# Attachment J02
# Table of Contents



## List of Tables

# J02 West Point Wastewater Utility System

## J02.1 West Point Overview

The U. S. Army Garrison, West Point, New York, (West Point) is located on approximately 16,000 acres on the West Bank of the Hudson River, roughly 50 miles north of New York City and 15 miles south of Newburgh, New York. Since 1802 when President Jefferson signed legislation establishing the U.S. Military Academy (USMA) at West Point, USMA has produced graduates who have contributed to our country in peace and war.

The purpose of USMA is "to provide the Nation with leaders of character who serve the common defense." The Mission of USMA is "(t)o educate, train, and inspire the Corps of Cadets so that each graduate is a commissioned leader of character committed to the values of Duty, Honor, Country; professional growth throughout a career as an officer in the United States Army; and a lifetime of selfless service to the nation."

Today, the Corps of Cadets includes over 4,300 men and women from every state in the Union as well as several foreign countries and U.S. Territories. In addition to the Corp of Cadets, the West Point community also includes approximately 8,000 officers, enlisted and civilian staff and faculty members (and their families) whose primary duty is the education and training of the cadets.

West Point was officially recognized for its historical significance and contributions to the country in 1960 when this rocky highland was declared a National Historical Landmark. It is estimated that almost 3 million tourists from around the world visit West Point every year to walk the grounds and, observe the cadets and enjoy the day along the banks of the Hudson River.

## J02.2 Wastewater Utility System Description

West Point's Wastewater Utility System includes two main subsystems, which serve the following areas: the Main Post area and the Camp Buckner / Camp Natural Bridge areas. There are a number of small septic / holding tank subsystems located at Round Pound, Constitution Island, Lake Frederick, Bull Pond, Morgan Farms and various ranges. Although these small subsystems have not been included in this potential privatization action, the wastewater will continued to be trucked-out of the areas to the wastewater treatment plants for treatment and disposal.

**Main Post Subsystem**

The Main Post subsystem includes approximately 30.8 miles of wastewater collection lines, 834 manholes, 6 sewage pump stations, and the Target Field Wastewater Treatment Plant (WWTP).

The wastewater collection system ranges in size from less than 4-inch to 28-inch in diameter. Materials used for mains and laterals include clay, cast iron (CI), PVC and concrete. **Table 1** summarizes the wastewater collection mains and laterals serving the Main Post area.

**TABLE 1 - MAIN POST AREA – WASTEWATER COLLECTION MAINS**

| Item | Description | Size | Material | Quantity | Unit | Approx.Year of Constr. |
|---|---|---|---|---|---|---|
| Collection mains & laterals | Pipe | 3 Inches | Unknown | 31 | Linear Feet | 1900 |
| Collection mains & laterals | Pipe | 3 Inches | Ductile Iron | 85 | Linear Feet | 1935 |
| Collection mains & laterals | Pipe | 3 Inches | CI Force Main | 870 | Linear Feet | 1960 |
| Collection mains & laterals | Pipe | 3 Inches | Vitrified Clay | 103 | Linear Feet | 1916 |
| Collection mains & laterals | Pipe | 4 Inches | Unknown | 805 | Linear Feet | 1919 |
| Collection mains & laterals | Pipe | 4 Inches | Cast Iron | 2,675 | Linear Feet | 1960 |
| Collection mains & laterals | Pipe | 4 Inches | CI Force Main | 352 | Linear Feet | 1900 |
| Collection mains & laterals | Pipe | 4 Inches | Concrete Pipe | 175 | Linear Feet | 1969 |
| Collection mains & laterals | Pipe | 4 Inches | Ductile Iron | 418 | Linear Feet | 1914 |
| Collection mains & laterals | Pipe | 4 Inches | PVC | 295 | Linear Feet | 1978 |
| Collection mains & laterals | Pipe | 4 Inches | Vitrified Clay | 2,316 | Linear Feet | 1939 |
| Collection mains & laterals | Pipe | 5 Inches | Unknown | 375 | Linear Feet | 1973 |
| Collection mains & laterals | Pipe | 6 Inches | Cast Iron | 2,939 | Linear Feet | 1949 |
| Collection mains & laterals | Pipe | 6 Inches | Concrete Pipe | 617 | Linear Feet | 1941 |
| Collection mains & laterals | Pipe | 6 Inches | CMP | 39 | Linear Feet | 1935 |
| Collection mains & laterals | Pipe | 6 Inches | Ductile Iron | 1,022 | Linear Feet | 1900 |
| Collection mains & laterals | Pipe | 6 Inches | PVC | 19,032 | Linear Feet | 1985 |
| Collection mains & laterals | Pipe | 6 Inches | Vitrified Clay | 20,000 | Linear Feet | 1950 |
| Collection mains & laterals | Pipe | 8 Inches | Unknown | 329 | Linear Feet | 1900 |
| Collection mains & laterals | Pipe | 8 Inches | APRD | 393 | Linear Feet | 1900 |
| Collection mains & laterals | Pipe | 8 Inches | Cast Iron | 8,492 | Linear Feet | 1973 |
| Collection mains & laterals | Pipe | 8 Inches | Concrete Pipe | 3,127 | Linear Feet | 1947 |
| Collection mains & laterals | Pipe | 8 Inches | CMP | 11 | Linear Feet | 1936 |
| Collection mains & laterals | Pipe | 8 Inches | Concrete Pipe | 264 | Linear Feet | 1935 |
| Collection mains & laterals | Pipe | 8 Inches | Ductile Iron | 2,969 | Linear Feet | 1928 |
| Collection mains & laterals | Pipe | 8 Inches | PVC | 23,342 | Linear Feet | 1990 |
| Collection mains & laterals | Pipe | 8 Inches | Vitrified Clay | 10,000 | Linear Feet | 1951 |
| Collection mains & laterals | Pipe | 10 Inches | Concrete Pipe | 664 | Linear Feet | 1908 |
| Collection mains & laterals | Pipe | 10 Inches | Ductile Iron | 251 | Linear Feet | 1900 |
| Collection mains & laterals | Pipe | 10 Inches | PVC | 2,128 | Linear Feet | 1975 |
| Collection mains & laterals | Pipe | 10 Inches | Vitrified Clay | 2,264 | Linear Feet | 1915 |
| Collection mains & laterals | Pipe | 12 Inches | Unknown | 129 | Linear Feet | 1900 |
| Collection mains & laterals | Pipe | 12 Inches | Vitrified Clay | 10,583 | Linear Feet | 1943 |
| Collection mains & laterals | Pipe | 12 Inches | Cast Iron | 327 | Linear Feet | 1900 |
| Collection mains & laterals | Pipe | 12 Inches | CI Force Main | 170 | Linear Feet | 1900 |
| Collection mains & laterals | Pipe | 12 Inches | Concrete Pipe | 7,076 | Linear Feet | 1918 |
| Collection mains & laterals | Pipe | 12 Inches | CMP | 110 | Linear Feet | 1900 |
| Collection mains & laterals | Pipe | 12 Inches | Concrete Pipe | 71 | Linear Feet | 1900 |
| Collection mains & laterals | Pipe | 12 Inches | Ductile Iron | 1,777 | Linear Feet | 1921 |

| | | | | | | |
|---|---|---|---|---|---|---|
| Collection mains & laterals | Pipe | 12 Inches | Force Main | 1,698 | Linear Feet | 1900 |
| Collection mains & laterals | Pipe | 12 Inches | PVC | 12,920 | Linear Feet | 1985 |
| Collection mains & laterals | Pipe | 15 Inches | Cast Iron | 446 | Linear Feet | 1911 |
| Collection mains & laterals | Pipe | 15 Inches | Concrete Pipe | 335 | Linear Feet | 1900 |
| Collection mains & laterals | Pipe | 15 Inches | PVC | 2,006 | Linear Feet | 2000 |
| Collection mains & laterals | Pipe | 15 Inches | Vitrified Clay | 40 | Linear Feet | 1900 |
| Collection mains & laterals | Pipe | 16 Inches | PVC | 190 | Linear Feet | 1975 |
| Collection mains & laterals | Pipe | 16 Inches | Vitrified Clay | 440 | Linear Feet | 1900 |
| Collection mains & laterals | Pipe | 18 Inches | Concrete Pipe | 2,045 | Linear Feet | 1902 |
| Collection mains & laterals | Pipe | 18 Inches | PVC | 2,408 | Linear Feet | 1994 |
| Collection mains & laterals | Pipe | 18 Inches | Vitrified Clay | 3,253 | Linear Feet | 1906 |
| Collection mains & laterals | Pipe | 21 Inches | Concrete Pipe | 75 | Linear Feet | 1900 |
| Collection mains & laterals | Pipe | 21 Inches | Vitrified Clay | 309 | Linear Feet | 1900 |
| Collection mains & laterals | Pipe | 24 Inches | Concrete Pipe | 1,424 | Linear Feet | 1900 |
| Collection mains & laterals | Pipe | 24 Inches | Vitrified Clay | 81 | Linear Feet | 1935 |
| Collection mains & laterals | Pipe | 28 Inches | Concrete Pipe | 194 | Linear Feet | 1900 |
| Collection mains & laterals | Pipe | 36 Inches | Concrete Pipe | 78 | Linear Feet | 1900 |
| Collection mains & laterals | Pipe | Unknown | APRD | 189 | Linear Feet | 1900 |
| Collection mains & laterals | Pipe | 6&8 Inches | Unknown | 7,951 | Linear Feet | 2002 |
| Total WW Collection Lines | | | | 162,708 | Linear Feet | |

The **South Site Pump Station Bldg 847** pumps wastewater from south end of Post through a 12-inch diameter CI pipe force main 3,600 feet to a gravity sewer line. The pump station has two 50-horsepower (HP) motor-driven variable speed pumps, each rated at 1,875 gallons per minute (gpm) with total dynamic head (TDH) of 65 feet. The overflow for this pump station is into the Hudson River. The pump station has a high-level alarm to the power plant.

The **Stony Lonesome Pump Station** pumps wastewater from 20 sets of quarters, located in the Stony Lonesome Housing area through a 4-inch diameter CI pipe force main 210 feet to a gravity sewer line. The pump station has two 5-HP motor driven pumps, each rated at 100 gpm with 40 feet of TDH. The pump station has a high-level alarm, which sounds locally.

The pump stations for **Building Nos. 609 and 767** include underground pits equipped with identical equipment. Each station has 2 submersible pumps that pump to gravity wastewater lines. The pump stations have both visual and audio high-level alarms, which sound locally.

The **Howze Field Pump Station** pumps wastewater from the Michie Stadium area through a 12-inch CI force main 75 feet to a gravity sewer line. The pump station has two 5 HP motor driven pumps, each pump rated at 300 gpm, with 25 feet TDH. The pump station has a high-level alarm, which sounds locally.

The **Commissary Area Pump Station** is equipped with 2 motor driven centrifugal pumps, each rated at 150 gpm. The pump station has both visual and audio high-level alarms, which sound locally.

**Table 2** summarizes the sewage pump stations serving the Main Post area.

**TABLE 2- MAIN POST AREA – SEWAGE PUMP STATIONS**

| | Fac. No. | Location | Type | Date Constr. | No. of Pumps | Pump Type | Capacity (gpm) | TDH Feet | Discharges To: |
|---|---|---|---|---|---|---|---|---|---|
| 1 | 847 | South Site Pump Station | Dry Pit | 2000 | 2 | Centrifugal | 1,875 | 65 | 12-Inch CI FM |
| 2 | -- | Stony Lonesome Pump Station side of Fac. No. 3053B | Wet Well | 2002, 1998 | 2 | Submersible | 100 | 40 | 4-Inch CI FM |
| 3 | 609 | Public Restroom next to Lincoln Hall | Wet Well | 1975 | 2 | Submersible | 150 | 40 | Gravity Main |
| 4 | 710 | Howze Field Pump Station | Wet Well | 2001 | 2 | Submersible | 300 | 25 | Gravity Main |
| 5 | 767 | South Tennis Court/ Public Restroom on side of new Rowing building | Wet Well | 2003 | 2 | Submersible | 150 | 15 | Gravity Main |
| 6 | -- | Commissary Pump Station | Dry Pit | 1998 | 2 | Centrifugal | 150 | 75 | Gravity Main |

The **Target Field WWTP (Facility No. 849)** is located in the Main Post area on the west bank of the Hudson River. Initially constructed in 1955 as a primary treatment facility, the secondary treatment facilities were completed in October 1973. The Target Field WWTP is designed to treat 2.06 million gallons per day (MGD) and discharges its treated effluent into the Hudson River, under a New York State Pollution Discharge Elimination System (NYSPDES) permit.

The wastewater enters the plant at two points bringing the wastewater from north and south ends of the Main Post area. The Target Field WWTP is a semi-automated WWTP with bar screens, grit chamber, primary settling tanks, and aeration and activated sludge process equipment. The WWTP has an auxiliary generator (675 kW) in the event that the plant loses its primary power source.

As previously noted, there are a number of small septic / holding tank subsystems located at located at Constitution Island, Lake Frederick, Bull Pond, Morgan Farms and various ranges. The wastewater is trucked-out of the areas and delivered to the Target Field WWTP for treatment and disposal; however, these subsystems have not been included in this potential privatization action,. An annual average of 3 million gallons of wastewater from the septic / holding tank subsystems is delivered to the Target Field WWTP for treatment and disposal. Most of this occurs during the summer when the septic / holding tanks are actually in operation.

**Camp Buckner & Camp Natural Bridge Subsystem**

The Camp Buckner (CB) and Camp Natural Bridge (CNB) subsystem includes approximately 5.2 miles of wastewater collection lines and effluent discharge force main, 33 manholes, 2 sewage pump stations, and the CB WWTP.

The wastewater collection mains and effluent discharge force main includes approximately 5.2 miles of pipe ranging in size from 6-inch to 10-inch diameter and approximately 33 wastewater manholes. Materials used for mains include clay, cast iron, PVC and concrete. The following table summarizes the wastewater collection mains serving the Camps Buckner and Natural Bridge Areas.

**TABLE 3- CB AND CNB AREAS – WASTEWATER COLLECTION MAINS**

| Item | Description | Size | Material | Quantity | Unit | Approx.Year Of Constr. |
|---|---|---|---|---|---|---|
| Collection mains & laterals | Pipe | 6 Inches | Unknown | 3,200 | Linear Feet | 1964 |
| Collection mains & laterals | Pipe | 8 Inches | Unknown | 6,206 | Linear Feet | 1978 |
| Collection mains & laterals | Pipe | 10 Inches | Unknown | 17,850 | Linear Feet | 1998 |
| Total WW Collection Lines | | | | 27,256 | Linear Feet | |

The **CNB Pump Station** pumps wastewater from CNB through a 6-inch diameter CI pipe force main 582 feet to an 8-inch gravity sewer line. The pump station has two 5-HP motor-driven variable speed pumps.

The **Building No. 1580 Pump Station** pumps wastewater from Building No. 1580 through a 3-inch diameter CI pipe force main 200 feet to a gravity sewer line. The pump station has two 2-HP motor-driven submersible speed pumps,.

**Table 4** summarizes the sewage pump stations serving the CB and CNB Areas.

**TABLE 4 - CB AND CNB AREAS – SEWAGE PUMP STATIONS**

| | Fac. No. | Location | Type | Date Constr. | No. of Pumps | Pump Type | Discharges To: |
|---|---|---|---|---|---|---|---|
| 1 | 1600 | CNB Pump Station | Wet Well | 1972 | 2 | Submersible | CB Wastewater Pipeline |
| 2 | 1580 | Vic Commandant's Cottage | Wet Well | ____ | 2 | Submersible | CB Wastewater Pipeline |

The **CB WWTP (Facility No. 1542)** is located in the CB area and was initially constructed during 1971-73 as a secondary treatment facility. The CB WWTP is designed to treat 0.25 MGD and discharges its treated effluent into the Popolopen Creek, under a NYSPDES permit.

The CB WWTP is an Extended Air Activated Sludge WWTP with bar screens, a grit chamber, combined clarifier settling/aeration tank and activated sludge process equipment. The WWTP has an auxiliary generator in the event that the plant loses its primary power source.

The wastewater effluent from the CB WWTP is discharged via the 10-inch gravity and 8-inch effluent discharge force main line to the Popolopen Creek. Part of the effluent line is above ground and in proximity to West Point's drinking water supply. Increased monitoring is provided. This line was relined with plastic pipe in 2004 from vicinity NY Route 293 on Mine Torne Road and the discharge into Popolopen Creek.

## J02.2.1 Inventory

**Table 5** provides a general listing of the major wastewater utility system fixed assets for West Point included in the purchase. The system will be sold in a "as is, where is" condition without any warranty, representation, or obligation on the part of government to make any alterations, repairs, or improvements. Ancillary equipment attached to and necessary for operating the system, though not specifically mentioned herein, is considered part of the purchased utility.

## Table 5 - Fixed Inventory

| Item | Description | Size | Material | Quantity | Unit | Approx.Year of Constr. |
|---|---|---|---|---|---|---|
| Wastewater Collection Lines | | | | | | |
| Collection mains & laterals | Pipe | 3 Inches | Unknown | 31 | Linear Feet | 1900 |
| Collection mains & laterals | Pipe | 3 Inches | Ductile Iron | 85 | Linear Feet | 1935 |
| Collection mains & laterals | Pipe | 3 Inches | CI Force Main | 870 | Linear Feet | 1960 |
| Collection mains & laterals | Pipe | 3 Inches | Vitrified Clay | 103 | Linear Feet | 1916 |
| Collection mains & laterals | Pipe | 4 Inches | Unknown | 805 | Linear Feet | 1919 |
| Collection mains & laterals | Pipe | 4 Inches | Cast Iron | 2,675 | Linear Feet | 1960 |
| Collection mains & laterals | Pipe | 4 Inches | CI Force Main | 352 | Linear Feet | 1900 |
| Collection mains & laterals | Pipe | 4 Inches | Concrete Pipe | 175 | Linear Feet | 1969 |
| Collection mains & laterals | Pipe | 4 Inches | Ductile Iron | 418 | Linear Feet | 1914 |
| Collection mains & laterals | Pipe | 4 Inches | PVC | 295 | Linear Feet | 1978 |
| Collection mains & laterals | Pipe | 4 Inches | Vitrified Clay | 2,316 | Linear Feet | 1939 |
| Collection mains & laterals | Pipe | 5 Inches | Unknown | 375 | Linear Feet | 1973 |
| Collection mains & laterals | Pipe | 6 Inches | Unknown | 3,200 | Linear Feet | 1964 |
| Collection mains & laterals | Pipe | 6 Inches | Cast Iron | 2,939 | Linear Feet | 1949 |
| Collection mains & laterals | Pipe | 6 Inches | Concrete Pipe | 617 | Linear Feet | 1941 |
| Collection mains & laterals | Pipe | 6 Inches | CMP | 39 | Linear Feet | 1935 |
| Collection mains & laterals | Pipe | 6 Inches | Ductile Iron | 1,022 | Linear Feet | 1900 |
| Collection mains & laterals | Pipe | 6 Inches | PVC | 19,032 | Linear Feet | 1985 |
| Collection mains & laterals | Pipe | 6 Inches | Vitrified Clay | 20,000 | Linear Feet | 1950 |
| Collection mains & laterals | Pipe | 8 Inches | Unknown | 6,535 | Linear Feet | 1974 |
| Collection mains & laterals | Pipe | 8 Inches | APRD | 393 | Linear Feet | 1900 |
| Collection mains & laterals | Pipe | 8 Inches | Cast Iron | 8,492 | Linear Feet | 1973 |
| Collection mains & laterals | Pipe | 8 Inches | Concrete Pipe | 3,127 | Linear Feet | 1947 |
| Collection mains & laterals | Pipe | 8 Inches | CMP | 11 | Linear Feet | 1936 |
| Collection mains & laterals | Pipe | 8 Inches | Concrete Pipe | 264 | Linear Feet | 1935 |
| Collection mains & laterals | Pipe | 8 Inches | Ductile Iron | 2,969 | Linear Feet | 1928 |
| Collection mains & laterals | Pipe | 8 Inches | PVC | 23,342 | Linear Feet | 1990 |
| Collection mains & laterals | Pipe | 8 Inches | Vitrified Clay | 10,000 | Linear Feet | 1951 |
| Collection mains & laterals | Pipe | 10 Inches | Unknown | 17,850 | Linear Feet | 1998 |
| Collection mains & laterals | Pipe | 10 Inches | Concrete Pipe | 664 | Linear Feet | 1908 |
| Collection mains & laterals | Pipe | 10 Inches | Ductile Iron | 251 | Linear Feet | 1900 |
| Collection mains & laterals | Pipe | 10 Inches | PVC | 2,128 | Linear Feet | 1975 |
| Collection mains & laterals | Pipe | 10 Inches | Vitrified Clay | 2,264 | Linear Feet | 1915 |
| Collection mains & laterals | Pipe | 12 Inches | Unknown | 129 | Linear Feet | 1900 |
| Collection mains & laterals | Pipe | 12 Inches | Vitrified Clay | 10,583 | Linear Feet | 1943 |
| Collection mains & laterals | Pipe | 12 Inches | Cast Iron | 327 | Linear Feet | 1900 |
| Collection mains & laterals | Pipe | 12 Inches | CI Force Main | 170 | Linear Feet | 1900 |

| | | | | | | |
|---|---|---|---|---|---|---|
| Collection mains & laterals | Pipe | 12 Inches | Concrete Pipe | 7,076 | Linear Feet | 1918 |
| Collection mains & laterals | Pipe | 12 Inches | CMP | 110 | Linear Feet | 1900 |
| Collection mains & laterals | Pipe | 12 Inches | Concrete Pipe | 71 | Linear Feet | 1900 |
| Collection mains & laterals | Pipe | 12 Inches | Ductile Iron | 1,777 | Linear Feet | 1921 |
| Collection mains & laterals | Pipe | 12 Inches | Force Main | 1,698 | Linear Feet | 1900 |
| Collection mains & laterals | Pipe | 12 Inches | PVC | 12,920 | Linear Feet | 1985 |
| Collection mains & laterals | Pipe | 15 Inches | Cast Iron | 446 | Linear Feet | 1911 |
| Collection mains & laterals | Pipe | 15 Inches | Concrete Pipe | 335 | Linear Feet | 1900 |
| Collection mains & laterals | Pipe | 15 Inches | PVC | 2,006 | Linear Feet | 2000 |
| Collection mains & laterals | Pipe | 15 Inches | Vitrified Clay | 40 | Linear Feet | 1900 |
| Collection mains & laterals | Pipe | 16 Inches | PVC | 190 | Linear Feet | 1975 |
| Collection mains & laterals | Pipe | 16 Inches | Vitrified Clay | 440 | Linear Feet | 1900 |
| Collection mains & laterals | Pipe | 18 Inches | Concrete Pipe | 2,045 | Linear Feet | 1902 |
| Collection mains & laterals | Pipe | 18 Inches | PVC | 2,408 | Linear Feet | 1994 |
| Collection mains & laterals | Pipe | 18 Inches | Vitrified Clay | 3,253 | Linear Feet | 1906 |
| Collection mains & laterals | Pipe | 21 Inches | Concrete Pipe | 75 | Linear Feet | 1900 |
| Collection mains & laterals | Pipe | 21 Inches | Vitrified Clay | 309 | Linear Feet | 1900 |
| Collection mains & laterals | Pipe | 24 Inches | Concrete Pipe | 1,424 | Linear Feet | 1900 |
| Collection mains & laterals | Pipe | 24 Inches | Vitrified Clay | 81 | Linear Feet | 1935 |
| Collection mains & laterals | Pipe | 28 Inches | Concrete Pipe | 194 | Linear Feet | 1900 |
| Collection mains & laterals | Pipe | 36 Inches | Concrete Pipe | 78 | Linear Feet | 1900 |
| Collection mains & laterals | Pipe | Unknown | APRD | 189 | Linear Feet | 1900 |
| Collection mains & laterals | Pipe | Unknown | Unknown | 7,951 | Linear Feet | 2002 |
| Total WW Collection Lines | | | | 189,964 | Linear Feet | |
| Manholes | -- | -- | -- | 893 | Each | 1931-2004 |
| Sewage Pump Station | | | | | | |
| Facility No. 847 - Dry Pit | Structure | -- | -- | 1 | Each | 1956 |
| | Pump | 1,875 gpm | -- | 2 | Each | 2000 |
| Stoney Lonesome - Wet Well | Structure | -- | -- | 1 | Each | 1972 |
| | Pump | 100 gpm | -- | 2 | Each | 2000 |
| Facility No. 609 - Wet Well | Structure | -- | -- | 1 | Each | 1937 |
| | Pump | 150 gpm | -- | 2 | Each | 2004 |
| Facility No. 710 - Wet Well | Structure | -- | -- | 1 | Each | 1964 |
| | Pump | 300 gpm | -- | 2 | Each | 2001 |
| Facility No. 767 - Wet Well | Structure | -- | -- | 1 | Each | 1967 |
| | Pump | 150 gpm | -- | 2 | Each | 2003 |
| Commissary - Dry Pit | Structure | -- | -- | 1 | Each | 1989 |
| | Pump | 150 gpm | -- | 2 | Each | 1998 |
| Facility No. 1580 - Wet Well | Structure | -- | -- | 1 | Each | 1944 |
| | Pump | ___ gpm | -- | 2 | Each | -- |

| | | | | | | |
|---|---|---|---|---|---|---|
| Facility No. 1600 - Wet Well | Structure | -- | -- | 1 | Each | 1947 |
| | Pump | ___ gpm | -- | 2 | Each | -- |
| Target Field WWTP | Primary | 2.06 MGD | -- | 1 | Each | 1955 |
| | Secondary | -- | -- | 1 | Each | 1973 |
| Camp Buckner WWTP | Extended Air Activated Sludge | 0.25 MGD | -- | 1 | Each | 1972 |

## J02.2.2 Wastewater Utility System Non-Fixed Equipment and Specialized Tools Inventory

**Table 6** lists other ancillary equipment (spare parts) and **Table 7** lists specialized equipment and vehicles included in the purchase. With regard to the sewage treatment plant, West Point plans to include the 168 items listed in its hand receipt records with a total acquisition cost in excess of $140,000. A list of the items included in the hand receipt records will be available in the Technical Library. **Table 7** lists the only hand receipt items with acquisition costs in excess of $2,000.

Offerors shall field verify all equipment and tools prior to submitting a bid. Offerors shall make their own determination of the adequacy of all equipment and tools. The successful Offeror shall provide any and all equipment, vehicles, and tools, whether included in the purchase or not, to maintain a fully operating system under the terms of this contract.

**TABLE 6 - SPARE PARTS**

| Qty | Item | Make/Model | Description | Remarks |
|---|---|---|---|---|
| None | | | | |

**TABLE 7 - SPECIALIZED EQUIPMENT AND VEHICLES**

| Description | Quantity | Location | Maker |
|---|---|---|---|
| Composite Sampler | 2 | Sewage Treatment Plant | ISCO & American Sigma |
| Mobile radio | 1 | Sewage Treatment Plant | Motorola |
| Pump, w/ drum assembly, w/ mixer 80 gal. tank | 1 | Sewage Treatment Plant | -- |
| Loader, w/ 80” low profile bucket, HD pallet fork | 1 | Sewage Treatment Plant | Bobcat |
| Pump, automatic self-priming diesel | 1 | Sewage Treatment Plant | Godwin |
| Sludge container, 22 ft by 20 cubic yards | 2 | Sewage Treatment Plant | -- |
| Lubrication handling unit, 132” (H) X 76” (W) | 1 | Sewage Treatment Plant | -- |
| Snow plow | 1 | Sewage Treatment Plant | Fisher |
| Retractable winch, w/ life line built-in harness | 1 | Sewage Treatment Plant | -- |
| Analytical balance | 1 | Sewage Treatment Plant | Mettler |

| | | | |
|---|---|---|---|
| Fume hood, lightweight benchtop w/ motor blower | 1 | Sewage Treatment Plant | -- |
| Chain hoist, 1 ton w/ 30 ft. lift, trolley mounted | 1 | Sewage Treatment Plant | Lodestar |
| 675 kW Generator | 1 | Sewage Treatment Plant | Cummins |

## J02.2.3 Wastewater Utility System Manuals, Drawings, and Records Inventory

**Table 8** lists the manuals, drawings, and records that will be transferred with the system.

**TABLE 8 - MANUALS, DRAWINGS, AND RECORDS**

| Qty | Item | Description | Remarks |
|---|---|---|---|
| West Point will provide copies of all manuals, drawings and records to the successful bidder. | | | |

## J02.2.4 Known System Deficiencies

**Table 9** details the planned upgrade projects associated with the known deficiencies in the wastewater utility systems. However, it is the responsibility of the Offeror to perform due diligence and make their own determination regarding known and unknown deficiencies within the systems.

**TABLE 9 - KNOWN DEFICIENCIES**

| Project No. | Description | Location |
|---|---|---|
| -- | Develop & Initiate CMOM Program | -- |
| UJ205352J | Construct New Sludge Thickener & Filter Press Facilities | Target Field WWTP |
| -- | Construct Additional Primary Settling Basin | Target Field WWTP |
| -- | Construct Additional Secondary Settling Tank | Target Field WWTP |
| -- | Replace Main Control Building Influent Pumps | Target Field WWTP |
| -- | Install New WW Monitoring Equipment | Target Field WWTP |
| -- | Install New Flow Monitoring Equipment | Collection Systems |
| -- | Prepare Inflow and Infiltration Study | Main Post Collection System |

## J02.2.5 Technical Library

**Table 10** provides a list of the reports and documents contained in the Technical Library, which will be available for review during the site visit or by scheduling an appointment.

**TABLE 10 - DOCUMENTS PROVIDED IN THE TECHNICAL LIBRARY**

| | The following documents will be made available according to current security procedures. |
|---|---|
| 1. | Utility Maps - AutoCAD Files |
| 2. | Utility Maps - Hard Copies |
| 3. | Wastewater System Inventory |
| 4. | Environmental Compliance Assessment System (ECAS) Report |
| 5. | USMA Status Report and Environmental Sites Information |
| 6. | Inflow & Infiltration (I&I) Reports |
| 7. | Manhole / Sewer Line Inspection Reports (CCTV Tapes, Smoke Test etc.) |
| 8. | Historical System Replacement Contracts |
| 9. | Operations and Maintenance Guidance Documents |

| | |
|---|---|
| 10. | Standard Operating Procedures |
| 11. | Preventive Maintenance Procedures |
| 12. | Draft Environmental Baseline Study (EBS) and Environmental Assessment (EA) |
| 13. | Regulatory Compliance Reports |
| 14. | Material and Chemical Usage Information |
| 15. | Dig Safe Policy |
| 16. | Service Contract Wage Rates |
| 17. | Monthly Operating Reports filed with the NY State Department of Health |
| 18. | NYNPDES Permits |
| 19. | Monitoring Requirements |
| 20. | Monthly Line Flushing Reports |
| 21. | Public Notifications |
| 22. | Repair Records |
| 23. | Installation Master Plan |
| 24. | Building / Facility Inventory and Historic Status |
| 25. | NY State Historic Property Office (SHPO) Agreement |

## J02.3 Current Service Arrangement

West Point collects the wastewater from its facilities and conveys it to either the Target Field WWTP or the CB WWTP for treatment and disposal. The following table summarizes the annual volume of wastewater collected and treated by West Point over the last three calendar years.

**TABLE 11 - ANNUAL VOLUMES OF WASTEWATER TREATED**

| | CY2001 | CY2002 | CY2003 | 3-Yr Avg. |
|---|---|---|---|---|
| | MG | MG | MG | MG |
| WW from Main Post | 619.094 | 623.930 | 695.465 | 646.163 |
| Trucked Sewage | 2.402 | 2.648 | 1.731 | 2.260 |
| Target Field WWTP | 621.497 | 626.578 | 697.196 | 648.424 |
| Camp Buckner WWTP | 12.458 | 15.405 | 15.551 | 14.471 |
| Total | 633.954 | 641.983 | 712.747 | 662.895 |

**Table 12** summarizes the peak day volumes of wastewater treated by West Point over the last three calendar years.

**TABLE 12 - PEAK DAY VOLUMES OF WASTEWATER TREATED**

| | CY2001 | CY2002 | CY2003 | 3-Yr Avg. |
|---|---|---|---|---|
| **Peak Day Volumes** | MGD | MGD | MGD | MGD |
| WW from Main Post | 2.902 | 3.427 | 6.509 | 4.279 |
| Trucked Sewage | 0.015 | 0.016 | 0.068 | 0.033 |
| Target Field WWTP | 2.917 | 3.443 | 6.577 | 4.312 |
| Camp Buckner WWTP | 0.216 | 0.214 | 0.221 | 0.217 |
| Total | 3.133 | 3.657 | 6.798 | 4.529 |

## J02.4 Submittals

The Contractor shall provide the Government monthly submittals for the following:

**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 the Contracting Officer's designee. (This information will be provided upon award.)

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

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

Outage reports shall be submitted by the 25th of each month for the previous month. Outage reports shall be submitted to the Contracting Officer's designee. (This information will be provided upon award.)

**Meter Reading Report.** If required by the Contracting Officer, the monthly meter reading report shall show the current and previous month readings for all 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 the Contracting Officer's designee. (This information will be provided upon award.)

**System Efficiency Report.** If required by Paragraph C.3, the Contractor shall submit a system efficiency report in a format proposed by the Contractor and accepted by the Contracting Officer. System efficiency reports shall be submitted by the 25th of each month for the previous month. System efficiency reports shall be submitted to the Contracting Officer's designee. (This information will be provided upon award.)

## J02.5 Energy Savings and Conservation Projects

IAW Clause C.3, Utility Service Requirement, there are no projects planned or currently executed by West Point for energy conservation purposes.

## J02.6 Service Area

IAW Paragraph C.4, Service Area, the service area is defined as all areas within the Main Installation boundaries including the South Post area, Camp Buckner and Camp Natural Bridge areas.

## J02.7 Off-Installation Sites

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

# J02.8 Specific Transition Requirements

IAW Clause C.13, Operational Transition Plan, **Table 13** lists service connections and disconnections required upon transfer.

**TABLE 13 - SERVICE CONNECTIONS AND DISCONNECTIONS**

| Location | Description |
|---|---|
| None. | |

# J02.9 Specific Service Requirements

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

## J02.9.1 Dig Safe Policy

The successful bidder will be required to adhere to the Dig Safe Policy. As noted in Section J02.2.5, a copy of the Dig Safe Policy is included in the Technical Library. This document will be available for review during the site visit or by scheduling an appointment.

## J02.9.2 Protection of Trees and Plant Material

The successful bidder will be required to adhere to the Protection of Trees and Plant Material. As noted in Section J02.2.5, a copy of the Protection of Trees and Plant Material is included in the Technical Library. This document will be available for review during the site visit or by scheduling an appointment.

## J02.9.3 NY State Historic Property (SHPO) Agreement

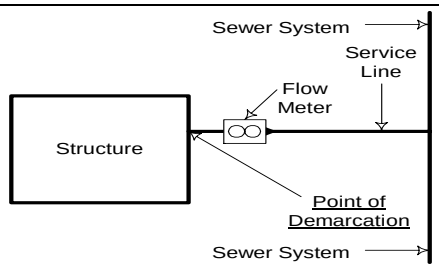
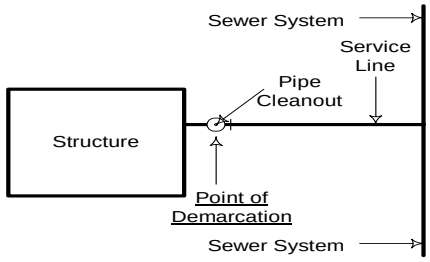
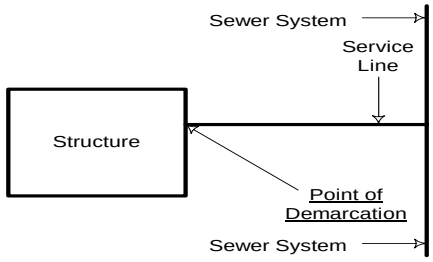
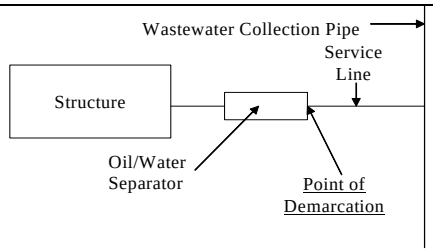
The successful bidder will be required to adhere to the NY State Historic Property Office (SHPO) Agreement. As noted in Section J02.2.5, copies of the NY SHPO Agreement and the Building Facility Inventory and Historic Status are included in the Technical Library. These documents will be available for review during the site visit or by scheduling an appointment.

# J02.10 Wastewater System Points of Demarcation

The West Point wastewater utility system consists of all wastewater laterals, mains, man-holes, pump stations, WWTP facilities, and effluent discharge lines required to collect, treat and dispose of the wastewater generated at West Point. The wastewater utility system starts with the sewage laterals at the building wall and terminates at the effluent discharge points of at each respective WWTP facility. This includes all wastewater laterals, mains, manholes, pump stations, WWTP facilities, and effluent discharge lines.

The point of demarcation is defined as the point on the piping system where ownership changes from the Grantee to the building owner. During the operation and maintenance transition period, concurrence on specific demarcation points will be documented during the joint inventory of facilities.

**TABLE 14 – LINES OF DEMARCATIONS – WASTEWATER UTILITY SYSTEMS**

| Point of Demarcation | Applicable Scenario | Sketch |
|---|---|---|
| Point where the service line enters the structure. | Sewer system flow meter is located on the service line entering the structure. |  |
| Point of demarcation is the cleanout device if within 10' of the building perimeter. | No flow meter exists and a sewer system cleanout is located within 10 feet of the building perimeter on the service line. |  |
| Point where the service line enters the structure.<br><br>*Note: A new cleanout device should be installed within 10' of building during any stoppage or maintenance action. This will then become the new point of demarcation.* | No flow meter or cleanout exists on the service line entering the structure. |  |
| The point of demarcation is the downstream side of oil/water separator. | All oil/water separators and grease traps. |  |

## J02.10.1 Unique Points of Demarcation

**Table 15** lists anomalous points of demarcation that do not fit any of the above scenarios.

**TABLE 15 - UNIQUE POINTS OF DEMARCATION**

| Building No. | Point of Demarcation Description |
|---|---|
| None. | |