

ATTACHMENT J3

# Hickam AFB Wastewater Collection system

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# J3 Hickam AFB Wastewater Collection system

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## J3.1 Hickam AFB Overview

Hickam Air Force Base (AFB) is located on the south-central coast of the Island of Oahu, about 2 miles west of the City of Honolulu. The total land area of Hickam AFB (including Fort Kamehameha, acquired from the U.S. Army in 1993) is 2,515.05 acres, and the Base contains approximately 1,238 buildings and other facilities occupying approximately 8,775,824 square feet. The Base population is more than 10,000 during daytime working hours, including approximately 5,000 Air Force and 2,500 Hawaii Air National Guard (HIANG) personnel; many of these personnel and their families also live at the Base.

Hickam AFB is situated immediately south of the Pearl Harbor Naval Reservation, and is bounded on the west by Pearl Harbor and on the south by the Pacific Ocean (Mamala Bay). The Base shares runways and taxiways with Honolulu International Airport (HIA), which is adjacent to the eastern border of the Base. Hickam AFB is situated on a relatively flat expanse of land where elevations range from zero to only 20 feet above mean sea level; most of the Base is at an elevation of approximately 10 feet. Housing, administration, aircraft maintenance and transport facilities, and support facilities have resulted in the intensive development of the Base.

The federal government purchased the property currently occupied by Hickam AFB in 1935; the land was previously used for agriculture and a fish pond. Hickam Field was activated in 1938 and redesignated as Hickam AFB in 1948. Since that time the Base has served as home to the Air Transport Command (ATC) and its successors, the Military Air Transport Service (MATS), the Military Air Command (MAC), and today's Air Mobility Command (AMC). Base operations have supported the movement of troops and materials from the mainland to the Far East, with peaks of activity during World War II and the Korea and Vietnam conflicts.

Hickam AFB is now owned and operated by the 15<sup>th</sup> Air Wing (AW), whose primary mission is to support Headquarters Pacific Air Forces (PACAF). The Base is home to the HQ PACAF; 715th Air Mobility Operations Group; HIANG's 154th Wing and 201st Combat Communications Group; Air Force Reserves; and the Army Air Force Exchange Service. 15 AW has also supported the Apollo Astronauts in the 1960s and 1970s, the Eniwetok Atoll Radioactive Cleanup Operation from 1977 to 1980, and the National Aeronautical and Space Administration's (NASA's) space shuttle missions in the 1980s.

The land occupied by Hickam AFB will undergo development in the near future. Major changes include the pending arrival of several C-17 aircraft. New C-17 facilities will include three large-sized hangars, numerous support facilities, and an expansion of the aircraft parking ramp. Other future on-base projects include upgrades and replacements of the electrical distribution system, improvements to Military Family Housing (MFH), a new Joint Mobility Complex, a consolidated munitions facility, a ramp expansion, and several AT/FP upgrades.

## **J3.2 Wastewater Collection system Description**

### **J3.2.1 Wastewater Collection system Fixed Equipment Inventory**

The Hickam wastewater collection system consists of all appurtenances physically connected to the collection system from the point of demarcation defined by the Right of Way. The system may include, but is not limited to, pipelines, manholes, lift stations, valves, controls, treatment plants, 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 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 wastewater collection system privatization are:

- Fort Kamehameha Waste Water Treatment Plant owned by the U.S. Navy
- Lift Stations 14 and 15 which are septic tank systems
- Septic systems
- Privatized Capehart and Earhart Housing: all lateral lines which are 6 inches and less in diameter including connection to the main.

#### **J3.2.1.1 Description**

The wastewater utility system at Hickam AFB was originally constructed in the late 1930's and 1940's, and has since been modified by numerous additions, and renewal and replacement projects. The current system includes gravity lines, pressure lines, and sewage lift stations.

Wastewater is collected at Hickam AFB by several wastewater collection subsystems consisting of lines of PVC, cast iron, asbestos cement, vitrified clay, and concrete piping ranging in diameter from 4 to 30 inches. The depth of the wastewater lines vary from 3 to 20 feet, but average 5 feet belowgrade. Tracer wire is not installed on the wastewater collection PVC pipe. There is no monitoring of the system by SCADA. Approximately 10 percent of the wastewater system is below paved surfaces.

Sewage lift stations are located across the base. Lift Station No. 33 and Lift Station No. 36 are currently not being used. Over time, the pump stations have been upgraded by numerous renewal and replacement projects.

Wastewater from Hickam AFB is collected and treated at the Fort Kamehameha Wastewater Treatment Plant (WWTP), which is under the jurisdiction of the U.S. Navy Public Works Center (PWC) Pearl Harbor, and is located in the western portion of the Base. On average, approximately 55 percent of the water supply ends up as wastewater. Most of the remainder is used for irrigation. Total wastewater flow is difficult to measure because some of the

Base's wastewater mains flow into Navy main lines; therefore, total flow measurements have not been made. Total wastewater flow from Hickam AFB is estimated to average 2,200 kGals per day. Wastewater is discharged to the Navy owned system at five locations at the base. In addition to the five locations where the Air Force lines discharge into the Navy collection system, there are several points where the Navy system discharges into the Air Force system.

The wastewater collection system inventory has been separated into two sections: Main base and housing. Hickam AFB housing consists of privatized and non-privatized housing. The non-privatized housing is included with the wastewater collection inventory and consists of all mains and laterals which are associated with the housing up to the point of demarcation.

The wastewater collection inventory does not include the inventory for the privatized housing areas: Capehart Housing and Earhart Housing. Therefore all lines which service Capehart and Earhart Housing which are 6" in diameter or less are not included in the system to be privatized.

Both the non-privatized and the privatized housing area's collect into Hickam AFB mains, which then flow to Navy mains, and do not have separate service connections. Of the total inventory being privatized Approximately 40 percent of the wastewater collection system inventory provides service for non-privatized military housing at Hickam AFB.

### J3.2.1.2 Inventory

**Table 1** provides a general listing of the major wastewater collection system fixed assets for the Hickam AFB wastewater collection system included in the sale.

**TABLE 1A**  
Fixed Inventory, Hickam AFB  
*Wastewater Collection System*

Item	Size	Quantity	Unit	Approximate Year of Construction
<b>Pipe - Main Base</b>				
<b>Asbestos Cement Pipe</b>				
Asbestos Cement Pipe	4-in.	2,000	LF	1959
Asbestos Cement Pipe	6-in.	5,000	LF	1959
Asbestos Cement Pipe	8-in.	1,700	LF	1959
Asbestos Cement Pipe	10-in.	1,200	LF	1959
Asbestos Cement Pipe	12-in.	9,900	LF	1959
Asbestos Cement Pipe	15-in.	1,500	LF	1959
Asbestos Cement Pipe	15-in.	1,500	LF	1964
Asbestos Cement Pipe	18-in.	700	LF	1959
Asbestos Cement Pipe	21-in.	1,120	LF	1959
<b>Cast Iron Pipe</b>				
Cast Iron Pipe	4-in.	2,850	LF	1944
Cast Iron Pipe	6-in.	1,175	LF	1944
Cast Iron Pipe	8-in.	1,500	LF	1944
Cast Iron Pipe	18-in.	2,700	LF	1944

**TABLE 1A**  
Fixed Inventory, Hickam AFB  
*Wastewater Collection System*

Item	Size	Quantity	Unit	Approximate Year of Construction
<b>Concrete Pipe</b>				
Concrete Pipe	4-in.	2,050	LF	1944
Concrete Pipe	6-in.	4,950	LF	1944
Concrete Pipe	8-in.	11,650	LF	1944
Concrete Pipe	10-in.	7,750	LF	1944
Concrete Pipe	12-in.	2,600	LF	1944
Concrete Pipe	15-in.	900	LF	1944
Concrete Pipe - slip lined with PE	21-in.	1,090	LF	1944
<b>PVC Pipe</b>				
PVC Pipe	6-in.	110	LF	1995
PVC Pipe	8-in.	1,750	LF	1995
PVC Pipe	10-in.	995	LF	1995
PVC Pipe	12-in.	400	LF	1995
PVC Pipe	15-in.	1,050	LF	1995
<b>Vitrified Clay Pipe</b>				
Vitrified Clay Pipe	4-in.	56,490	LF	1944
Vitrified Clay Pipe	6-in.	39,550	LF	1944
Vitrified Clay Pipe	8-in.	20,800	LF	1944
Vitrified Clay Pipe	10-in.	9,700	LF	1944
Vitrified Clay Pipe	12-in.	2,850	LF	1944
Vitrified Clay Pipe	15-in.	1,100	LF	1944
Vitrified Clay Pipe	18-in.	4,100	LF	1944
Vitrified Clay Pipe	24-in.	1,300	LF	1944
Vitrified Clay Pipe	30-in.	1,850	LF	1944
<b>Standard Sanitary Sewer Manhole</b>				
Standard Sanitary Sewer Manhole	48-in.	160	EA	1944
Standard Sanitary Sewer Manhole	48-in.	80	EA	1959
Standard Sanitary Sewer Manhole	48-in.	26	EA	1995
<b>Wastewater Flow Meters</b>				
Wastewater Flow Meters		4	EA	1985
Wastewater Metering Vault		4	EA	1985
Wastewater Metering Station, Piping, Controls and Elec.		4	EA	1985
<b>Sewage Lift Stations</b>				
Sewage Lift Station 1				
Pumps, Piping, Controls, Electrical	Large	1	EA	1999
Lift Station Wet Well, Excavation, Backfill and Concrete	Large	1	EA	1999
Sewage Lift Station 1A				
Pumps, Piping, Controls, Electrical	Large	1	EA	1999
Lift Station Wet Well, Excavation, Backfill and Concrete	Large	1	EA	1999
Sewage Lift Station 2				
Pumps, Piping, Controls, Electrical	Medium	1	EA	1985

**TABLE 1A**  
 Fixed Inventory, Hickam AFB  
*Wastewater Collection System*

Item	Size	Quantity	Unit	Approximate Year of Construction
Lift Station Wet Well, Excavation, Backfill and Concrete	Medium	1	EA	1985
Lift Station Building	Medium	1	EA	1985
Sewage Lift Station 3				
Pumps, Piping, Controls, Electrical	Medium	1	EA	1985
Lift Station Wet Well, Excavation, Backfill and Concrete	Medium	1	EA	1985
Lift Station Building	Medium	1	EA	1985
Sewage Lift Station 4				
Pumps, Piping, Controls, Electrical	Medium	1	EA	1985
Lift Station Wet Well, Excavation, Backfill and Concrete	Medium	1	EA	1985
Lift Station Building	Medium	1	EA	1985
Sewage Lift Station 5				
Pumps, Piping, Controls, Electrical	Medium	1	EA	2001
Lift Station Wet Well, Excavation, Backfill and Concrete	Medium	1	EA	2001
Lift Station Building	Medium	1	EA	2001
Sewage Lift Station 6				
Pumps, Piping, Controls, Electrical	Large	1	EA	1993
Lift Station Wet Well, Excavation, Backfill and Concrete	Large	1	EA	1993
Lift Station Building	Large	1	EA	1993
Sewage Lift Station 7				
Pumps, Piping, Controls, Electrical	Medium	1	EA	1998
Lift Station Wet Well, Excavation, Backfill and Concrete	Medium	1	EA	1998
Lift Station Building	Medium	1	EA	1998
Sewage Lift Station 8				
Pumps, Piping, Controls, Electrical	Medium	1	EA	1996
Lift Station Wet Well, Excavation, Backfill and Concrete	Medium	1	EA	1996
Sewage Lift Station 9				
Pumps, Piping, Controls, Electrical	Medium	1	EA	1995
Lift Station Wet Well, Excavation, Backfill and Concrete	Medium	1	EA	1995
Sewage Lift Station 10				
Pumps, Piping, Controls, Electrical	Medium	1	EA	1995
Lift Station Wet Well, Excavation, Backfill and Concrete	Medium	1	EA	1995
Sewage Lift Station 11				

**TABLE 1A**  
 Fixed Inventory, Hickam AFB  
*Wastewater Collection System*

<b>Item</b>	<b>Size</b>	<b>Quantity</b>	<b>Unit</b>	<b>Approximate Year of Construction</b>
Pumps, Piping, Controls, Electrical	Small	1	EA	1995
Lift Station Wet Well, Excavation, Backfill and Concrete	Small	1	EA	1995
Sewage Lift Station 11A				
Pumps, Piping, Controls, Electrical	Small	1	EA	1996
Lift Station Wet Well, Excavation, Backfill and Concrete	Small	1	EA	1996
Sewage Lift Station 11B				
Pumps, Piping, Controls, Electrical	Small	1	EA	1996
Lift Station Wet Well, Excavation, Backfill and Concrete	Small	1	EA	1996
Sewage Lift Station 12				
Pumps, Piping, Controls, Electrical	Large	1	EA	1985
Lift Station Wet Well, Excavation, Backfill and Concrete	Large	1	EA	1985
Sewage Lift Station 16				
Pumps, Piping, Controls, Electrical	Small	1	EA	2000
Lift Station Wet Well, Excavation, Backfill and Concrete	Small	1	EA	2000
Sewage Lift Station 17				
Pumps, Piping, Controls, Electrical	Small	1	EA	2000
Lift Station Wet Well, Excavation, Backfill and Concrete	Small	1	EA	2000
Sewage Lift Station 18				
Pumps, Piping, Controls, Electrical	Large	1	EA	1985
Lift Station Building	Large	1	EA	1985
Lift Station Wet Well, Excavation, Backfill and Concrete	Large	1	EA	1985
Sewage Lift Station 19				
Pumps, Piping, Controls, Electrical	Medium	1	EA	1995
Lift Station Wet Well, Excavation, Backfill and Concrete	Medium	1	EA	1995
Sewage Lift Station 23A				
Pumps, Piping, Controls, Electrical	Small	1	EA	2001
Lift Station Wet Well, Excavation, Backfill and Concrete	Small	1	EA	2001
Sewage Lift Station 23B				
Pumps, Piping, Controls, Electrical	Small	1	EA	2001
Lift Station Wet Well, Excavation, Backfill and Concrete	Small	1	EA	2001

**TABLE 1A**  
 Fixed Inventory, Hickam AFB  
*Wastewater Collection System*

Item	Size	Quantity	Unit	Approximate Year of Construction
<b>Sewage Lift Station 24</b>				
Pumps, Piping, Controls, Electrical	Medium	1	EA	1993
Lift Station Wet Well, Excavation, Backfill and Concrete	Medium	1	EA	1993
<b>Sewage Lift Station 25</b>				
Pumps, Piping, Controls, Electrical	Medium	1	EA	1985
Lift Station Building	Medium	1	EA	1985
Lift Station Wet Well, Excavation, Backfill and Concrete	Medium	1	EA	1985
<b>Sewage Lift Station 27</b>				
Pumps, Piping, Controls, Electrical	Small	1	EA	1985
Lift Station Building	Small	150	SF	1985
Lift Station Wet Well, Excavation, Backfill and Concrete	Small	1	EA	1985
<b>Sewage Lift Station 28</b>				
Pumps, Piping, Controls, Electrical	Small	1	EA	1985
Lift Station Building	Small	150	SF	1985
Lift Station Wet Well, Excavation, Backfill and Concrete	Small	1	EA	1985
<b>Sewage Lift Station 29</b>				
Pumps, Piping, Controls, Electrical	Small	1	EA	1985
Lift Station Wet Well, Excavation, Backfill and Concrete	Small	1	EA	1985
<b>Sewage Lift Station 30</b>				
Pumps, Piping, Controls, Electrical	Small	1	EA	1985
Lift Station Wet Well, Excavation, Backfill and Concrete	Small	1	EA	1985
<b>Sewage Lift Station 31</b>				
Pumps, Piping, Controls, Electrical	Small	1	EA	2000
Lift Station Wet Well, Excavation, Backfill and Concrete	Small	1	EA	2000
<b>Sewage Lift Station 32</b>				
Pumps, Piping, Controls, Electrical	Small	1	EA	1985
Lift Station Wet Well, Excavation, Backfill and Concrete	Small	1	EA	1985
<b>Sewage Lift Station 33</b>				
Pumps, Piping, Controls, Electrical	Small	1	EA	2000
Lift Station Wet Well, Excavation, Backfill and Concrete	Small	1	EA	2000
<b>Sewage Lift Station 34 (type, size &amp; year estimated)</b>				

**TABLE 1A**  
Fixed Inventory, Hickam AFB  
*Wastewater Collection System*

Item	Size	Quantity	Unit	Approximate Year of Construction
Pumps, Piping, Controls, Electrical	Small	1	EA	1985
Lift Station Wet Well, Excavation, Backfill and Concrete	Small	1	EA	1985
Sewage Lift Station 35				
Pumps, Piping, Controls, Electrical	Small	1	EA	1985
Lift Station Wet Well, Excavation, Backfill and Concrete	Small	1	EA	1985
Sewage Lift Station 36 (type, size & year estimated)				
Pumps, Piping, Controls, Electrical	Small	1	EA	1985
Lift Station Wet Well, Excavation, Backfill and Concrete	Small	1	EA	1985
<b>HOUSING</b>				
<b>Asbestos Cement Pipe</b>				
Asbestos Cement Pipe	10-in.	1,200	LF	1964
Asbestos Cement Pipe	12-in.	10,500	LF	1964
Asbestos Cement Pipe	15-in.	1,500	LF	1964
Asbestos Cement Pipe	15-in.	1,500	LF	1964
Asbestos Cement Pipe	18-in.	700	LF	1964
Asbestos Cement Pipe	21-in.	1,120	LF	1964
<b>Cast Iron Pipe</b>				
Cast Iron Pipe	6-in.	2,450	LF	1974
Cast Iron Pipe	18-in.	2,250	LF	1964
<b>Concrete Pipe</b>				
Concrete Pipe	4-in.	5,100	LF	1959
Concrete Pipe	4-in.	5,460	LF	1964
Concrete Pipe	6-in.	900	LF	1959
Concrete Pipe	6-in.	26,050	LF	1964
Concrete Pipe	8-in.	10,165	LF	1959
Concrete Pipe	8-in.	19,910	LF	1964
Concrete Pipe	10-in.	900	LF	1959
Concrete Pipe	15-in.	900	LF	1944
<b>PVC Pipe</b>				
PVC Pipe	4-in.	360	LF	1974
PVC Pipe	4-in.	50	LF	1995
PVC Pipe	4-in.	140	LF	2000
PVC Pipe	6-in.	640	LF	2000
PVC Pipe	8-in.	4,595	LF	1974
PVC Pipe	8-in.	2,060	LF	2000
PVC Pipe	10-in.	1,255	LF	1974
PVC Pipe	12-in.	400	LF	1974
PVC Pipe	15-in.	1,050	LF	1974
<b>Vitrified Clay Pipe</b>				
Vitrified Clay Pipe	4-in.	9,900	LF	1939

**TABLE 1A**  
Fixed Inventory, Hickam AFB  
*Wastewater Collection System*

<b>Item</b>	<b>Size</b>	<b>Quantity</b>	<b>Unit</b>	<b>Approximate Year of Construction</b>
Vitrified Clay Pipe	6-in.	19,900	LF	1939
Vitrified Clay Pipe	8-in.	3,500	LF	1939
Vitrified Clay Pipe	10-in.	2,150	LF	1939
<b>Standard Sanitary Sewer Manhole</b>				
Standard Sanitary Sewer Manhole	48-in.	100	EA	1944
Standard Sanitary Sewer Manhole	48-in.	53	EA	1959
Standard Sanitary Sewer Manhole	48-in.	18	EA	1995

Notes:

EA = each

gpm = gallons per minute

hp = horsepower

in. = inches

LF = linear feet

PVC = polyvinyl chloride

PE = polyethylene

SLS = sewage lift stations

sf = square feet



**TABLE 1B**  
 Sewage Lift Station Data, Hickam AFB  
 Sanitary Wastewater System

Lift Station	Pump Horsepower	Number of Pumps	Pump GPM	Pump Age	Controls Type	Controls Age	Building Size
1	25	2	600	1999	Pneumatic	1999	N/A
1A	25	2	600	1999	Pneumatic	1999	N/A
2	5	2	370	1985	Pneumatic	1985	13'3x11'8
3	5	2	370	1985	Pneumatic	1985	14'1x13'7
4	5	2	370	1985	Pneumatic	1985	13'3x12'9
5	15	2	350	2001	Pres. Transducer	2001	14'x8'
6	40	3	870	1993	Floats	1993	14'x21'5
7	7.5	2	350	1998	Floats	1998	10'x8'
8	3	2	250	1996	Floats	1996	N/A
9	5	2	250	1995	Floats	1995	N/A
10	5	2	250	1995	Floats	1995	N/A
11	1	2	100	1996	Floats	1996	N/A
11A	1	2	100	1996	Floats	1996	N/A
11B	1	2	100	1996	Floats	1996	N/A
12	25	2	600	1985	Floats	1985	N/A
16	3	2	100	2000	Pres. Transducer	2000	N/A
17	3	2	30	2000	Pres. Transducer	2000	N/A
18	30	3	900	1985	Floats	1985	15'x22'
19	3	2	250	1995	Floats	1995	N/A
23A	1.5	2	80	2001	Pres. Transducer	2001	N/A
23B	1.5	2	140	1985	Floats	1985	N/A
24	15	2	170	1993	Pres. Transducer	1993	N/A
25	5	2	370	1985	Floats	1999	18'5x19'
27	2	2	92	1985	Floats	1985	18'5x19'
28	2	2	92	1985	Floats	1985	18'5x19'
29	2	2	100	1985	Floats	1985	N/A

**TABLE 1B**  
 Sewage Lift Station Data, Hickam AFB  
 Sanitary Wastewater System

30	1.5	2	140	1985	Floats	1985	N/A
31	3	1	200	2000	Pres. Transducer	2000	
32	1.5	2	140	1985	Floats	1985	N/A
33	2	1	40	2000	Pres. Transducer	2000	N/A
34				1985		1985	N/A
35	1.5	2	130	1985	Floats	1985	N/A
36				1985		1985	N/A

### J3.2.2 Wastewater Collection 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  
*Wastewater Collection System Hickam AFB*

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

**TABLE 3**  
Specialized Vehicles and Tools, Hickam AFB  
*Wastewater Collection System*

Description	Quantity	Location	Maker
Green pumper truck	1	Building 4016	Navistar International
Rodder Model 447	1	Building 4016	Sewer Equipment Co. of America

### J3.2.3 Wastewater collection 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, Hickam AFB  
*Wastewater Collection System*

Qty	Item	Description	Remarks
1	Drawings	Base Comprehensive Plan, Sanitary Sewer System (G-tab)	
30	Lift stations Records	Folder of records for each station	Located Building 4016
1	Rodder Model 447 Manual	Manual of operation	Located Building 4016
1	Trailer jet Model 747 Manual	Manual of operation	Located Building 4016
1	Green pumper truck Manual	Manual of operation	Located Building 4016

**TABLE 4**  
Manuals, Drawings, and Records, Hickam AFB  
*Wastewater Collection System*

Qty	Item	Description	Remarks
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### J3.3 Specific Service Requirements

The service requirements for the Hickam AFB wastewater collection system are as defined in the Section C, *Description/Specifications/Work Statement*. The following requirements are specific to the Hickam AFB wastewater collection 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. Contractor will not commence any activities until any required permits are formally approved (e.g., construction), and will immediately notify the Base of any contractor activity that may constitute a permit violation. Contractor will notify the Base and obtain the Base's prior approval for all new, modified, or decommissioned pollution sources or regulated activities on the installation used by contractor or its contractors. Examples include, but are not limited to, well closures, tank removals, and use of temporary sources such as generators.
2. Contractor will provide the Base, in advance and in a timely manner, any information that relates to contractor's activities that might have an impact upon the installation's air conformity status. Contractor will provide the Base with advance notice of any changes in operations or conditions that might result in increased air emissions in sufficient time to allow the Base to obtain any necessary permits, or permit modifications. Contractor will provide a timely and complete response to the Base's requests for information
3. Contractor will immediately report all hazardous waste or hazardous material releases to the Base emergency response activity, and fully cooperate with any emergency response in accordance with the Base's plans and directives. Contractor responsible for remediation and disposal of materials and contract costs.
4. Contractor will participate in exercises conducted by the Base. These will be identified by Hickam AFB.
5. Contractor will CC the base on all correspondence regarding environmental enforcement actions. The Contractor shall provide the Contracting Officer with a copy of any and all testing information and reports related to the wastewater collection system that are submitted to any agency.
6. Contractor will coordinate and get approval (AF Form 103 Base Civil Engineering Work Clearance Request) from the Base before proceeding with any excavation.
7. Contractor will be notified by Hickam AFB within 1 hr from the wastewater treatment plant or the Base of contaminated material/products entering the system. The Contractor will work with the Base to identify the source of contamination.

8. Contractor will be responsible for excavation/exposing wastewater breaks near the mains to determine responsibility of repairs.
9. Contractor will notify the Base of any scheduled or unscheduled outages (wastewater). For scheduled outages the Contractor will notify all affected occupants/users, Civil Engineering and Public Affairs Office prior to proceeding. For unscheduled outages the contractor will provide an operational report in accordance to AFI 10-206/PACAFSUP1 and when practical, notify all affected occupants/users.
10. Contractor will notify the Base (Security Forces, Medical Group, Fire Dept and Civil Engineering) of any road closures.
11. Contractor will be responsible for disconnecting Contractor's utilities for facilities to be demolished and insure no disruption of utilities to other adjacent facilities.
12. The Contractor shall enter into a Memorandum of Understanding with the Hickam AFB Fire Department for fire protection of all facilities included in the purchase of the utility. The Memorandum of Understanding shall be completed during the transition period and a copy provided to the Contracting officer.
13. The Contractor shall abide by Hickam AFB fire protection requirements. The utility system purchased by the Contractor includes lift stations. These lift stations may or may not include fire alarm systems. Where required by federal, state or local regulations, the Contractor shall maintain the fire alarm system for all facilities owned and operated by the Contractor. The Contractor shall permit Fire Department personnel access to their facilities to perform fire inspections and emergency response.
14. Contractor shall contact the owner of the land through which Contractor's utility line passes through to establish an easement or right-of-way for any part of the utility system that is on Non-AF land.
15. Contractor shall furnish information of any undertaking involving ground disturbance or alterations to a building/structure to the Environmental Planning Office (15 CES/CEVP) in order for the Air Force to submit a Section 106 document to the Hawai'i State Historic Preservation Office. If historic resources are identified in the area, the grantee shall not remove or disturb, or cause or permit to be removed or disturbed, any historical, archaeological, architectural, or other cultural artifacts, relics, vestiges, remains, or objects of antiquity without an archaeological monitor or historic architect to oversee such actions. Contractor shall pay for all historic preservation compliance issues associated with the undertaking, such as archaeological monitoring.

In the event such items are discovered inadvertently on the Premises without an archaeological monitor, Contractor shall cease its activities at the site (30 days for human remains) and immediately notify the Base Historic Preservation Officer and protect the site and the material from further disturbance until said officer gives clearance to proceed. Any costs resulting from this delay shall be the responsibility of Contractor .

## J3.4 Current Service Arrangement

Hickam AFB currently discharges wastewater to the Fort Kamehameha Wastewater Treatment Plant (WWTP), under the jurisdiction of the U.S. Navy Public Works Center, Pearl Harbor. The Hickam AFB wastewater utilities are currently maintained by the Hickam AFB Utilities Shop. Major system upgrades are performed by Hickam AFB Utilities Shop.

During 2002, the annual water consumption at Hickam AFB was approximately 1,931,345 kGals, with a maximum monthly consumption of 222,980 kGals during October.

During 2002, the total annual wastewater flow at Hickam AFB was approximately 798,360 kGals, with an average daily wastewater flow of about 2,200 kGals per day.

## 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 Sections C.3 of the RFP and J3.6 below.

**TABLE 5**  
Existing Secondary Meters  
Wastewater Collection System

Meter Location	Meter Description (Type)
Adjacent to Fort Kamehameha Wastewater Treatment Plant	10-inch flow meter
Building 1628 (at Pump Station 6)	2 each: 8-inch flow meters
Building 7474 (at Pump Station 18)	18-inch flow meter and digital circular chart recorder

### 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 Section C.13 of the RFP, *Transition Plan*. After installation, the Contractor shall maintain and read these meters IAW Sections C.3 of the RFP and J3.6 below.

**TABLE 6**  
New Secondary Meters, Hickam AFB  
Wastewater Collection System

Meter Location	Meter Description
The government does not require any new secondary meters.	

## 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 25<sup>th</sup> of each month for the previous month. Invoices shall be submitted to:

*Name:* 15 CES/CERU  
*Address:* 75 H Street, Hickam AFB, HI 96853-5233  
*Phone number:* (808) 449-2628

2. Outage Report. The Contractor's monthly outage report (blockage and overflow information) will be prepared in the format proposed by the Contractor and accepted by the Contracting Officer. Outage reports shall be submitted by the 25<sup>th</sup> of each month for the previous month. Outage reports shall be submitted to:

*Name:* 15 CES/CERU  
*Address:* 75 H Street, Hickam AFB, HI 96853-5233  
*Phone number:* (808) 449-2628

## J3.7 Infiltration and Inflow (I&I) Projects

IAW Paragraph C.3, Utility Service Requirement, the following projects have been implemented by the Government for managing and monitoring I&I.

1. Infiltration and Inflow Study Report, November 2000, F41624-97-D-8020, entitled: "Characterization and Rehabilitation of Wastewater Collection and Stormwater Drainages at Hickam AFB", Hawaii, by URS Radian International.

## J3.8 Service Area

IAW Paragraph C.4, Service Area, the service area is defined as all areas within the Hickam AFB boundaries and utility easements through non-Air Force owned lands.

## J3.9 Off-Installation Sites

No off-installation sites are included in the sale of the Hickam AFB wastewater collection system.

## J3.10 Specific Transition Requirements

IAW Paragraph C.13, Transition Plan, **Table 6** provides a listing of service connections and disconnections required upon transfer.

**TABLE 6**  
Service Connections and Disconnections  
*Wastewater Collection System Hickam AFB*

Location	Description
The government does not require any service connections or disconnections during the transition period.	

### J3.11 Government Recognized System Deficiencies

**Table 7** provides a listing of system improvements that the Government has planned. The Government recognizes these improvement projects as representing current deficiencies associated with the Hickam AFB wastewater collection 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.

Note: Further Project information will be in the Utilities Privatization Technical Library.

**TABLE 7**  
System Deficiencies  
*Wastewater Collection System Hickam AFB*

Project Number	Project Title, Description, and Remarks	Justification, Impact, and Remarks
	Bellows AFS: Upgrade the Bellows AFS on-site wastewater treatment systems (septic) to a standard municipal wastewater collection and conveyance system. The system shall follow the design criteria contained in the State of Hawaii standards and the Recommended Standards for Wastewater Facilities - 10 State Standards.	Bellows AFS is increasing in size and population density, this will probably lead to the Hawaii Department of Health issuing a requirement to install a collection system.
KNMD 011096	Hickam AFB: Repair Grease Interceptor, Wilbur & Orville, Bldg. 900	Existing grease trap is not operating effectively due to deterioration, broken/missing components, or inadequate size. Bypass grease collects in the lines and causes blockages.
KNMD 001041	Hickam AFB: Install Grinders at Lift Stations	

**TABLE 7**  
System Deficiencies  
*Wastewater Collection System Hickam AFB*

<b>Project Number</b>	<b>Project Title, Description, and Remarks</b>	<b>Justification, Impact, and Remarks</b>
	Install eight grinders at Lift Stations 2, 3, 4, 6 (2ea), 9, and 18 (2ea) to grind solids entering the wet wells and pumps to small pieces that will not lodge in the pumps. Existing bar screens are inadequate to protect the pumps from the debris.	Solids such as wood, daipers, rags, etc., are still passing the bar screens and clogging the pumps sometimes causing significant damage. Smaller racks/screens would cause rapid buildup/blockage of flow channel. Some lift stations require pump removal once per month for repair or dislodging objects.
KNMD 971079	Hickam AFB: Repair Sewer Line, Signer  Repair 6" VCP sewerline near the clinic from MH No. 151 to No. 146. The line requires cleaning and removal of blockages 6 times per year. Mud in the lines indicate there are broken section(s).	The line blockages from silt, debris, and root intrusion causes the drains in the basement of the Clinic to overflow in the basement. The overflow poses a health hazard to clinic occupants.
KNMD 961084	Hickam AFB: Repair Sewer Line Between SPS 5 and MH 516  Repair existing 4" steel pipe force main and gravity line serving the facilities along Row 23 aircraft parking, which includes fuel operations, Family Support, OSI, Grounds Shop, etc.	The existing steel line is severely corroded. The inside diameter is reduced from the corrosion and cannot accommodate the demand flows. Backed up sewage and line breaks periodically occur.
KNMD 004016	Hickam AFB: Repair Sewer/Water/Storm Lines (IDIQ)  Provides for repair of sewer, water, and storm drain systems by IDIQ contract.	Sewerlines are old and breaks need to be repaired immediately.
KNMD 951013	Hickam AFB: Repair Sewer Lines, Vickers/B St.  Repair 10 and 12" VCP sewerline along Vickers Avenue and B Street in vicinity of Bldgs. 1050 and 1055 (see Towill Infiltration/Inflow Report dated Apr 1991).	Sewerline is cracked, separated and eroded at joints and sagging. There is significant groundwater infiltration occurring in this portion of sewerline.
KNMD 053002	Hickam AFB: Repair Sewer Lines  Repair sewerline from SMH No. 1060 to 227 and SMH No. 1061 to 231 including laterals (6, 12, 15, 18, 24 inch sizes)	Sewerline is cracked and there is infiltration of fuel from underground plume.
KNMD 981023	Hickam AFB: Repair Sewer Lines, O'Club/Wg HQ / Youth Center  Repair existing sewerlines at the Officer's Club MH No. 56-54 (8" VCP), Wg HQ MH No. 261-263 (6 & 8" VCP), and Youth Center MH No. 427-425 (6" VCP).	These sewerlines require frequent cleaning and removal of blockages caused by roots and debris indicating broken pipes. Shops to check if the youth center line is still active.

**TABLE 7**  
System Deficiencies  
*Wastewater Collection System Hickam AFB*

<b>Project Number</b>	<b>Project Title, Description, and Remarks</b>	<b>Justification, Impact, and Remarks</b>
KNMD 991011	Hickam AFB: Repair Sewer Lines Between Lift Station Nos. 7 and 8  Replace existing 6" CIP sewer line. Solids settle and collect in the line until it blocks flow and causes sewage backups. Includes force and gravity mains.	The line has to be regularly flushed and cleared of blockages. Poor line grades prevent proper flow. Solids build up at low points. The line serves the Army hangar and other facilities along Taxiway HA on Kamakahi Road.
KNMD 001005	Hickam AFB: Repair Sewer Lines at Dining Hall and Harbor Area  Repair existing 10" CP between MH No. 1106-546 near the dining hall and the existing 6 and 8" VCP between the beach bathhouse (3470) and SPS No. 10 in the HIANG area. This is a main collection pipe servicing the Hickam Beach, Seabreeze Restaurant, and HIANG facilities.	The existing mains have grade and root intrusion problems which cause line blockages and sewage backups. The lines require regular flushing and clearing.
KNMD 984005	Hickam AFB: M/R Sewerlines, MFH  Maintain/repair existing sewerlines in the Hickam Village, Earhart, Onizuka, Fort Kamehameha and BF50 MFH areas.	Sewerlines are old. See Analysis of Military Family Housing Infrastructure and Facilities Report. There are a lot of root intrusion in the joints of the concrete pipe.
KNMD 004004	Hickam AFB: M/R Sewerlines, MFH	
KNMD 014004	Hickam AFB: M/R Sewerlines, MFH	
KNMD 024004	Hickam AFB: M/R Sewerlines, MFH	
KNMD 034004	Hickam AFB: M/R Sewerlines, MFH	
KNMD 044004	Hickam AFB: M/R Sewerlines, MFH	