

## **CITY SUPPLIED EQUIPMENT**

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### **1. GENERAL**

- .1 The City has entered into an equipment supply contract based on the Bid Opportunity described in Part D. Installation of City Supplied Equipment is the responsibility of this Contractor.
- .2 The City Supplied Equipment will be delivered to and stored at the Site. The Contractor shall offload and accept equipment delivery.
- .3 The Contractor shall be responsible for all equipment at the City Warehouse.
- .4 The Contractor shall ensure that he is fully informed of precautions to be taken in the unloading of equipment and its subsequent storage including any required maintenance, and shall provide care and custody of the City Supplied equipment during the performance of the Work.
- .5 All forms referred to in this Section (Form 100, 101, 102 and 103) will be initiated by the Supply Contractor to be completed by the Contractor as detailed below.
- .6 Prior to accepting any of the equipment to be supplied by a Supply Contractor, the Contractor shall inspect the equipment. A representative from each of the following groups will be in attendance at the time of pick-up and delivery: the Supply Contractor, Contractor, and Contract Administrator. A duly executed *Form 100 – Certificate of Equipment Delivery* shall be completed. Any minor damage identified during the inspection shall be repaired as per the Supply Contractor's instructions at the Supply Contractor's cost. Any severe damage will be grounds for rejection of the equipment. The severely damaged equipment will be replaced at the Supply Contractor's cost. The Contractor shall accept the equipment and assume risk and responsibility for the equipment and fill out *Form 100 - Certificate of Equipment Delivery*.
- .7 If the Contractor's inspection reveals any deficiencies in the equipment, then these shall be noted in writing prior to the Contractor accepting the equipment. Only deficiencies noted and documented in the foregoing manner will be deemed not the responsibility of the Contractor.
- .8 The Contractor shall be responsible for the installation of City Supplied Equipment in addition to all equipment supplied under this Contract. City Supplied Equipment shall be installed in accordance with the Supply Contractor's installation instructions.
- .9 For the purposes of Form 100, the Supply Contractor will be the Manufacturer.

### **2. SUPERVISION OF INSTALLATION, START-UP, COMMISSIONING, AND FIELD TESTING**

- .1 For City Supplied Equipment, each Supply Contractor will provide the services of a qualified representative to assist in the installation, start-up, and performance testing of all of

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the equipment. The Contractor shall refer to Sections 01650 – Equipment Installation. The services to be performed by the Supply Contractors are as follows:

- .1 Prior to the Contractor beginning the installation, the Supply Contractor will provide to the Contractor instructions and advice regarding the detailed requirements for the equipment installation. The Supply Contractor will be required to provide a *Certificate of Readiness to Install, Form 101*. The Contractor shall be required to sign Form 101 to acknowledge that he has received adequate instruction. During installation, if the Contractor has additional questions regarding installation requirements or procedures, he shall contact the Supply Contractor, with the assistance of the Contract Administrator, as required. No additional compensation to the Contractor based on claims of inadequate training from a Supply Contractor will be entertained should he install equipment improperly.
  - .2 Following the completion of the installation, the Supply Contractor will inspect the installation of the equipment to verify that it has been installed in accordance with the Supply Contractor's requirements. The Supply Contractor will be required to provide a *Certificate of Satisfactory Installation, Form 102*. If any deficiencies in the installation exist at the time of inspection, these shall be noted on Form 102 by the Supply Contractor. The Contractor shall be responsible for the prompt correction of these deficiencies prior to performance testing of the equipment.
  - .3 The Contractor shall assist the Supply Contractor in Performance Verification of the equipment.
  - .4 The Supply Contractor for City Supplied Equipment has been contracted to provide site visits for inspection of installation and to take primary responsibility for operating City Supplied Equipment as required for Performance Verification.
- .2 The Contract Administrator will be responsible for the Project Master Schedule and will coordinate the services to be provided. The Contract Administrator will provide the Contractor at least twenty one (21) days advance notice of when the Supply Contractor's services will be provided.

### **3. OPERATION AND PERFORMANCE VERIFICATION**

- .1 Equipment shall be subjected to a demonstration, running test, and performance tests after the installation has been verified and any identified deficiencies have been remedied.
- .2 Inform the Contract Administrator at least twenty one (21) days in advance of conducting the tests and arrange for the attendance of the Supply Contractor. The tests may be concurrent with the inspection of satisfactory installation if mutually agreed by the Contractor and the Contract Administrator.
- .3 The Supply Contractor will conduct all necessary checks to equipment and if necessary, advise the Contractor of any further checking, flushing, cleaning, or other work needed prior to confirming the equipment is ready to run.

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- .4 The Contractor shall then operate the equipment for at least one (1) hour to demonstrate to himself the operation of the equipment and any required ancillary services. Any remedial measures required to ensure satisfactory operation shall be promptly undertaken.
- .5 Demonstration:
  - .1 The Contractor shall notify the Contract Administrator of his readiness to have the Supply Contractor demonstrate the operation of the equipment. The Contract Administrator shall attend, as expeditiously as possible.
  - .2 Switchgear:
    - .1 The Supply Contractor will demonstrate that the equipment is properly installed. Alignment, piping connections, electrical connections, etc. will be checked and if appropriate, code certifications provided. In accordance with the terms of the Supply Contract, the Supply Contractor will complete a checklist in the presence of the Contract Administrator and the Contractor in order to demonstrate that the City Supplied Equipment is properly installed.
  - .3 Generators:
    - .1 The Supply Contractor will demonstrate that the standby generators are properly installed. Alignment, piping connections, electrical connections, etc. will be checked and if appropriate, code certifications provided. In accordance with the terms of the Supply Contract, the Supply Contractor will complete a checklist in the presence of the Contract Administrator and the Contractor in order to demonstrate that the City Supplied Equipment is properly installed.
    - .2 The Supply Contractor will run each generator and associated equipment for one (1) hour fully loaded. The Supply Contractor will provide load banks if sufficient electrical loads are not available On Site at the time of testing. The Contractor shall be responsible for the connection of the load banks. In accordance with the terms of the Supply Contract, the Supply Contractor will verify the controls and measure operating parameters.
    - .3 On satisfactory completion of the one (1) hour demonstration, the equipment shall be stopped.
- .6 Running Test: The Supply Contractor will perform running tests in accordance with the requirements of this Contract.
  - .1 Switchgear:
    - .1 The Contractor shall energize the 5kV Switchgear as required to support the running tests. Upon successful completion of the running tests, the equipment will be operated by the Contract Administrator to supply power to the WTP and associated works.

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.2 Generators:

- .1 The Contractor shall operate all ancillary equipment supplied and installed under this Contract, as required to support the running tests.
- .2 The Supply Contractor will operate the generators, fully loaded, for an eight (8) hour running test. The test will be conducted during a period of high ambient temperature. It is anticipated that the running test will be conducted in summer 2007 when ambient temperature is relatively high. The Contract Administrator shall schedule the running test and provide three (3) days notice to the Contractor based on weather condition forecasts to ensure the ambient temperature is near its peak value. The purpose of this test is to test the generators under extreme temperature condition. The building HVAC system is required to be fully functional at the time of testing.
- .3 All three generators will be tested concurrently. The Supply Contractor will provide load banks if sufficient electrical loads are not available On-Site at the time of testing. The Contractor is responsible for the connection of the load banks.

.7 Performance Tests:

- .1 The Supply Contractor is solely responsible for conducting performance tests.
- .8 All water, chemicals, temporary power (except portable generators), heating, or any other ancillary services required to complete the initial demonstration, running test and performance tests are the responsibility of the City.
- .9 Should the initial demonstration, running test or performance tests reveal any defects, then those defects shall be promptly rectified and the demonstration, running tests, and / or performance tests shall be repeated to the satisfaction of the Contract Administrator. Additional costs incurred by the Contractor, the Contract Administrator, or the City, due to repeat demonstration, running tests, and/or performance tests shall be the responsibility of the Contractor or Supply Contractor as determined by the Contract Administrator.
- .10 On successful completion of the demonstration, running test, and performance tests, *Form 103 – Certificate of Equipment Satisfactory Performance* attached to Section 01650 will be signed by the Supply Contractor, the Contractor, and the Contract Administrator.
- .11 The Contractor shall affix to the tested equipment a 100 mm by 200 mm card reading "Operable Condition - Do Not Operate without Contractor's Permission." stenciled on in large black letters.

**END OF SECTION**