

**ATTACHMENT J7**

# U.S. Army Garrison Selfridge Wastewater Collection System

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# J7 U.S. Army Garrison Selfridge Wastewater Collection System

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## J7.1 U.S. Army Garrison Selfridge Overview

Selfridge is located on the north side of the metropolitan area of Detroit, Michigan, along the western shore of Lake St. Clair. Selfridge is the home of a garrison of the United States Army and the 127<sup>th</sup> Wing of the Michigan Air National Guard. Army Garrison-Selfridge provides base operations and services to include housing, morale welfare and recreation, and family services to a joint military community, affiliated civilian employees and their family members. Housing units are located on the base and at an offsite housing area referred to as Seville Manor. Many of the residents are part of the Tank-automotive and Armaments Command (TACOM) supporting tank construction in the Detroit area. Other army units stationed at Selfridge include an active Army Readiness unit, Army Reserves, and a unit of the Army Guard (Rangers). The Army portion of Selfridge also provides housing for military personnel. The airfield is the home of the 127<sup>th</sup> Wing of the Michigan Air National Guard. The Air Force Reserve (AFRC) 927<sup>th</sup> Air Refueling Wing provides the KC-135 mission on base and occupies numerous facilities on ANG property, making it the third largest group on base. The 127<sup>th</sup> Wing is the host command.

Several other branches of the U.S. military also have offices or units on the base. They include the 425<sup>th</sup> infantry and Army Guard Recruiting, Naval Mobile Construction Battalion, Naval Air Reserve Activity Selfridge, Naval Reserve Center, Immigration and Naturalization Service for U.S. Boarder Patrol, Marine Wing Support Group 47, the Army's 3<sup>rd</sup> Brigade, 85<sup>th</sup> Division, and the 75<sup>th</sup> Explosive Ordnance Company. The Coast Guard Air Station Detroit also uses Selfridge as a base of operations.

The population on the Army side of Selfridge is currently 468 staff and 2000 residents.

The site upon which Selfridge is located initially was established as an airfield during the early part of the 20<sup>th</sup> century. It began being used as an airfield for the U.S. Army Air Corps in the 1920s. Over the years, it grew into an active duty base for the Air Force. In 1971 the U.S. granted a license to the State of Michigan for the use of the former Selfridge Air Force Base for National Guard purposes. The base at that time consisted of roughly 3,075 acres of land, including a complete airfield, buildings to support base operations and flight-line activities, 593 on-base housing units and associated quality of life facilities, and miscellaneous other buildings. In 1989, the Air Force transferred 520 acres of the base and the 102-acre Seville Manor housing area to the U.S. Army. The ANG also leases another area at the southeast corner of the base to the U.S. Army.

Currently the 127<sup>th</sup> Wing side of the base contains 228 buildings, and the U.S. Army side including Seville Manor contains 495 buildings (mostly housing). The total structure surface area over the entire base covers 1,922,310 ANG, 1,513,954 Army for a total of 3,436,255 square feet.

In 1997 Team Selfridge completed the Vision 2000 Base Renovation Plan for the 127<sup>th</sup> Wing. The Vision 2000 document identifies the condition of many aspects of the utility infrastructure, pavement, and buildings on the site. It also lays out a plan for implementing the recommendations for renovations presented in the plan. Based upon the Vision 2000 document, plans for demolition, construction, and new infrastructure projects have begun. Of particular interest to this feasibility analysis report is the expectation that demolition and construction on the base will result in a net reduction in the surface area of structures (127<sup>th</sup> Wing and U.S. Army). The reduction in building area is expected to result in a proportionate reduction in demand for the four commodities being analyzed by the project.

## J7.2 Wastewater Collection System Description

### J7.2.1 Wastewater Collection System Fixed Equipment Inventory

The U.S. Army Garrison Selfridge wastewater collection system consists of all appurtenances physically connected to the collection system from the point of demarcation. The system may include, but is not limited to, pipelines, manholes, lift stations, valves, controls, 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:

- Oil Water Separators
- Storm Sewers
- Grease Traps
- Septic Systems

#### J7.2.1.1 Description

The wastewater collection system at the U.S. Army Garrison Selfridge consists of approximately 35,000 linear feet of PVC pipe installed in 1998. The system uses gravity sewers, pump stations, and force mains to convey wastewater from Army owned areas to the wastewater collection system owned and operated by the 127<sup>th</sup> Wing. The 127<sup>th</sup> wing discharges wastewater to the Harrison Township collection system south of the main base.

The Seville Manor Housing Area sanitary sewer system was constructed in 1960 and contains approximately 30,000 feet of 4-, 6-, and 8-inch clay gravity lines that drain to a pump station. The pump station conveys sewage to a gravity main owned by the township of Chesterfield. The pumps in the lift station were replaced in 1980. Service was required about once a week.

### J7.2.1.2 Inventory

**Table 1** provides a general listing of the major wastewater collection system fixed assets for the U.S. Army Garrison Selfridge, and Seville Manor wastewater collection system included in the sale.

**TABLE 1**  
 Fixed Inventory  
 Wastewater Utility System U.S. Army Garrison Selfridge

Item	Size (in.)	Quantity	Unit	Approximate Year of Construction	
PVC Pipe	Leads	6	10,359	Lf	1998
		8	3,058	Lf	1998
		10	9,669	Lf	1999
		12	600	Lf	1994
Vitrified Clay Pipe		4	200	Lf	1956
		6	13,9002	Lf	1961
		8	15,800	Lf	1958
		10	6,086	Lf	1950
Standard Sanitary Sewer Manhole		53	Ea	1960	
		84	Ea	1998	
Wastewater Lift/Pump Station (med)		4	Ea	1969	
Sewer Clean-outs		159	Ea	1998	

Notes:  
 PVC = Polyvinyl Chloride  
 LF = Linear Feet  
 EA = Each

### J7.2.2 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 U.S. Army Garrison Selfridge

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

**TABLE 3**  
 Specialized Vehicles and Tools  
 Wastewater Collection System U.S. Army Garrison Selfridge

Description	Quantity	Location	Maker
There are no tools or vehicles to transfer with the system			

### J7.2.3 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  
 Wastewater Collection System U.S. Army Garrison Selfridge

Qty	Item	Description	Remarks
1	System maps	Plan view figures showing the collection systems will be turned over.	

### J7.3 Specific Service Requirements

The service requirements for the U.S. Army Garrison Selfridge wastewater collection system are as defined in the Section C, *Description/Specifications/Work Statement*. The following requirements are specific to the U.S. Army Garrison Selfridge 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.

- The contractor must subscribe to the *MISSDIG* utilities locating service.

### J7.4 Current Service Arrangement

The current provider of wastewater service to U.S. Army Garrison Selfridge is the 127<sup>th</sup> Wing. Flow from the Army is not restricted, however, that may change as the 127<sup>th</sup> Wing completes negotiations with Harrison Township regarding allowable discharge rates from Selfridge to the Harrison Township system. The current provider of wastewater collection service to the U.S. Army at Seville Manor is Chesterfield Township.

According to the billing records, the average daily wastewater flow from the Selfridge system is roughly 276,000 gallons.

Future wastewater collection system demand based upon the construction of new buildings and demolition from the Vision 2000 plan has been estimated. The additions appear to equal or be less than the demolition plan for the base. Therefore, the demand of 276,000 gallons per day is similar to the calculated future demand.

System capacity is limited by the Harrison Township discharge limit of 950,000 gallons per day maximum instantaneous peak flow rate and 732,000 gallons for the maximum daily flow. This may change as different agreements are negotiated with Harrison Township. Future wastewater flows are expected to be below these current flow levels because the square footage of buildings will be reducing. The highest flows are currently reached during wet weather conditions, and the excess wastewater is stored in the equalization basin at pump station 501.

## J7.5 Secondary Metering

### J7.5.1 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 and J3.6 below.

TABLE 5  
 Existing Secondary Meters  
 Wastewater Collection System U.S. Army Garrison Selfridge

Meter Location	Meter Description (Type)
Building 2500	Sebille Manor

### J7.5.2 Required New Secondary Meters

The Contractor shall install and calibrate new secondary meters as listed in **Table 6**. New secondary meters shall be installed IAW Paragraph C.13, Transition Plan. After installation, the Contractor shall maintain and read these meters IAW Paragraphs C.3 and J3.6 below.

TABLE 6  
 New Secondary Meters  
 Wastewater Collection System U.S. Army Garrison Selfridge

Meter Location	Meter Description
None	

## J7.6 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:* US Army Garrison-Selfridge, DPW  
*Address:* Building 970, Mount Clemens, MI 48045  
*Phone number:* (810) 307-4189

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:* US Army Garrison-Selfridge, DPW  
*Address:* Building 970, Mount Clemens, MI 48045  
*Phone number:* (810) 307-4189

3. **Infiltration and Inflow Report.** If required by Paragraph C.3, the Contractor shall submit an Infiltration and Inflow report in a format proposed by the Contractor and accepted by the Contracting Officer. System efficiency reports shall be submitted by the 25<sup>th</sup> of each month for the previous month. System efficiency reports shall be submitted to:

*Name:* US Army Garrison-Selfridge, DPW  
*Address:* Building 970, Mount Clemens, MI 48045  
*Phone number:* (810) 307-4189

### J7.7 Infiltration and Inflow (I&I) Projects

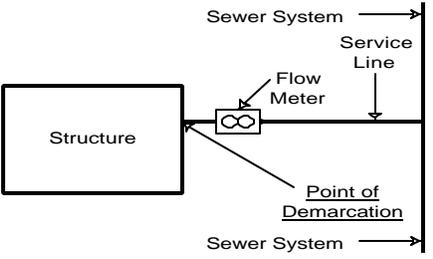
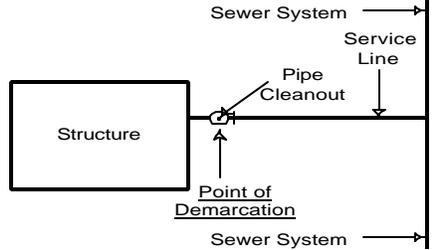
IAW Paragraph C.3, Utility Service Requirement, the following projects have been implemented by the Government for managing and monitoring I&I.

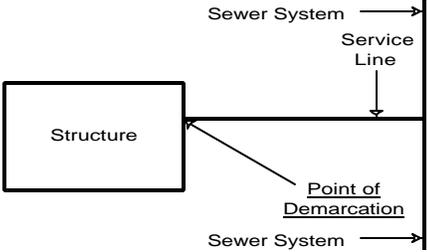
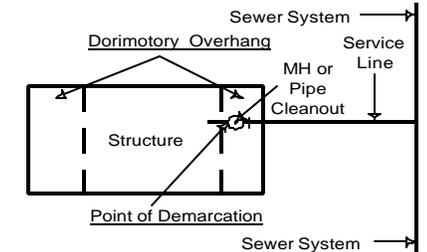
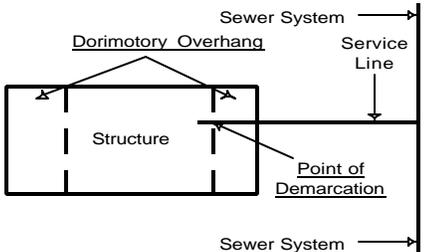
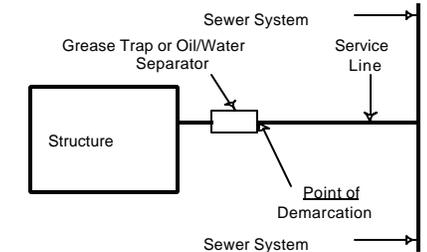
- None Identified

### J7.8 Service Area and Points of Demarcation

IAW Paragraph C.4, Service Area, the service area is defined as all areas within the U.S. Army Garrison Selfridge boundaries and Seville Manor.

The point of demarcation is defined as the point on the wastewater collection pipe where ownership changes from the utility owner to the building owner. The table below identifies the general locations of these points with respect to the building served.

Point of Demarcation	Applicable Scenario	Sketch
<p>Point of demarcation is where the service line exits the structure</p> <p><i>Note: A new 2-way cleanout device should be installed within 10' of building during any stoppage or maintenance action. The upstream side of the cleanout will then become the new point of demarcation.</i></p>	<p>Wastewater system flow meter is located on the service line exiting the structure.</p>	 <p>The sketch shows a rectangular box labeled 'Structure' on the left. A horizontal line representing the 'Service Line' extends from the structure to the right. A 'Flow Meter' is shown as a circle with an infinity symbol on the service line. The 'Point of Demarcation' is indicated by a vertical line and an arrow pointing to the flow meter. Above and below the service line are arrows labeled 'Sewer System' pointing to the right.</p>
<p>Point of demarcation is the upstream side of the cleanout device.</p>	<p>No flow meter exists and a wastewater system cleanout is located within 10 feet of the building perimeter on the service line.</p>	 <p>The sketch shows a rectangular box labeled 'Structure' on the left. A horizontal line representing the 'Service Line' extends from the structure to the right. A 'Pipe Cleanout' is shown as a circle with a cross on the service line. The 'Point of Demarcation' is indicated by a vertical line and an arrow pointing to the pipe cleanout. Above and below the service line are arrows labeled 'Sewer System' pointing to the right.</p>

Point of Demarcation	Applicable Scenario	Sketch
<p>Point of demarcation is where the service line exits the structure.</p> <p><i>Note: A new 2-way cleanout device should be installed within 10' of building during any stoppage or maintenance action. The upstream side of the cleanout will then become the new point of demarcation..</i></p>	<p>No flow meter or cleanout exists on the service line within 10 feet of where the service line exits the structure.</p>	
<p>Point of demarcation is upstream side of cleanout device or manhole from first floor building edge.</p>	<p>Dormitories with overhang and a cleanout device or manhole is located within 10' of the first floor building edge.</p>	
<p>Point of demarcation is where the service line exits from first floor building edge..</p> <p><i>Note: A new 2-way cleanout device should be installed within 10' of building during any stoppage or maintenance action. The upstream side of the cleanout will then become the new point of demarcation.</i></p>	<p>Dormitories with overhang and a cleanout device or manhole is not located within 10' of the first floor building edge.</p>	
<p>Point of demarcation is the downstream side of grease trap or oil/water separator.</p>	<p>Grease trap or Oil/water separator</p>	

The following paragraphs present anomalous (unique) points of demarcation that do not fit the above categories.

Building No.	Point of Demarcation Description
<p>Lines crossing shared Property Line between Air National Guard and U.S. Army Garrison</p>	<p>The utility system transfers from ownership by the Air National Guard to ownership by the U.S. Army at points where the system crosses the shared property line between these two entities.</p>
<p>Sebille Manor Housing Area</p>	<p>Ownership of the system extends to the point where the wastewater pipe leaving Sebille Manor connects to Chesterfield Townships collection system.</p>

## J7.9 Off-Installation Sites

The Seville Manor Housing area is an off-installation site located 2.6 miles north of the base. It is currently owned and managed by the U.S. Army. Seville Manor is included in the sale of the U.S. Army Garrison Selfridge wastewater collection system.

## J7.10 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  
*Wastewater Collection System U.S. Army Garrison Selfridge*

Location	Description
None Identified	

## J7.11 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 U.S. Army Garrison Selfridge 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.

**TABLE 8**  
 System Deficiencies  
*Wastewater Collection System U.S. Army Garrison Selfridge*

Project Location	Project Description
Lift Station 2500	There is not a back-up power supply in the event of an outage
Pump Station 501	The back-up transfer switch is inoperable
Pump Station 1402	There is not a back-up power supply in the event of an outage
Lift Station 510	Lift station 510 has exceeded its service life and is in need of replacement
Manholes from Area 1000 south to building 997	These manholes have exceeded their service life and are in need of replacement