

ATTACHMENT J02

JUL 2003

Fort Gillem Electrical Distribution System

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J02 Fort Gillem Electrical Distribution System

J02.1 Fort Gillem Overview

Fort Gillem is a sub-post of Fort McPherson. Fort McPherson is located in the city of Atlanta, four miles southwest of downtown. It covers 487 acres of well-landscaped grounds. Fort Gillem is a 1,500-acre site located in Forest Park, 10 miles southeast of Atlanta. Fort Gillem is home for the 1st U.S. Army and the U.S. Army Southeast Region Recruiting Command.

J02.2 Electrical Distribution System Description

J02.2.1 Electrical Distribution System Fixed Equipment Inventory

The Fort Gillem electric distribution system comprises all appurtenances physically connected to the distribution system from the point in which the distribution system enters the Installation, and/or Government ownership currently, starts to the point of demarcation defined by the real estate instruments. Generally, the point of demarcation will be the building footprint. The system may include, but is not limited to, substations, transformers, underground and overhead circuits, utility poles, switches, vaults, and lighting fixtures. The following description and inventory is included to provide the Offeror with a general understanding of the size and configuration of the distribution system. The inventory is assumed to be approximately 90 percent complete. The Offeror shall base the proposal on site inspections, information in the technical library, other pertinent information, and to a lesser degree the following description. Under no circumstances shall the successful Contractor be entitled to any rate adjustments based on the accuracy of the following description and inventory.

J02.2.1.1 Description

Fort Gillem currently purchases electrical power at 12.5 kV from Georgia Power at a single primary delivery point near the north boundary of the Installation.

Fort Gillem owns and operates an electrical distribution system consisting of:

- one 12.5 kV distribution substation;
- approximately 17.1 circuit miles of overhead primary distribution line; and
- approximately 1.0 circuit mile of underground primary distribution line.

The main substation, which supplies the entire compound, is a conventional, outdoor, air-insulated substation consisting of two incoming 115 kV transmission line bays, one 20 MVA 115 – 12.5 kV power transformer, and a 12.5 kV secondary structure. The secondary structure is configured with a main oil-filled circuit breaker, a main and transfer bus, voltage regulators, and four feeder oil-filled circuit breakers. Georgia Power owns the 115 kV switching and protective equipment, and the power transformer. Fort Gillem owns the 12.5 kV structure, buswork, voltage regulators, and oil-filled circuit breakers. This substation provides voltage regulation, control, and over-current protection for four 12.5 kV overhead feeders.

The majority of the distribution circuits are configured with loop tie switches to neighboring circuits. The distribution system is composed primarily of overhead, pole-line construction (which is narrow-profile, open wire construction) with pole-mounted transformer banks. There is also a small amount of underground primary construction (utilizing duct type construction practices and pad-mounted transformers). The major underground primary facilities are arranged in a looped configuration.

J02.2.1.2 Inventory

Table 1 provides a general listing of the major electrical system fixed assets for the Fort Gillem electrical distribution system included in the purchase. The system will be sold in an “as is, where is” condition without any warrant, representation, or obligation on the part of the Government to make any alterations, repairs, or improvements. All ancillary equipment attached to and necessary for operating the system, though not specifically mentioned here in, is considered part of the purchased utility.

PLEASE NOTE: Fort Gillem will require all future renewals / replacements / upgrades of overhead lines, pole mounted transformers and all overhead facilities to be replaced with underground line, pad mounted transformers, and underground facilities. (See Paragraphs C.3.1 and C11.1)

TABLE 1
1. Fixed Inventory
Electrical Distribution System Fort Gillem

Item	Size	Approx. Quantity	Units	Average Yr. of Construction
<u>Substation Equipment</u>				
12.5 kV Structure / Buswork		6	Bays	1989
12.5 kV OCBs		5	Each	1989
Voltage Regulator		4	Sets	1989
Miscellaneous		---	---	1989
<u>Overhead Lines</u>				
12.5 kV / 3 Phase – Large		3.82	Miles	1980
12.5 kV / 3 Phase – Small		13.29	Miles	1983
7.5 kV / 1 Phase		0.45	Miles	2000
Group Operated Air Break Switches		13	Each	1983
Secondary		4.39	Miles	1982
Capacitor Banks – 150 KVAR		---	Each	
<u>Underground Lines</u>				
12.5 kV / 3 Phase – Large		0.48	Miles	2000
12.5 kV / 3 Phase – Small		0.50	Miles	1982
Secondary		0.24	Miles	1982
Pad-mount Sectionalizing Switches		5	Each	2000
Manholes		6	Each	2000
Duct Banks		0.63	Miles	2000
<u>Transformers – Pole Type</u>				
15 kVA & smaller		65	Each	1989
25 kVA		64	Each	1989
30 kVA		21	Each	1989
50 kVA		59	Each	1989
75 kVA		30	Each	1989
100 kVA		35	Each	1990
150 kVA		4	Each	1997

Item	Size	Approx. Quantity	Units	Average Yr. of Construction
167 kVA		9	Each	1991
175 kVA		3	Each	1989
Total		290		
<u>Transformers - Pad Mount</u>				
1 Phase – 25 kVA		3	Each	1989
1 Phase – 333 kVA		3	Each	2000
3 Phase – 150 kVA		7	Each	1992
3 Phase – 225 kVA		2	Each	1995
3 Phase – 300 kVA		6	Each	1995
3 Phase – 500 kVA		3	Each	2000
3 Phase – 750 kVA		3	Each	2000
3 Phase – 1500 kVA		2	Each	2000
3 Phase – 2500 kVA		2	Each	1999
Total		31		
<u>Street Lights</u>				
Fixtures		422	Each	1983
Poles		211	Each	1983
Lighting Circuits		7.75	Miles	1982
<u>Services</u>				
3 Phase		160	Each	1985
1 Phase		71	Each	1984

Acronyms:

kVA = Nominal Kilovolt Amperes

J02.2.2 Electrical Distribution System Non-Fixed Equipment and Specialized Tools Inventory

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 and tools prior to submitting a bid. Offerors shall make their own determination of the adequacy of all equipment and tools. The successful Contractor 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 2
2. Spare Parts
Electrical Distribution System Fort Gillem

Quantity	Item	Make/Model	Description	Remarks
Fort Gillem maintains an inventory of spare parts for the electrical distribution system. Contents of the inventory vary as items are used and/or purchased. Availability of this inventory to the new owner will be negotiated before or during the transition period.				

TABLE 3

3. Specialized Equipment and Vehicles
Electrical Distribution System Fort Gillem

Description	Quantity	Location	Maker
No specialized equipment or vehicles for maintenance of the Fort Gillem electrical distribution system will be transferred to the new owner of the system.			

J02.2.3 Electrical System Manuals, Drawings, and Records Inventory

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

TABLE 4

4. Manuals, Drawings, and Records
Electrical Distribution System Fort Gillem

Quantity	Item	Description	Remarks
Fort Gillem maintains a limited collection of technical manuals, drawings, and records on the installed components of the electrical distribution system. This information will be transferred to the new owner during the transition period. System maps will be available in the technical library.			

J02.3 Current Service Arrangement

Fort Gillem currently purchases electrical power at 12.5 kV from Georgia Power at a single primary delivery point near the north boundary of the Installation.

Annual Power Usage Fort Gillem		
FY	Total (kWh)	Peak Demand (kW)
2000	32,446,064	7,152
2001	30,700,393	6,557
Avg	31,573,229	6,855

As required by this contract, the Contractor shall demonstrate the ability to meet and shall establish any and all requirements to provide electric distribution service to Fort Gillem.

J02.4 Secondary Metering

The Installation may require secondary meters for internal billings of their reimbursable customers, utility usage management, and energy conservation monitoring. The Contractor shall assume full ownership and responsibility for existing and future secondary meters IAW Clause C.3.

J02.4.1 Existing Secondary Meters

Table 5 provides a listing of the existing (at the time of contract award) secondary meters that will be transferred to the Contractor. The Contractor shall provide meter readings once a month for all secondary meters IAW H.5 and J01.5 below.

TABLE 5

5. Existing Secondary Electric Meters
Electrical Distribution System Fort Gillem

Building No.	Meter Type	Meter No.	Location

J02.4.2 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 Clause C.17, Transition Plan. After installation, the Contractor shall maintain and read these meters IAW Clauses C.3, H.5, and J01.5 below.

TABLE 6

6. New Secondary Meters
Electrical Distribution System Fort Gillem

Meter Location	Meter Description

J02.5 Monthly 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 prepared in the format proposed by the Contractor and accepted by the Contracting Officer. Outage reports shall include the following information for Scheduled and Unscheduled outages:

Scheduled: Requestor, date, time, duration, facilities affected, feedback provided during outage, outage notification form number, and digging clearance number.

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

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

Meter Reading Report: 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.)

J02.6 Energy Savings Projects

There are currently no existing energy saving projects for the exterior electrical distribution system at Fort Gillem.

J02.7 Service Area

IAW Clause C.4, Service Area, the service area is defined as all areas within the Fort Gillem boundaries.

J02.8 Off-Installation Sites

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

J02.9 Specific Transition Requirements

IAW Clause C.17, Transition Plan, **Table 7** lists service connections and disconnections required upon transfer, and **Table 8** lists the improvement projects required upon transfer of the Fort Gillem electrical distribution system.

TABLE 7
7. Service Connections and Disconnections
Electrical Distribution System Fort Gillem

Location	Description
Required service connections and disconnections will be provided to the contractor, as the requirements become known.	

TABLE 8
8. System Improvement Projects
Electrical Distribution System Fort Gillem

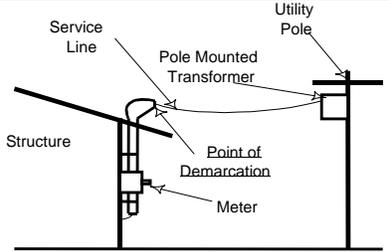
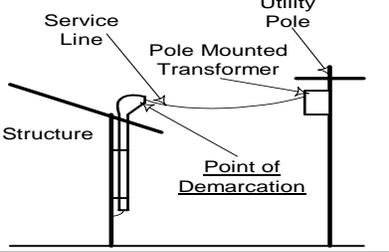
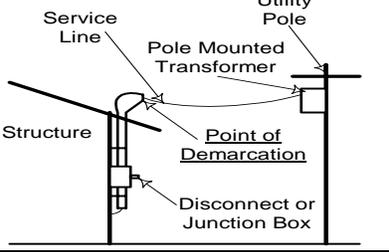
Project Location	Project Description
None identified as of the beginning of FY01.	

J02.10 Electric Distribution System Points of Demarcation

The point of demarcation is defined as the point on the distribution system where ownership changes from the Grantee to the building owner. This point of demarcation will typically be at the point the utility enters a building structure or the load side of a transformer within a building structure. The table below identifies the type and general location of the point of demarcation with respect to the building for each scenario. During the operation and maintenance transition period, concurrence on specific demarcation points will be documented during the joint inventory of facilities.

TABLE 9
9. Points of Demarcation
Electrical Distribution System Fort Gillem

Point of Demarcation	Applicable Scenario	Sketch
Point of demarcation is the first point of disconnect at or in the facility.	Pad Mounted Transformer located outside of structure with underground service to the structure and no meter exists.	
Down current side of the meter	Residential service, and three phase self contained meter installations. Electric Meter exists within five feet of the exterior of the building on an underground secondary line.	
Point of demarcation is the first point of disconnect at or in the facility.	Three Phase CT metered service.	
Secondary terminal of the transformer inside of the structure	Transformer located inside of structure and an isolation device is in place with or without a meter Note: Utility Owner must be granted 24-hour access to transformer room.	
Secondary terminal of the transformer inside of the structure	Transformer located inside of structure with no isolation device in place. Note: Utility Owner must be granted 24-hour access to transformer room.	

Point of Demarcation	Applicable Scenario	Sketch
Point of demarcation is the point where the overhead conductor is connected to the weather head.	Electric meter is connected to the exterior of the building on an overhead secondary line.	
Point of demarcation is the point where the overhead conductor is connected to the weather head.	Pole Mounted Transformer located outside of structure with secondary attached to outside of structure with no meter.	
Point of demarcation is the point where the overhead conductor is connected to the weather head.	Service may be overhead or underground. A disconnect switch or junction box is mounted to the exterior of the structure with no meter.	

J02.11 Unique Points of Demarcation

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

TABLE 10

10. Unique Points of Demarcation
Electrical Distribution System Fort Gillem

Building No.	Point of Demarcation Description
None	

J02.12 Plants and Substations

TABLE 11

11. Plants and Substations
Electrical Distribution System Fort Gillem

Description	Facility No.	State Coordinates	Other Information
Substation – Six bay 12.5 kV structure / buswork, five 12.5 kV OCB's, 12 voltage regulators			