

ATTACHMENT J3

Elmendorf AFB Water Distribution System

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J3 Elmendorf AFB Water Distribution System

J3.1 Elmendorf AFB Overview

Elmendorf AFB is located on the Knik Arm of Cook Inlet in south-central Alaska. The Base is bounded by the Municipality of Anchorage and the Fort Richardson Army reservation. The Base is situated on approximately 13,130 acres and has approximately 867 buildings. Elmendorf AFB is in Anchorage County, Alaska.

Elmendorf AFB employs approximately nearly 8,000 people, including over 6,750 military and more than 1,150 civilians. The Base serves as headquarters for the Alaskan Command, the 11th Air Force, and Alaska-North American Aerospace Defense Command (NORAD) Region.

The Base's host command is the 3rd Wing. The 3rd Wing encompasses the following entities:

- 3rd Operations Group – The Group directs all operational and maintenance functions required to maintain combat readiness of air superiority and interdiction forces for the air defense of Alaska and North America. The 3rd Operations Support Squadron provides inclusive support for the maintenance of the Wing's flying mission.
- Fighter Squadrons – The 19th and 54th Fighter Squadrons maintain air sovereignty with the F-15C/D Eagle. The 90th Fighter Squadron flies long-range interdiction with F-15E Strike Eagle fighters.
- 517th Airlift Squadron – Using C-130 and C-12 aircraft, the 517th provides airlift support of airborne training for the 6th Infantry Division (Light) and the 11th Air Force.
- 962nd Airborne Air Control Squadron – The Squadron flies airborne warning and control operations missions with the E-3B Sentry, a modified Boeing 707 with a 30-foot-diameter rotodome mounted above the fuselage.
- 3rd Logistics Group – The Group provides the Wing with support in the areas of maintenance and repair, supply, transportation, and contracting.
- 3rd Support Group – The 3rd Support Group is responsible for a variety of support functions including mission support, communications, security, civil engineering, environmental management, recreation, food services, facility management, and other services.
- 3rd Medical Group – This Group provides medical, dental, and aerospace medicine support.

Elmendorf AFB also supports the following major installation tenants:

- The Alaska Command encompasses Air Force, Army, and Navy components and is responsible for the unified defense of Alaska.
- The NORAD Region provides for the defense of North America from air attack and implementation of assigned operational missions.
- The 611th Air Operations Group (AOG) and 611th Air Support Group (ASG), assigned to the 11th Air Force, provide critical air surveillance and command, control, and communications functions essential to the tactical warning and attack assessment in defense of Alaska.
- The 632nd Air Mobility Support Squadron provides en route maintenance support to strategic airlift missions and distinguished visitor aircraft transiting Alaska.
- The 381st Intelligence Squadron provides tactical support to national and theater commanders; command, control, and communications countermeasures deception training; and combat support.

Construction began on Fort Richardson (now known as Elmendorf AFB) on land set aside by Executive Order in 1929. The installation, included Elmendorf Field, which was named after Captain Hugh Elmendorf, a pilot who died in a test flight accident. Fort Richardson was renamed Elmendorf AFB in 1940. The first aircraft at the Base was the P-36 assigned to the 18th Pursuit Squadron. Elmendorf AFB served as the focal point for Alaska's defense against Japan in World War II.

Elmendorf remained prominent during the Cold War years. A large-scale construction effort replaced the War-era buildings. Aircraft were also modernized and included the P-51 Mustang, F-80s, F-84s, F-89s, F-102s, and F-4s. The Army vacated the field in 1951 for a new Fort Richardson, and the old facilities were transferred to the Air Force as Elmendorf AFB. The number of aircraft based at Elmendorf in the 1950s peaked at 200 in six squadrons. By 1960, however, only one squadron remained.

The Base resurfaced as a key installation in 1966 with the activation of the 21st Composite Wing, which later evolved to the 21st Tactical Fighter Wing in 1979, replacing the F-4s with the F-15. In 1991 the 3rd Wing replaced the 21st as the host unit.

Projected future mission requirements have necessitated the renovation or demolition of older facilities and the construction of new facilities. The Elmendorf AFB Capital Improvements Program (CIP) emphasizes consolidating existing facilities and maximizing their utilization as much as possible. Over the next 5 years, key projects planned for Elmendorf AFB, if implemented, will reduce the total square footage of buildings and facilities on Base by 2 percent.

Elmendorf AFB is also in the process of privatizing all military housing on the installation. Some area's of military housing which have all ready been privatized include Dallas, Silver Run and Chugach Housing. Chugach Housing and Sunflower Phase 1 Housing are unique at Elmendorf AFB, because these housing neighborhoods at Elmendorf AFB did not privatize the housing utilities with the housing privatization effort. The utilities for Chugach and Sunflower Phase 1 Housing are included in the Elmendorf AFB Utilities Privatization.

Future plans for Elmendorf AFB housing includes the renovation , demolition and reconstruction of current housing, as well as, the future construction of more housing for the installation.

- Elmendorf AFB has one off-installation site, Seward Recreation Camp, located near the city of Seward, Alaska. The systems being privatized at Seward Recreation Camp which are included with the Elmendorf AFB Privatization are the electric, water and wastewater systems. Seward Recreation Camp is not included with the natural gas distribution system privatization. Seward Recreation Camp is situated on land that is leased from the City of Seward, Alaska. Seward Recreation Camp is in Kenai Peninsula County, Alaska.

J3.2 Water Distribution System Description

J3.2.1 Water Distribution System Fixed Equipment Inventory

The Elmendorf 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 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.

Specifically excluded from the water distribution system privatization are:

Elmendorf AFB

- Approximately 2,075 linear feet of 14-in. distribution pipe, 7,600 linear feet of 24-in. abandoned distribution pipe, and 7,600 linear feet of 42-in. concrete distribution pipe on Elmendorf AFB owned by Anchorage Water and Wastewater Utility (AWWU).
- All water wells on Elmendorf AFB.
- Water distribution system and all appurtenances located in Privatized housing at Elmendorf AFB, except for Chugach and Sunflower Phase 1 housing, as defined in the Right-of-way.

Seward Recreation Camp

- At Seward Recreation Camp: Municipal Wells #s 1, 2 and 3 and approximately 450 feet of 10-in. asbestos cement distribution piping owned by the City of Seward.

J3.2.1.1 Description

Elmendorf AFB

Elmendorf AFB obtains its water supply from three sources: the Fort Richardson Water Treatment Plant (FRWTP), the Anchorage Water and Wastewater Utility (AWWU) supply system, and groundwater wells on Elmendorf AFB. Fort Richardson owns and operates a

diversion dam on Ship Creek that serves as the water supply intake. AWWU also has its own water supply intake at Fort Richardson's Ship Creek diversion dam that provides raw water to AWWU's water treatment system.

The FRWTP was constructed in 1955, though the water treatment process has not changed significantly, the treatment plant equipment has been modernized through renewals and replacements. During the winter, when the flow into the Ship Creek diversion dam is below the demand of Elmendorf/Fort Richardson and AWWU, both users limit the draw from Ship Creek at the diversion dam to maintain flow in downstream Ship Creek. During such periods, both users rely on groundwater production wells to supplement their water supplies. Fort Richardson has three water production wells. Each production well is equipped with a chlorination system. Flow from the wells is chlorinated and routed directly into the system for distribution.

The FRWTP's water production capacity is 7 million gallons per day (mgd). The peak demand occurs during the spring irrigation season. In winter, when low Ship Creek flow limits intake from the diversion dam, about half the water supply is from Ship Creek and half from the production wells.

Water is supplied to Elmendorf AFB through four metered mains that connect to the FRWTP distribution system. These main feeds are located at the boundary between Fort Richardson and Elmendorf AFB. Each feed is metered by the FRWTP to measure flow, chlorine residual, and pressure. The metering is monitored by a supervisory control and data acquisition (SCADA) system at the FRWTP. The FRWTP owns and maintains the metering system.

Elmendorf AFB is also served by two metered backup tie-ins to AWWU. One is located near the intersection of Provider Drive and Zeamer Avenue which connects to the AWWU 42-inch main. The other is an 8-inch line tie-in to AWWU located south of Andrews Avenue. The meters are owned by AWWU.

The Base also obtains potable water from its own on-Base groundwater supply wells. The potable water supplied by the wells is less than 1 percent of the Base total demand. The Base classifies wells as follows: Class A wells, large water supply wells tied directly into the main potable water distribution system; Class B wells, those that serve specific facilities having 25 or more staff on a 24-hour basis; and Class C wells, those that serve specific facilities with limited personnel and are not Class A or B wells. The well systems are located outside or adjacent to the facilities served and are considered exterior utilities. Wells are not included with the privatization effort. Currently there is one Class A well, and three Class B wells and eight Class C wells at Elmendorf AFB.

It should be noted that, six Base buildings located away from the main water distribution system are provided water and sewer services directly by AWWU. Water supply and wastewater disposal by these six facilities is less than 1 percent of the total Base demand.

The potable water utility system includes a 2-million-gallon (MG) water storage reservoir located on 37th Street on a hill. Water is conveyed to and from the reservoir by the water distribution piping system. The concrete reservoir is buried, and was lined with a new rubber liner in 1988.

The quality of potable water supplied by Fort Richardson, AWWU, Base wells, and the potable water distribution system complies with Alaska Department of Environmental Conservation (ADEC) criteria.

Water distribution piping at Elmendorf AFB is on average at a depth of eight feet below ground and is marked with either marking tape or tracing wire. There is no cathodic protection on the water distribution system. Approximately 5% of the distribution system is below paved or asphalt surfaces.

Seward Recreation Camp

The system description for Seward Recreation Camp is included in Section 3.9 Off-Installation sites.

J3.2.1.2 Inventory

Table 1 provides a general listing of the major water distribution system fixed assets for the Elmendorf AFB and Seward Recreation Camp water distribution system included in the sale.

TABLE 1
Fixed Inventory
Elmendorf AFB and Seward Recreation Camp Water Distribution Systems

Item	Size (in.)	Quantity	Unit	Approximate Year of Construction
ELMENDORF AFB				
Cast Iron Pipe				
Cast Iron pipe	4"	330	LF	1950
Cast Iron pipe	6"	14,215	LF	1950
Ductile Iron pipe	6"	10,110	LF	1960
Cast Iron pipe	8"	2,220	LF	1950
Ductile Iron pipe	8"	21,135	LF	1960
Cast Iron pipe	12"	6,350	LF	1950
Cast Iron pipe	20"	7,680	LF	1960
HDPE Pipe				
HDPE pipe	1"	250	LF	1990
HDPE pipe	1 1/2"	190	LF	1990
HDPE pipe	2 1/2"	250	LF	1990
HDPE pipe	2"	1,790	LF	1990
HDPE pipe	3"	220	LF	1990

Item	Size (in.)	Quantity	Unit	Approximate Year of Construction
HDPE pipe	4"	810	LF	1990
HDPE pipe	6"	3,100	LF	1990
HDPE pipe	8"	10,800	LF	1990
HDPE pipe	8"	5,910	LF	2002
HDPE pipe	10"	6,250	LF	1990
HDPE pipe	12"	19,545	LF	1990
HDPE pipe	14"	3,550	LF	1990
HDPE pipe	14"	12,015	LF	1996
Asbestos Cement Pipe				
Asbestos Cement pipe	2"	2,380	LF	1965
Asbestos Cement pipe	2"	575	LF	1950
Asbestos Cement pipe	2 1/2"	320	LF	1965
Asbestos Cement pipe	3"	140	LF	1950
Asbestos Cement pipe	3"	200	LF	1965
Asbestos Cement pipe	4"	430	LF	1950
Asbestos Cement pipe	4"	1,730	LF	1965
Asbestos Cement pipe	6"	16,060	LF	1965
Asbestos Cement pipe	6"	29,910	LF	1950
Asbestos Cement pipe	8"	3,720	LF	1950
Asbestos Cement pipe	8"	3,810	LF	1957
Asbestos Cement pipe	8"	80,360	LF	1965
Asbestos Cement pipe	10"	21,540	LF	1950
Asbestos Cement pipe	10"	1,600	LF	1957
Asbestos Cement pipe	10"	3,370	LF	1965
Asbestos Cement pipe	12"	870	LF	1950
Asbestos Cement pipe	12"	15,980	LF	1965
Asbestos Cement pipe	14"	2,860	LF	1950
Asbestos Cement pipe	14"	38,310	LF	1965
Galvanized Iron Pipe				
Galvanized Iron pipe	1"	240	LF	1965

Item	Size (in.)	Quantity	Unit	Approximate Year of Construction
Galvanized Iron pipe	1 1/4"	100	LF	1950
Galvanized Iron pipe	1 1/4"	150	LF	1965
Galvanized Iron pipe	1 1/2"	1,030	LF	1965
Galvanized Iron pipe	2"	3,690	LF	1965
Galvanized Iron pipe	2 1/2"	20	LF	1950
Galvanized Iron pipe	2 1/2"	2,540	LF	1965
Galvanized Iron pipe	3"	720	LF	1965
Galvanized Iron pipe	4"	270	LF	1965
Galvanized Iron pipe	6"	950	LF	1965
Galvanized Iron pipe	8"	810	LF	1965
Ductile Iron Pipe				
Ductile Iron pipe	6"	2,830	LF	1970
Ductile Iron pipe	10"	1,215	LF	1970
Ductile Iron pipe	12"	1,220	LF	1970
Copper Pipe				
Copper pipe	3/4"	300	LF	1950
Copper pipe	1"	441	LF	1957
Copper pipe	1"	310	LF	1965
Copper pipe	1"	710	LF	2003
Copper pipe	1 1/4"	930	LF	1950
Copper pipe	1 1/4"	640	LF	1965
Copper pipe	1 1/2"	450	LF	1965
Copper pipe	1 1/2"	80	LF	1950
Copper pipe	2"	160	LF	1950
Steel Pipe				
Steel pipe	6"	1,950	LF	1965
Steel pipe	6"	290	LF	1950
Steel pipe	6"	4,110	LF	1965
Steel pipe	8"	1,880	LF	1965

Item	Size (in.)	Quantity	Unit	Approximate Year of Construction
Steel pipe	8"	1,640	LF	1950
Steel pipe	8"	2,530	LF	1965
Steel pipe	10"	5,550	LF	1965
Gate Valves				
Gate Valves	6"	6	EA	1980
Gate Valves	1 1/2"	2	EA	1980
Gate Valves	2 1/2"	2	EA	1980
Gate Valves	8"	3	EA	1980
Gate Valves	12"	2	EA	1980
Service Valves				
Note: Quantity and size estimated based on the number of buildings at Elmendorf AFB				
Service Valves	1"	52	EA	1965
Service Valves	2"	112	EA	1965
Service Valves	3"	12	EA	1965
Service Valves	4"	34	EA	1965
Valve Pit Valves (assumed gate)				
Valve Pit 11, circulation loop	2-in	1	EA	1970
Valve Pit 12, circulation loop	6-in	1	EA	1970
Valve Pit 8 and two unnamed pits on service to Antenna Field	8-in	3	EA	1970
Valve pit 24	10-in	1	EA	1980
Valve pits 2, 3, and 14	12-in	3	EA	1970
Valve Pits 4, 5, 6, 7, 9, 10, 13, 17, 23, and 26	14-in	10	EA	1970
Valve Pits 15 and 16	20-in	2	EA	1980
Meter Vaults				
Valve Pit 18, with venturi meter and chlorine residual monitor	14-in	1	EA	1980
Meter Vault box	20'x20'x20'	1	EA	1980
Valve pit 19 with venturi meter and chlorine residual	20-in	1	EA	1980

Item	Size (in.)	Quantity	Unit	Approximate Year of Construction
monitor				
Meter Vault box	24'x24'x24'	1	EA	1980
Valve Pit 20 with turbine meter and chlorine residual monitor	8-in	1	EA	1970
Meter Vault box	12'x12'x20'	1	EA	1970
Concrete Reservoir	2 MG	1	EA	1970
Facility 16437 Valve Building				
Valve Building	600 SF	1	EA	1970
Knife gate valve	14"	7	EA	1970
Facility 3924 Hospital/City Bypass				
Valve Building	250 SF	1	EA	1980
Double check valve	10"	1	EA	1980
Gate valve	8"	2	EA	1980
Gate valve	10"	1	EA	1980
Knife gate valve	10"	1	EA	1980
Pressure Reducing Valve	10"	1	EA	1980
Brass Neptune turbine meter	4"	1	EA	1980
Facility 3941 Hospital Valve House				
Valve Building	900 SF	1	EA	2000
Propeller meter	14"	2	EA	2000
Brass Sensus turbine meter	3"	1	EA	2000
Sensus propeller meter	10"	1	EA	2000
Facility 3000 Housing/City Bypass				
Valve Building	600 SF	1	EA	1980
Check valve	10"	1	EA	1980
Check valve	12"	1	EA	1980
Check valve	14"	2	EA	1980

Item	Size (in.)	Quantity	Unit	Approximate Year of Construction
Double check valve	8"	1	EA	1980
Gate valve	4"	2	EA	1980
Gate valve	6"	2	EA	1980
Gate valve	8"	3	EA	1980
Gate valve	10"	3	EA	1980
Gate valve	12"	3	EA	1980
Gate valve	14"	6	EA	1980
Pressure Reducing Valve	8"	1	EA	1980
Brass Neptune turbine meter	4"	1	EA	1980
Chlorine residual analyzer	---	1	EA	1980
Fire Hydrants				
Fire Hydrants	6-in	409	EA	1942
Fire Hydrants	6-in	65	EA	1970
Fire Hydrants	6-in	56	EA	1996
Secondary Meters				
Secondary Service Meters – size estimated	1"	5	EA	1985
SEWARD RECREATION CAMP				
Copper Pipe	3-in.	684	LF	1990
	2-in.	1,956	LF	1990
	1-in.	210	LF	1990
	3/4-in.	285	LF	1990
Service Valves (quantity estimated based on number of buildings and pipe size)				
	2-in.	15	EA	1990
	1-in.	6	EA	1990
	3/4-in.	3	EA	1990
Valves, Gate	2-in.	5	EA	1990
	3-in.	2	EA	1990

Item	Size (in.)	Quantity	Unit	Approximate Year of Construction
Fire Hydrants		2	EA	1990
Notes: EA = Each GAL= Gallon HDPE = High Denisty Polyvinylchloride HP = Horsepower LF = Linear Feet PVC = Polyvinyl chloride SF = Square Feet				

J3.2.2 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 purchase. 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
Elmendorf AFB and Seward Recreation Camp Water Distribution Systems

Qty	Item	Make/Model	Description	Remarks
There are no spare parts with the system to be privatized.				

TABLE 3
Specialized Vehicles and Tools
Elmendorf AFB and Seward Recreation Camp Water Distribution Systems

Description	Quantity	Location	Maker
There are no specialized vehicles and tools with the system to be privatized.			

J3.2.3 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
Elmendorf AFB and Seward Recreation Camp Water Distribution Systems

Qty	Item	Description	Remarks
	<i>GIS Drawings</i>	Water System Elmendorf AFB	
	<i>Drawings</i>	Master Plan, Water System	

Qty	Item	Description	Remarks
		Elmendorf AFB, Anchorage AK	
	<i>GIS Drawings</i>	Water System Seward Recreation Camp	
	<i>Drawings</i>	Master Plan Seward Recreation Camp	
		Seward, AK	
	<i>Manuals</i>	Water System manuals and records located in the Mechanical Shop, Building 5327	

J3.3 Specific Service Requirements

The service requirements for the Elmendorf AFB and Seward Recreation Camp water distribution system are as defined in the Section C, *Description/Specifications/Work Statement*. The following requirements are specific to the Elmendorf 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.

1. The Contractor shall perform flow testing and marking of fire hydrants IAW National Fire Protection Association standards/recommended practices. The government reserves the right to review flow test records. The Contractor shall be required to meet all unique and specific fire-flow requirements for the base, which will be listed and available in the Utilities Privatization Technical Library.
2. The Contractor shall prepare and distribute the annual consumer confidence report. The Contractor shall contact the contracting officer for the format of the annual consumer confidence report.
3. Contractor will make advance notification for any scheduled outages and real-time notifications for unscheduled outages. For scheduled outages the Contractor will notify all affected occupants/users, Civil Engineering, Security Forces, and Public Affairs Office prior to proceeding.
4. Contractor shall notify the Base (Security Forces, Medical Group, Fire Dept and Civil Engineering) in advance of any road closures that will alter the base traffic flow. The contractor will be responsible for coordinating road closures with appropriate base officials such as Public Affairs to ensure the closure is publicized to the base and local populace.
5. Contractor shall coordinate and get approval (3 WG Form 3, AF Form 103) Base Civil Engineering Work Clearance Request) from the Base before proceeding with any excavation.
6. Contractor shall notify the Base Bio-environmental Engineering of any water line breaks, repairs, or replacement of the water system. Contractor will be responsible for sampling the water following a waterline break.

7. Contractor shall be responsible for excavation/exposing water line breaks near the mains to determine responsibility of repairs.
8. The Contractor shall provide the Contracting Officer with a copy of any and all testing information and reports related to the water distribution system that are submitted to any agency.
9. The Contractor shall be required to provide and maintain all operation and maintenance logs and documentation associated with the water distribution system (e.g., meter readings, base water pressures, fire hydrant flow data, etc.) .
10. IAW Paragraph C.5.1.3, Roads are not to be cut without permission of Base Civil Engineer, Chief Engineering Division or higher.
11. Contractor shall comply with Elmendorf AFB Environmental Restoration Program

11.1 Elmendorf AFB Environmental Restoration Program (ERP). Elmendorf AFB has been listed on the National Priorities List (NPL) under the Comprehensive Environmental Response, Compensation, and Liability Act of 1980 (CERCLA), as amended. "Lessee acknowledges that Lessor has provided it with a copy, with current amendments, of the Federal Facility Agreement (FFA)", a copy of which is attached hereto and by this reference made a part hereof and labeled as **Exhibit D**, entered into by the U.S. Environmental Protection Agency (USEPA)--Region 10, the Alaska Department of Environmental Conservation (ADEC), and the Air Force and effective on September 19, 1991.

11.2 Elmendorf AFB has signed seven records of decision (RODs) at various operable units (OUs) and sites. These RODs for DP98 and OUs 1, 2, 4, 5, and 6 are legal agreements that require the management of land use controls (LUCs). LUCs are a non-engineering type of restriction that is required when contamination has been left in place and they are a component of their selected remedy in their respective RODs. LUCs range from placing limitations on types of buildings at a certain area to designating a particular area as recreational use only. Maps with approximate LUC boundaries can be provided by 3 CES/CEVR. These LUCs apply at Elmendorf AFB:

11.2.1 Basewide Groundwater - Use of the Elmendorf AFB shallow aquifer in the Outwash Plain for any purpose including, but not limited to, drinking, irrigation, fire control, dust control, or any other activity south of the Elmendorf Moraine is strictly prohibited. It is understood that portions of the shallow aquifer are contaminated and may pose a health risk.

11.2.2 Operable Unit 1 - "Restricted Use Area" designated for recreational use and construction of unmanned facilities (such as parking lots, storage buildings, etc). The construction of manned facilities (such as office buildings or residential structures) is strictly prohibited. Excavation affecting the integrity and function of the landfill caps, or impacting the shallow groundwater table is not allowed.

11.2.3 Operable Unit 2 (ERP Site ST41)–“Restricted Use Area” designated for recreational use of the parcel (such as cross country skiing, etc) and construction of unmanned facilities (such as parking lots, storage buildings, or taxiways). The construction of manned facilities (such as office buildings or residential structures) is strictly prohibited. As long as hazardous substances remain on this site at levels that preclude unrestricted use, groundwater development and the use of the groundwater at this site for any purpose including, but not limited to, drinking, irrigation, fire control, dust control or any other activity is prohibited.

11.2.4 Operable Unit 4 (East/West)– “Airfield Use Area” designated for aircraft operations and maintenance which include active and inactive runways, taxiways, and parking aprons for aircraft. The establishment of residential development of the areas is strictly prohibited.

11.2.5 Operable Unit 6 (ERP Site LF02)– “Restricted Use Area” designated for recreational use of the parcel (such as cross-country skiing, etc.) and construction of unmanned facilities (such as parking lots, storage buildings, or taxiways). The construction of manned facilities (such as office buildings or residential structures) is strictly prohibited. As a former landfill, this designation will remain indefinitely.

11.2.6 Operable Unit 6 (ERP Site LF03) – “Restricted Use Area” designated for recreational use of the parcel (such as cross-country skiing, etc.) and construction of unmanned facilities (such as parking lots, storage buildings, or taxiways). The construction of any sort of manned facilities (such as office buildings or residential structures) is strictly prohibited. As a former landfill, this designation will remain indefinitely. This site is also permanently included in the “accident potential zone” which further restricts the construction of any above ground facilities at this location.

11.2.7 Operable Unit 6 (ERP Site LF04) – “Restricted Use Area” designated for recreational use of the parcel (such as cross-country skiing, etc.) and construction of unmanned facilities (such as parking lots, storage buildings, or taxiways). The construction of any sort of manned facilities (such as office buildings or residential structures) is strictly prohibited. As a former landfill, this designation will remain indefinitely. The use of contaminated groundwater throughout LF04 for any purpose including, but not limited to, drinking, irrigation, fire control, dust control or any other activity is prohibited. Drilling into the shallow aquifer is also restricted.

11.2.8 Operable Unit 6 (ERP Site SD15) – The use of contaminated groundwater throughout SD15 for any purpose including, but not limited to, drinking, irrigation, fire control, dust control or any other activity is prohibited.

11.2.9 Operable Unit 6 (ERP Site WP14) –The use of contaminated groundwater throughout WP14 for any purpose including, but not limited to, drinking, irrigation, fire control, dust control or any other activity is prohibited.

11.2.10 ERP Site DP98 – Excavating, digging or drilling is restricted to reduce the possibility of migration or exposure to contaminants that exceed the chemical-specific ARARs as outlined in Table 8-1 in the DP98 record of decision (ROD). If contaminated soil that exceeds residential cleanup levels is excavated, it cannot be transported to or disposed of at other location on base. No dewatering of excavations or trenches will be allowed unless contaminated water is treated prior to use or disposal. Any excavations or drilling greater than ten feet below ground surface will require special engineering controls to prevent downward migration of contamination and to protect the groundwater aquifer. The use of contaminated groundwater throughout DP98 for any purpose including, but not limited to, drinking, irrigation, fire control, dust control or any other activity is prohibited. The current land use will be maintained to reduce the possibility of exposure to contaminants.

11.3 Elmendorf AFB has implemented the following procedures for managing remedial treatment systems and LUCs:

11.3.1 The grantee must comply with the most current version of the 3rd Wing Instruction (3 WGI) 32-1007, Safeguarding Utilities from Damage. The 3 WGI 32-1007 discusses the work clearance request process, which is required for any ground disturbance of more than 4 inches on Elmendorf AFB. If the shallow groundwater aquifer is encountered during excavation, there are additional dewatering requirements, which are outlined in Section 11.3.3.

11.3.2 In areas where soil contamination is known, a work plan and sampling and analysis plan must be submitted to 3 CES/CEVR for review and approval at least 90 days prior to proposed work beginning, with at least a 45-day review time. The grantee must also have a health and safety plan prepared and on file at a known contaminated soil site prior to work beginning. Maps with approximate contaminated soil site boundaries can be provided by 3 CES/CEVR.

11.3.3 In areas where groundwater contamination is known, dewatering is prohibited without an approved (by 3 CES/CEVR) work plan and sampling and analysis plan. Both the work plan and sampling and analysis plan must be submitted to 3 CES/CEVR at least 90 days prior to proposed work beginning, with at least a 45-day review time. There are several groundwater plumes on Elmendorf AFB. Maps with approximate boundaries of groundwater plumes can be provided by 3 CES/CEVR.

11.3.4 There are remedial treatment systems (e.g. engineered wetland, high-vacuum extraction, and bioventing) in operation throughout Elmendorf AFB. Operations of these systems are required by decision documents that have been agreed upon and signed by all parties (Air Force, Environmental Protection Agency, and Alaska Department of Environmental Conservation). Some of these systems are powered by electricity, and generally, have buried electrical lines in the area. The bioventing systems also have two to three associated wells that are a part of the treatment system and are located anywhere from 5 - 30 feet from the main bioventing system. Hand digging is required within 2 feet of any system, its associated wells, or the buried electrical lines. The grantee must not disrupt these remedial treatment systems and must allow for their continued operation. If the

grantee, its employees, agents or contractors damage, interrupt, or interfere with the operation of these remedial treatment systems the grantee shall immediately provide verbal notification to 3 CES/CEVR, followed up with a written notice to the Elmendorf Base Civil Engineer and a copy provided to 3 CES/CEVR. The grantee is required to pay for any damage to a treatment system and/or its associated wells. No utility lines will be placed within 10 feet of these systems or their associated wells. Maps of these systems can be provided by 3 CES/CEVR during the work clearance request review process.

11.3.5 There are over 100 groundwater monitoring wells (active/inactive and stickup/flush-mounted) located on Elmendorf AFB. The grantee will flag all wells located within 100 feet of the ROW and will take precautions to ensure wells are not destroyed or damaged. The grantee will not excavate within 5 feet of monitoring wells without prior approval from 3 CES/CEVR. The grantee will be required to repair or replace damaged monitoring wells. The grantee shall immediately notify 3 CES/CEVR of any damage to monitoring wells caused by the grantee. 3 CES/CEVR will locate wells at the grantee's request.

11.3.6 The grantee will make every effort to determine potential impacts to groundwater monitoring wells in advance of any site work. If it is determined that damage is unavoidable and it is mutually agreed with 3 CES/CEVR that a replacement well will be required, then the grantee will take the following actions:

11.3.6.1 Install replacement monitoring well(s), in accordance with ADEC regulations, at location(s) determined by 3 CES/CEVR. (This may require multiple well installations in order to get a well that can provide similar data.)

11.3.6.2 Replacement wells must be installed and sampled prior to well abandonment.

11.3.6.3 Conduct two rounds of sampling in replacement and original wells to correlate data. Sampling rounds should be three months apart.

11.3.7 The grantee will not use water from Elmendorf AFB's shallow groundwater aquifer for any purpose including, but not limited to, drinking, irrigation, fire control, dust control, or any other activity. It is understood portions of the shallow groundwater aquifer are contaminated and may pose a health risk.

11.3.7.1 The grantee will not drill through the shallow aquifer into the confined groundwater aquifer unless adequate engineering controls are used to prevent cross contamination from the shallow groundwater aquifer to the confined groundwater aquifer. All engineering controls and methods must be reviewed by 3 CES/CEVR with a minimum 30-day review time.

11.3.7.2 The grantee will not damage or interfere in any way with access to and operation of groundwater monitoring wells, remedial treatment systems and/or sampling efforts. 3 CES/CEVR and their contractors must have access, including but not limited to, vehicle access to existing monitoring wells for sampling and maintenance.

11.3.7.3 Immediately upon discovery, the grantee will provide 3 CES/CEVR with written notice of any failures to comply with these environmental land use controls.

11.3.7.4 Biennially, the grantee is required to certify compliance with LUCs by completing/signing/returning questionnaire provided by 3 CES/CEVR. Certification of compliance with LUCs can also be accomplished by grantee providing 3 CES/CEVR a signed memo of there past two years of excavating (ground disturbance of more than 4 inches) activities. 3 CES/CEVR can provide approximate LUC boundaries.

J3.4 Current Service Arrangement

Elmendorf AFB

Elmendorf AFB currently receives potable water (commodity supply) from three sources: the Fort Richardson Water Treatment Plant (FRWTP), the Anchorage Water and Wastewater Utility (AWWU) supply system, and groundwater wells on Elmendorf AFB itself. The main water supply for the Base is from the FRWTP. Annual water consumption data was unavailable, but the following consumption data from the FRWT for Elmendorf AFB shows water consumption for the months indicated.

Elmendorf AFB FRWT Water Consumption

Month	KGAL
Jun-03	75,244
May-03	72,913
Apr-03	69,928
Feb-03	69,969
Jan-03	74,397
Nov-02	66,807

Base personnel feel the water distribution is adequate to meet current and future requirements.

Seward Recreation Camp

Seward Recreation Camp currently receives potable water (commodity supply) from the City of Seward. Base personnel feel the water distribution is adequate to meet current and future requirements.

J3.5 Secondary Metering

J3.5.1 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 for all secondary meters IAW Paragraph C.3.3 and J3.6 below.

TABLE 5
Existing Secondary Meters
Elmendorf AFB and Seward Recreation Camp Water Distribution Systems

Building Number	Facility	Location
Elmendorf AFB		
2204	HQ Alaska District Corps of Engineers	3rd Street
3924	Water Valve House (Hospital): 4" Brass Neptune meter	Provider Drive
8509	1st National Bank of Anchorage	Rickenbacker Ave.
8511	Alaska USA Federal Credit Union	Rickenbacker Ave.
15380	Air Freight Terminal	Airlifter Drive
15920	Recon Marines	
3941	Water Valve House (JCC): 3 " Brass Sensus Turbine Meter	Zeamer
3941	Water Valve House (JCC): 14" Propeller meter - 2 EA	Zeamer
3941	Water Valve House (JCC): 10" Sensus Propeller meter	Zeamer
3000	Housing/City Bypass Valve House : 4" Brass Neptune meter	
	Valve Pit 18 - 14" Venturi meter	
	Valve Pit 19 - 20 " Venturi meter	
	Valve Pit 20 - 8" Venturi meter	
Seward Recreation Camp		
There are no secondary meters.		

J3.5.2 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.3.3 and J3.6 below.

TABLE 6
New Secondary Meters
Elmendorf AFB and Seward Recreation Camp Water Distribution Systems

Meter Location	Meter Description
There are no new secondary meters required with the system to be privatized.	

J3.6 Monthly Submittals

The Contractor shall provide the Government monthly 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: Maintenance Engineering/3 CES
Address: 6326 Arctic Warrior Drive, Anchorage, Alaska 99506

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

Name: Maintenance Engineering/3 CES
Address: 6326 Arctic Warrior Drive, Anchorage, Alaska 99506

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: Maintenance Engineering/3 CES
Address: 6326 Arctic Warrior Drive, Anchorage, Alaska 99506

J3.7 Water Conservation Projects

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

- There are no water conservation projects associated with the system to be privatized.

J3.8 Service Area

Elmendorf AFB

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

Seward Recreation Camp

IAW Paragraph C.4, Service Area, the service area is defined as all areas within the Seward Recreation Camp boundaries.

J3.9 Off-Installation Sites

Seward Recreation Camp is included with the sale of the Elmendorf AFB water distribution system as an off-installation site.

The City of Seward provides the potable water supply for the Seward Recreation Camp through two metered connections to the city's water main located along the camp's southern property line. The average installation date of the water piping is 1990.

The camp includes cabins, recreational vehicle (RV)/trailer sites, camper/tent spaces, the Main Lodge (office, BX, snack bar, laundry), a fish-cleaning building, and several other service buildings. The camp is open from May 21 to September 7 and is occupied by up to 600 guests. The utility systems at the Camp are typically turned on in the spring and turned off, and winterized, in the fall.

The potable water and sanitary wastewater systems underwent a series of major renewal and replacement projects in the 1990s when recreation facilities at the camp were modernized. Tracer wire or marking tape is installed with the newer piping. Seward Recreation Camp water lines are on average 6 feet deep. There is no cathodic protection on the water distribution lines.

The capacity of the Camp's potable water system is adequate for current and future requirements as indicated by the system's historical record of satisfactory performance.

J3.10 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

Elmendorf AFB and Seward Recreation Camp Water Distribution Systems

Location	Description
	There are no service connections and disconnections with the system to be privatized.

J3.11 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 Elmendorf AFB water distribution system. If the utility 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
Elmendorf AFB and Seward Recreation Camp Water Distribution Systems

Project Number	Project Title	Project Description
FXSB992802	Lower water main by 5 feet.	Lower water main 5 feet below existing elevation. Work includes all required utilities and other necessary support for Facility 2218.
FXSB042803	Increase water supply line feeding Facility 4140.	Facility was retrofitted with upgraded fire suppression system in 1999. The existing water supply was not upgraded at the time to meet increased demand of the facility.
FXSB992803	Lower water supply line feeding Facility 4140.	Facility 4140 lower water supply lines by five feet, currently lines freeze up during winter.
FXSB992801	Install new water lines to Facility 8535	Facility area 34-600 (Facility 8535): Lower water and sewer mains below the frost freeze depth of winter 1998/1999. Work to include all required utilities and other necessary support.
FXSB022801	Replace 5 valves at Valve House Pit #5.	
FXSB031020	Upgrade facility mechanical system, new valves, controls and piping. Upgrade Heating and Lighting	Old valves, piping and control system are over 50 years old and are beginning to fail. This system controls the water distribution system from the underground reservoir to the 381 st and the main base. Without this system we have no control for potable water distribution and fire protection if isolation is required.

FXSB032800	Upgrade facility mechanical system, new valves, controls and piping. Upgrade Heating and Lighting	Old valves, piping and control system are over 50 years old and are beginning to fail. This system controls the water distribution system from the underground reservoir to the 381 st and the main base. Without this system we have no control for potable water distribution and fire protection if isolation is required.
FXSB032801	Upgrade valve pits.	Old valves, piping and control system are over 50 years old and are beginning to fail. This system controls the water distribution system from the underground reservoir to the 381 st and the main base. Without this system we have no control for potable water distribution and fire protection if isolation is required.
FXSB032803	Replace 8 Inch Water Main	Replace 8" cast iron water main from water pit #20 to hangar #16, approximately 7000 linear feet with new HDPE pipe. Replace old fire hydrants with new American Darling or Mueller.
FXSB032804	Replace 14 Inch Water Main	Replace 14" Asbestos cement pipe. Replace old fire hydrants with new American Darling or Mueller.
FXSB961308	Replace 20 Inch Water Main	Replace 20" cast iron water main from water pit #19 to water pit #15, with approximately 4,600 linear feet of HDPE pipe.
FXSB961308	Excavate/Seal Exterior Water Pits	Excavate and seal around water pits 14, 15, 16. Water pits are constructed of concrete walls and tops. Seals around them have deteriorated around them to the point where surface water can run inside the pits.
FXSB971231	Replace Insulated Water Line 44510	Replace water service line from Spur road to 44-785. Work includes all utilities and other necessary support. Approximately 2000 lf of line for Facility 84110. The current 2 " plastic insulated water line is not deep enough for freeze protection.
FXSB962804	Replace Water Main Pit 3 to Pit 4	Replace 12" cast iron water main from Pit 3 to Pit 4, approximately 3000 lf. Suggested replacement HDPE.

J3.12 Right of Access to the Elmendorf AFB Utility System

Exhibit A—Map of Premises

Exhibit A map or maps from the Base Comprehensive Plan or other drawings show the known locations of the utility system and are available at the Base Civil Engineering Office. Portions of the utility system may not be fully shown on the map or maps. Any such failure to show the complete utility system on the map or maps shall not be interpreted as that part of the utility system being outside the Premises. The Premises are co-extensive with the entire linear extent of the utility system sold to Grantee, whether or not precisely shown on the map or maps.

EXHIBIT A*Water Distribution System Elmendorf AFB*

Qty	Item	Description	Remarks
	GIS Drawings	Water System Elmendorf AFB	
	Drawings	Master Plan, Water System Elmendorf AFB, Anchorage AK	

Exhibit B—Description of Premises**B.1. General Description of the Utility System, Lateral Extent of the Right-of-Way, and Points of Demarcation:****UTILITY SYSTEM DESCRIPTION:**

The utility system may be composed of, without limitation, wells, well pumps, supporting emergency generator sets, water treatment equipment, valves, fire hydrants, water distribution mains, meters, booster station pumps, storage tanks, reservoirs, all related electrical controls, and computer hardware and software used to operate and control the production and delivery of water to end users on the Installation.

LATERAL EXTENT OF UTILITY SYSTEM RIGHT-OF-WAY:

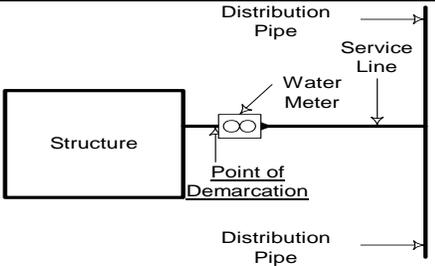
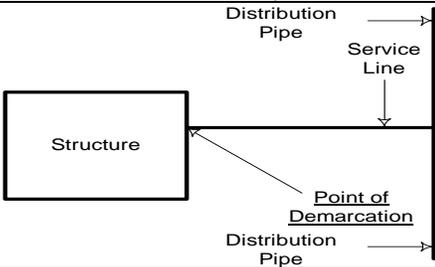
For pipe sizes of 24 inches in diameter or less, 26-feet-wide, extending 13 feet on each side of the utility system, as installed.

For pipe sizes greater than 24 inches in diameter, 50-feet-wide, extending 25 feet on each side of the utility system, as installed.

UTILITY SYSTEM POINTS OF DEMARCATION:

The point of demarcation is defined as the point on the utility system where ownership changes from the utility system owner to the facility owner. The table below identifies the type and general location of the point of demarcation with respect to the facility for each scenario.

Point of Demarcation (POD)	Applicable Scenario	Sketch

Point of Demarcation (POD)	Applicable Scenario	Sketch
<p>POD is at the water meter, backflow device, or valve (closest apparatus to the exterior of the structure).</p>	<p>Water meter, backflow device, or valve is located on the service line entering the structure within 25 feet of the exterior of the structure.</p>	 <p>The sketch shows a rectangular box representing a 'Structure'. To its right, a horizontal line represents the 'Distribution Pipe' with an arrow pointing right. A vertical line labeled 'Service Line' descends from the distribution pipe and enters the structure. At the point of entry, there is a circular symbol representing a 'Water Meter'. An arrow points to this symbol with the label 'Point of Demarcation'.</p>
<p>POD is where the service line enters the structure.</p>	<p>No water meter, backflow device, or valve exists on the service line entering the structure. Service valve may be within 25 feet of the structure at any time. Down stream side of the service valve will become the new point of demarcation.</p>	 <p>The sketch shows a rectangular box representing a 'Structure'. To its right, a horizontal line represents the 'Distribution Pipe' with an arrow pointing right. A vertical line labeled 'Service Line' descends from the distribution pipe and enters the structure. An arrow points to the distribution pipe on the right side of the structure with the label 'Point of Demarcation'.</p>
<p>If the fire suppression system has a storage tank, then the POD is located on the inlet side of the isolation valve or backflow prevention device closest to the storage tank. If no storage tank is present, the POD is located on the inlet side of the PIV or isolation valve closest to the fire suppression pumps.</p>	<p>Fire suppression system is provided flow and/or pressure by the potable water distribution system. These systems are typically dedicated to serving one facility or a small cluster of facilities.</p>	<p>None</p>
<p>POD is located on the inlet side of the PIV, isolation valve, or backflow prevention device closest to the fire suppression system.</p>	<p>Fire suppression system is connected to the potable water distribution system.</p>	<p>None</p>
<p>POD for irrigation systems is the inlet side of the backflow prevention device or isolation valve closest to the irrigation system.</p>	<p>Irrigation system is fed directly from potable water distribution system.</p>	<p>None</p>
<p>POD is the inlet side of the hose bib or water fountain assembly's connection to the service lateral.</p> <p>Note: A service valve may be installed within 25 feet of the hose bib or water fountain at any time. Once installed, the inlet side of the</p>	<p>Drinking Fountains and Hose Bibs connected to the water distribution system (typically found at ballfields and outdoor recreation areas). <u>No valve is located on the lateral</u> providing water service to the drinking fountain or hose bib within 25 feet of these connections.</p>	<p>None</p>

Point of Demarcation (POD)	Applicable Scenario	Sketch
<p>service valve becomes the new POD.</p>		
<p>POD is the inlet side of the service valve.</p>	<p>Drinking Fountains and Hose Bibs connected to the water distribution system (typically found at ball fields and outdoor recreation areas). <u>Service valve is located on the lateral</u> providing water service to the drinking fountain or hose bib within 25 feet of these water use devices.</p>	<p>None</p>
<p>POD is at the overhead service line's connection to the service entrance mast.</p> <p>Note: If an electric meter is present, or is to be installed, the owner of the electric distribution system on the installation is the owner and maintainer of the electric meter and the can. The POD for the electric meter is at the water utility owner's conductors to the electric utility owner's conductors. This meter POD applies regardless of the location of the electric utility owner's meter. The water utility owner will own the service entrance mast.</p>	<p>Electric power is provided to a water facility via an <u>overhead</u> service drop. This configuration could be found at facilities dedicated to the water utility such as a water well, pump station, or water tower.</p>	<p>None</p>
<p>POD is at the transformer secondary terminal spade.</p> <p>Note: If an electric meter is present, or is to be installed, the owner of the electric distribution system on the installation is the owner and maintainer of the electric meter. The POD for the meter is at the water utility owner's conductors to the electric utility owner's conductors. This meter POD applies regardless of the location of the electric meters and transformers.</p>	<p>ELECTRIC POWER IS PROVIDED TO A WATER FACILITY VIA AN <u>UNDERGROUND SERVICE CONNECTION</u>. THIS CONFIGURATION COULD BE FOUND AT FACILITIES DEDICATED TO THE WATER UTILITY SUCH AS A WATER WELL, PUMP STATION, OR WATER TOWER.</p>	<p>None</p>

UNIQUE POINTS OF DEMARCATION:

The following table list anomalous points of demarcation that do not fit any of the scenarios shown above.

Building No.	Point of Demarcation Description
Fort Richardson Tie-in No. 1	Located near the Elmendorf AFB Hospital. The tie in is upstream of the metered connection on the 14-inch main.
Fort Richardson Tie-in No. 2	Elmendorf AFB/Fort Richardson Boundary and 31 st . Street The Point of Demarcation is upstream of the metered connection on the 8-inch main.
Fort Richardson Tie-in No. 3	Elmendorf AFB/Fort Richardson Boundary and Davis Highway on a 14-inch main. The Point of Demarcation is upstream of the metered connection.
Fort Richardson Tie-in No. 4	Elmendorf AFB/Fort Richardson Boundary and Davis Highway (same location as Fort Richardson Tie-in No. 3 but on the other side of Davis Highway) on a 20-inch main. The Point of Demarcation is upstream of the metered connection.
AWWU Back-up Tie-in No. 1	42-inch main located at the intersection of Provider Drive and Zeamer Ave. The point of demarcation is downstream of the Anchorage Water and Wastewater Utility (AWWU)-meter.
AWWU Back-up Tie-in No. 2	8-inch line located south of Andrews Avenue. The point of demarcation is downstream of the AWWU-owned meter.
Elmendorf AFB Water Wells	The point of demarcation for the Elmendorf AFB wells will be the first valve after the well. Ownership will include the valve.
Chlorination Systems Associated with Class B and C Water Wells	The chlorination systems associated with the Elmendorf AFB Class B and C water wells are located inside the facilities served by the wells and integrated into the facilities' interior plumbing. The point of demarcation is the first fitting on the chlorination systems' feed to the facilities' plumbing system.

Unique Points of Demarcation between Elmendorf AFB Housing and Elmendorf AFB	
Housing Neighborhood	Point of Demarcation Description
Cherry Hill	The point of demarcation (POD) is at the connection of the 8" line to Elmendorf 10" line. Ownership does not include the valve. Location is near Firefighter Ave. and Arnold Ave.
Cherry Hill	The point of demarcation (POD) is at the connection of the 8" line to Elmendorf 10" line. Ownership does not include the valve. Location is approximately 500 feet north of the intersection of Firefighter Ave. and Arnold Ave.
Phoenix	The POD is where the Phoenix line connects to the Elmendorf main on Kuter Ave., this line serves facilities 8361,8355 and 8357.
Phoenix	The POD is where the Phoenix line connects to the Elmendorf main on Kuter Ave., this line serves facilities 8351,8353 and 8347.
Denver	The POD is where the housing lateral connects to the Elmendorf main. Ownership does not include the lateral.
FOCO	The POD is where the housing lateral connects to the Elmendorf main. Ownership does not include the lateral.
GOQ	The POD is where the housing lateral connects to the Elmendorf main. Ownership does not include the lateral.

Boston 1	The POD is where the housing lateral connects to the Elmendorf main. Ownership does not include the lateral.
Seattle	The POD is where the housing lateral connects to the Elmendorf main. Ownership does not include the lateral.
Boston 2	The POD is where the housing lateral connects to the Elmendorf main. Ownership does not include the lateral.
Dayton	The POD is where the 8" Dayton housing main connects to the Elmendorf main, north west of the intersection of 16 th street and Quesada Ave. (For housing facilities 7438,7440, 7442, 7444, 7446, 7448, and 7450/
Dayton	The POD is where the housing lateral connects to the Elmendorf main on Rickenbacker Ave. for housing Facilities: 7437, 7439, 7441, 7445, 7447 and 7449.
Houston	The POD is where the housing lateral connects to the Elmendorf main. Ownership does not include the lateral.
Douglas	The POD is where the housing lateral connects to the Elmendorf main. Ownership does not include the lateral.
Boston 3	The POD is where the housing lateral connects to the Elmendorf main. Ownership does not include the lateral.
Sunflower Phase 2	The POD is where the housing lateral connects to the Elmendorf main. Ownership does not include the lateral.
Sunflower Phase 2 - Facilities: 3056, 3052, 3048 and 3044	The POD is where the 3" housing main connects to the 8" Elmendorf main (parallel to the southern boundary of the installation). Ownership does not include the housing main.
Sunflower Phase 2 - Facilities 3026, 3022, 3018, and 3014.	The POD is where the 3" housing main connects to the 8" Elmendorf main which parallels the southern boundary of the installation. The 3" Boston line services the following facilities: 3026, 3022, 3018, and 3014.
Sunflower Phase 2 - Facilities 3016, 3012, 3008, and 3004.	The POD is where the 3" housing main connects to the 8" Elmendorf main which parallels the southern boundary of the installation. The 3" Boston line services the following facilities: 3026, 3022, 3018, and 3014.
Boulder - 11 acre parcel	The POD is where the building laterals connects to the Elmendorf main. Ownership does not include the lateral.
Dallas Housing	Point of demarcation is where the Housing main connects to the Elmendorf main on Fairchild Ave.
Silver Run Housing	Point of demarcation is where the Housing main connects to the Elmendorf main at the intersection of Provider Drive and Vosler Ave.
Chugach Housing	Point of demarcation is where the water meter, backflow device, or valve is located on the service line entering the structure within 25 feet of the exterior of the structure. Ownership does not include the meter.
Sunflower Phase 1	Point of demarcation is where the water meter, backflow device, or valve is located on the service line entering the structure within 25 feet of the exterior of the structure. Ownership does not include the meter.

MAPS OF THE PRIVATIZED HOUSING UNIQUE POINTS OF DEMARCATION :

The following Maps represent the privatized housing area distribution systems in relation to the utilities privatization distribution systems. The maps are to provide a general overview of the Housing privatization lines . Portions of the utility system may not be fully shown on the map or maps.

Attachment Water Map 1.pdf

Attachment Water Map 2.pdf

Attachment Water Map 3.pdf

B.2. Description of Restricted Access Areas:

Description	Facility #	State Coordinates	Other Information
2,000,000 gallon storage tank			The ROW extends 25' beyond the storage tank perimeter fence.
Booster Pump Station			The ROW extends 25' beyond the building/pump station perimeter walls.

Exhibit C—Environmental Baseline Survey

The Air Force has determined that it is not required to conduct an EBS in regard to the sale of this utility system.

Exhibit D—Elmendorf AFB Federal Facility Agreement

The Elmendorf AFB Federal Facility Agreement is hereby attached.



FFA electronic copy main.pdf

J3.13 Right of Access to the Seward Recreational Camp Utility System

Exhibit A—Map of Premises

Exhibit A map or maps from the Base Comprehensive Plan or other drawings show the known locations of the utility system and are available at the Base Civil Engineering Office. Portions of the utility system may not be fully shown on the map or maps. Any such failure to show the complete utility system on the map or maps shall not be interpreted as that part of the utility system being outside the Premises. The Premises are co-extensive with the entire linear extent of the utility system sold to Grantee, whether or not precisely shown on the map or maps.

EXHIBIT A

Drawings

Water Distribution System Seward Recreation Camp

Qty	Item	Description	Remarks
	<i>GIS Drawings</i>	<i>Water System Seward Recreation Camp</i>	
	<i>Drawings</i>	Master Plan Seward Recreation Camp Seward, AK	

Exhibit B—Description of Premises

B.1. General Description of the Utility System, Lateral Extent of the Right-of-Way, and Points of Demarcation:

UTILITY SYSTEM DESCRIPTION:

The utility system may be composed of, without limitation, wells, well pumps, supporting emergency generator sets, water treatment equipment, valves, fire hydrants, water distribution mains, meters, booster station pumps, storage tanks, reservoirs, all related electrical controls, and computer hardware and software used to operate and control the production and delivery of water to end users on the Installation.

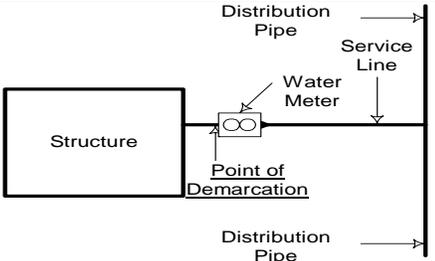
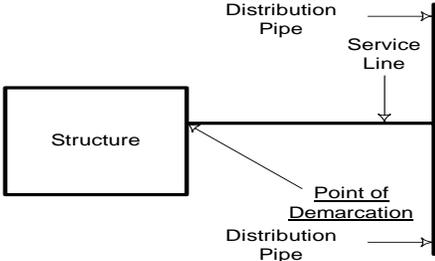
LATERAL EXTENT OF UTILITY SYSTEM RIGHT-OF-WAY:

For pipe sizes of 24 inches in diameter or less, 26-foot-wide, extending 13 feet on each side of the utility system, as installed.

For pipe sizes greater than 24 inches in diameter, 50-foot-wide, extending 25 feet on each side of the utility system, as installed.

UTILITY SYSTEM POINTS OF DEMARCATION:

The point of demarcation is defined as the point on the utility system where ownership changes from the utility system owner to the facility owner. The table below identifies the type and general location of the point of demarcation with respect to the facility for each scenario.

Point of Demarcation (POD)	Applicable Scenario	Sketch
POD is at the water meter, 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.	 <p>The sketch shows a rectangular box labeled 'Structure' on the left. A horizontal line representing the 'Service Line' enters the structure from the right. On this service line, just outside the structure, is a 'Water Meter'. To the right of the water meter, the line continues as a 'Distribution Pipe'. The 'Point of Demarcation' is indicated by a vertical line at the water meter. Arrows point to the 'Distribution Pipe' and 'Service Line' labels.</p>
POD is where the service line enters the structure.	No water meter, backflow device, or valve exists on the service line entering the structure. Service valve may be within 25 feet of the structure at any time. Down stream side of the service valve will become the new point of demarcation.	 <p>The sketch shows a rectangular box labeled 'Structure' on the left. A horizontal line representing the 'Service Line' enters the structure from the right. To the right of the structure, the line continues as a 'Distribution Pipe'. The 'Point of Demarcation' is indicated by a vertical line at the point where the service line enters the structure. Arrows point to the 'Distribution Pipe' and 'Service Line' labels.</p>
If the fire suppression system has a storage tank, then the POD is located on the inlet side of the isolation valve or backflow prevention device closest to the storage tank. If no storage tank is present, the POD is located on the inlet side of the PIV or isolation valve closest to the fire suppression pumps.	Fire suppression system is provided flow and/or pressure by the potable water distribution system. These systems are typically dedicated to serving one facility or a small cluster of facilities.	None
POD is located on the inlet side of the PIV, isolation valve, or backflow prevention device closest to the fire suppression system.	Fire suppression system is connected to the potable water distribution system.	None
POD for irrigation systems is the inlet side of the backflow prevention device or isolation valve closest to the irrigation system.	Irrigation system is fed directly from potable water distribution system.	None

Point of Demarcation (POD)	Applicable Scenario	Sketch
<p>POD is the inlet side of the hose bib or water fountain assembly's connection to the service lateral.</p> <p>Note: A service valve may be installed within 25 feet of the hose bib or water fountain at any time. Once installed, the inlet side of the service valve becomes the new POD.</p>	<p>Drinking Fountains and Hose Bibs connected to the water distribution system (typically found at ballfields and outdoor recreation areas). <u>No valve is located on the lateral</u> providing water service to the drinking fountain or hose bib within 25 feet of these connections.</p>	<p>None</p>
<p>POD is the inlet side of the service valve.</p>	<p>Drinking Fountains and Hose Bibs connected to the water distribution system (typically found at ball fields and outdoor recreation areas). <u>Service valve is located on the lateral</u> providing water service to the drinking fountain or hose bib within 25 feet of these water use devices.</p>	<p>None</p>
<p>POD is at the overhead service line's connection to the service entrance mast.</p> <p>Note: If an electric meter is present, or is to be installed, the owner of the electric distribution system on the installation is the owner and maintainer of the electric meter. The POD for the electric meter is at the water utility owner's conductors to the electric utility owner's conductors. This meter POD applies regardless of the location of the electric utility owner's meter. The water utility owner will own the service entrance mast, including the can.</p>	<p>Electric power is provided to a water facility via an <u>overhead</u> service drop. This configuration could be found at facilities dedicated to the water utility such as a water well, pump station, or water tower.</p>	<p>None</p>
<p>POD is at the transformer secondary terminal spade.</p> <p>Note: If an electric meter is present, or is to be installed, the owner of the electric distribution system on the installation is the owner and maintainer of the electric meter. The POD for the meter is at the water utility owner's conductors to the electric utility owner's conductors. This meter POD applies regardless of the location of the electric meters and transformers.</p>	<p>ELECTRIC POWER IS PROVIDED TO A WATER FACILITY VIA AN <u>UNDERGROUND SERVICE CONNECTION</u>. THIS CONFIGURATION COULD BE FOUND AT FACILITIES DEDICATED TO THE WATER UTILITY SUCH AS A WATER WELL, PUMP STATION, OR WATER TOWER.</p>	<p>None</p>

UNIQUE POINTS OF DEMARCATION:

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

Building No.	Point of Demarcation (POD) Description
City of Seward Tie-in.	Connection to the City of Seward-owned distribution system. The point of demarcation is downstream of the City of Seward-owned meters, which are located along the Camp's southern property line.

B.2. Description of Restricted Access Areas:

Description	Facility #	State Coordinates	Other Information
None			

Exhibit C—Environmental Baseline Survey

The Air Force has determined that it is not required to conduct an EBS in regard to the sale of this utility system.

Exhibit D—Elmendorf AFB Federal Facility Agreement

The Elmendorf AFB Federal Facility Agreement is hereby attached.



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