saw			
5	Wrench		Speed ratchet	
1	Bender		Copper tubing type	

Qty	Item	Make/Model	Description	Remarks
1	Bolt cutter			
2	Hydrant wrenches			
2	Single blades		2" - 4"; 1" - 2"	
3	Quad blades		4" - 6"; 6" - 8"; 8" - 12"	
4	Pipe threading kit	Rigid		
1	EZ out kit	Walton tools		
1	Pipe taping kit	Flarebeau		
1	Electric solderer	Sting Products	Silver Blazer	
1	Floor jack		2 ton	
1	Pipe vise	Tripod	Portable type	
1	Soldering kit		Portable type	
1	Skill saw	Black and Decker		
2	Electric saw	Sawzall		
1	Grease gun		Pneumatic type	
2	Metal detectors			
1	Ultrasonic probe			
4	Spade shovels			
1	Hoe			
3	Rake			
3	Trench shovel			
3	Sledge hammers			
1	Wheel barrel			
2	Trailer		Dirt Pintle-hook	
1	Pipe vise			
2	Saw		K-12	
1	Trailer		Shielding / Shoring transport	
16	Shielding / Shoring panel		Aluminum	
3	Hydraulic support		Trenching	
11	Jacks		Manual extension	
4	Plywood		1.25", 4'x8'	
22	Brackets		Shielding / Shoring	
200	Pins		Shielding / Shoring	
1	Chain			
2	Water buffalos	TMC M149A2	Trailers	
1	Pipe cutter		Hydraulic pipe snap	
1	Pipe cutter		Ratchet pipe snap	
1	Pipe cutter		Manual pipe snap	
2	Pipe wrench		Chain tong	
4	Test kit		Hydrant flow, pitot gauge	
2	Test kit		Hydrant flow	
2	Hydrant pump			
2	Centrifugal pump			
1	Structure		2,563 sq ft	Pump Bldg. 140
3	Water pumps			
	Motor	The Louis Allis Co.	150 hp, 440v/3ph/60 hz, 1765 rpm, OGX Type, Frame 1158	
	Pump	Peerles	1700 gpm @ 225', Size 6AD16.50, Seal type	
1	Water Pump			
	Motor	Marathon Electric Motor Model 9L326TTDR7026CEW	50 hp, 230-460v/3ph/60hz, TDR-BE Type, Frame 326T	
	Pumps	Peerles		

PVC = Polyvinyl chloride EA = Each GAL= Gallon
 HP = Horsepower LF = Linear Feet

TABLE 3

Specialized Vehicles and Tools
Water Distribution System, Sheppard AFB

Qty	Item	Make/Model	Description	Remarks
	No specialized vehicles and tools are included in the privatization of this utility system.			

J25.2.3 Water Distribution System Manuals, Drawings, and Records

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

TABLE-4

Manuals, Drawings, and Records
Water Distribution System, Sheppard AFB

Qty	Item	Description	Remarks
1	CD	Utility System Drawings	

J25.3 Specific Service Requirements

The service requirements for the Sheppard AFB water distribution system are as defined in the Section C, *Description/Specifications/Work Statement*. The following requirements are specific to the Sheppard 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 monthly meter reading reports IAW Paragraph J25.6, 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.

- IAW the Right of Way, the Contractor shall allow the Government access to operate and maintain any communication equipment, obstruction lights, beacon lighting, emergency warning equipment, public address equipment, and other Government equipment on water tanks.
- The Contractor shall enter into a Memorandum of Understanding with the Sheppard Air Force Base Fire Department for fire protection of all facilities included in the purchase of the utility. The Contractor shall abide by Sheppard 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 the Sheppard Air Force Base Civil Engineer Control Center or equivalent agency 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 IAW National Fire Protection Association standards. The government reserves the right to review flow test records.
- The Contractor shall operate, maintain and test the Base water system IAW 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 own, 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 any painting of water tanks.

J25.4 Current Service Arrangement

Sheppard AFB currently has a peak water demand of 80 million gallons per month. This peak normally occurs in the summer. Key projects planned for Sheppard may increase the total square footage of buildings on Base by about 6 percent.

J25.5 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.

J25.5.1 Existing Secondary Meters

Table 5 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 J25.6 below.

TABLE 5
Existing Secondary Meters
Water Distribution System, Sheppard AFB

Meter Location	Meter Description
Wherry School	Inoperable
Wherry School	Inoperable
Hospital	Water Meter
Capehart	Water Meter
Capehart	Water Meter
Capehart	Water Meter
Bunker Hill	Water Meter
Wherry Housing	Water Meter
Wherry Housing	Water Meter

Meter Location	Meter Description
Municipal Airport	Water Meter
Municipal Airport	Water Meter
Base Exchange, Bldg. 239	Water Meter
Beauty, Barber Shop, Bldg. 238	Water Meter
Commissary, Bldg. 120	Water Meter
Credit Union, Bldg. 212	Water Meter
Sheppard Bank, Bldg. 200	Water Meter
AAFES Cleaners, Bldg. 202	Water Meter
City Venturi Meter, Bldg. 140	Water Meter
Northside City Sewage Plant	Water Meter
North Shopette, Bldg. 1400	Water Meter
Sheppard Bank ATM, Bldg. 101	Water Meter
Southside Sewage Discharge	Water Meter
Northside Lift Station	Water Meter
Fuel Cell, Bldg. 2414	Water Meter
Satelite Pharmacy, Bldg. 100	Water Meter
BX Mini Mall, Bldg. 740	Water Meter
Package Store, Bldg. 125 (North)	Water Meter
Package Store, Bldg. 125 (South)	Water Meter
VOQ, Bldg. 127	Water Meter
VOQ, Bldg. 128	Water Meter
VOQ, Bldg. 129	Water Meter
VOQ, Bldg. 130	Water Meter
VOQ, Bldg. 131	Water Meter
VOQ, Bldg. 132	Water Meter
VOQ, Bldg. 133	Water Meter
VOQ, Bldg. 134	Water Meter
MWR, Bldg. 531	Water Meter
Bldg. 960, East Side	Water Meter
AEROPORT, Bldg. 996 (North)	Water Meter
AEROPORT, Bldg. 996 (South)	Water Meter
South Shopette, Bldg. 1105	Water Meter
VOQ, Bldg. 1511	Water Meter
Bldg. 333, East Side	Water Meter
South Bowling Lanes, Bldg. 318	Water Meter
North Bowling Lanes, Bldg. 811	Water Meter
Officer's Club, Bldg. 340	Water Meter
Enlisted Club, Bldg. 1108	Water Meter
Base Golf Club House, Bldg. 4490	Water Meter
New Fitness Center, Bldg. 384	Water Meter
7 Level Training, Bldg. 1662	Water Meter
Bldg. 260 Meter # 1	Water Meter
Bldg. 260 Meter # 2	Water Meter
Bldg. 260 Meter # 3	Water Meter
Officer's Quarters, Bldg. 280	Water Meter
Dorm, Bldg. 632	Water Meter
HQ Group, Bldg. 634	Water Meter

J25.5.2 Required New Secondary Meters

The Contractor shall install and calibrate new secondary meters as listed in **Table 6**. 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 J25.6 below.

TABLE 6
New Secondary Meters
Water Distribution System, Sheppard AFB

Meter Location	Building Number	Meter Description
80 th ENJJPT Area	Main Water Line	Water Meter
Vet Clinic	60	Water Meter
Hospital Training Area	Old CE CONNEX Training Area	Water Meter
Print Shop	60	Water Meter
Clothing Sales	649	Water Meter
Pad 1, 2, 3	AAFES Snack Stand	Water Meter
Post Office	551	Water Meter
Multi Use Facility	1624	Water Meter
Multi Use Facility	1638	Water Meter
Theater	840	Water Meter
Recreation Center	430	Water Meter
Arts and Crafts	832	Water Meter
Horse Riding Club		Water Meter
Dorm	527	Water Meter
Dorm	528	Water Meter
Dorm	529	Water Meter
Dorm	633	Water Meter
Dorm	280	Water Meter
Dorm	516	Water Meter
Dorm	526	Water Meter
Dorm	596	Water Meter
Dorm	691	Water Meter
Dorm	692	Water Meter
Dorm	693	Water Meter
Dorm	716	Water Meter
Dorm	726	Water Meter
Dorm	776	Water Meter
Dorm	791	Water Meter
Dorm	792	Water Meter
Dorm	793	Water Meter

J25.6 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: 82th CES/CERS

Address: 231 9th, Sheppard AFB TX 76311

Phone number: (940) 676-6287

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: 82th CES/CERS

Address: 231 9th Street, Sheppard AFB TX 76311

Phone number: (940) 676-5689

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: 82th CES/CERS

Address: 231 9th Street, Sheppard AFB TX 76311

Phone number: (940) 676-5689

4. **Cathodic Protection Testing Report.** The Contractor shall submit a cathodic protection testing report in a format proposed by the Contractor and accepted by the Contracting Officer. The Contracting Officer will determine the frequency of the report based on Government requirements. Cathodic Protection Testing reports shall be submitted to:

Name: 82th CES/CEOE

Address: 231 9th Street, Sheppard AFB TX 76311

Phone number:(940) 676-5689

J25.7 Water Conservation Projects

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

- None

J25.8 Service Area

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

J25.9 Off-Installation Sites

No off-installation sites are included in the sale of the Sheppard AFB water distribution system.

J25.10 Specific Transition Requirements

IAW Paragraph C.13, Transition Plan, **Table 7** provides a listing of service connections and disconnections required upon transfer.

TABLE 7
Service Connections and Disconnections
Water Distribution System, Sheppard AFB

Location	Description
	The Government does not require any connection or disconnections during the transition period.

J25.11 Government Recognized System Deficiencies

Table 8 provides a listing of system improvements that the Government has planned. The Government recognizes these improvement projects as representing current deficiencies associated with the Sheppard 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 8
System Deficiencies
Water Distribution System Sheppard AFB

Project Identifier/Location	Project Description
Replace Water Mains (Ream/2 nd Ave)	Replace approximately 3,000 linear feet of water mains along Ream Ave and Skaggs Ave, and approximately 400 linear feet of water main along 2nd St
Paint Interior Water Storage Tanks	Paint interior surfaces and replace Cathodic Protection System of the two 500,000 Gal. Base Water Storage Tanks at Bldg 140. Remote video inspection identified extensive corrosion of tank walls and some structural members. The interior ladder has been weakened and requires replacement to provide safe access for personnel.
Replace Water Mains Hart/Moates Ave	Replace approximately 3,000 linear feet of water mains along Hart St and Moates Ave. Existing 6 and 12-inch water mains installed in 1941. Line deterioration has lead to numerous leaks.
Replace Water Mains 10th & Missile Rd	Replace 3,200 linear feet of 10-inch steel water mains along 10th Street and Missile Rd. Work includes installation of new service valves and fire hydrants. The existing steel lines have corroded and it is no longer economically feasible to continue repairing them.
Replace Water Main F Ave	Replace 500 linear feet of 12-inch steel and asbestos water mains along Ave F. Work includes installation of new service valves and fire hydrants. In mid-eighties leaks developed in a water main that was abandoned. The abandonment prevented a looped system along Ave. F. The new water main will restore looped system and increase system pressure at ends of distribution lines in the area.
Replace Water Mains School Apron	Replace 2,250 linear feet of steel water main servicing training hangars 1020, 1040, 1060, 1080 and 1090. Existing 6 and 10-inch cast iron water mains have deteriorated through graphitization. This condition can lead to numerous water line breaks thus interrupting fire protection capability to the adjacent training hangars.