# SECTION 01750

# STARTING AND ADJUSTING PROCEDURES

## PART 1 - GENERAL

### 1.1 RELATED DOCUMENTS

A. Construction Drawings, Technical Specifications, Addenda, and general provisions of the Contract, including Contract General Conditions and Supplementary General Conditions and other Division 1 Specification Sections, apply to this Section.

### 1.2 SECTION INCLUDES

A. Starting systems.

B. Demonstration and instructions.

C. Testing, adjusting, and balancing.

### 1.3 RELATED SECTIONS

A. Section 01450 - Quality Control: Manufacturers field reports.

B. Section 01783 - Operation and Maintenance Data: System operation and maintenance data and extra materials.

### 1.4 STARTING SYSTEMS

A. Contractor shall coordinate schedule for start-up of various equipment and systems.

B. Contractor shall notify University's Representative, Architect and Project Inspector in writing at least seven calendar days prior to start-up of each item.

C. Contractor shall verify that each piece of equipment or system has been checked for proper lubrication, drive rotation, belt tension, control sequence, and for conditions which may cause damage.

D. Contractor shall verify tests, meter readings, and specified electrical characteristics agree with those required by the equipment or system manufacturer.

E. Contractor shall verify that wiring and support components for equipment are complete and tested.

F. Contractor shall execute start-up under supervision of applicable manufacturer's representative and/or Contractor’s personnel in accordance with manufacturer’s instructions.

G. When specified in individual specification Sections, Contractor shall require manufacturer to provide authorized representative to be present at site to inspect, check, and approve equipment or system installation prior to start-up, and to supervise placing equipment or system in operation.

H. Contractor shall submit a written report in accordance with Section 01330 - Submittals Procedures that equipment or system has been properly installed and is functioning correctly.

### 1.5 DEMONSTRATION AND INSTRUCTIONS

A. Contractor shall demonstrate operation and maintenance of Products to University's personnel at least two

weeks prior to date of Contract Completion review.

B. Contractor shall demonstrate Project equipment and instruct in a classroom environment located at the University. The instruction shall be done by a qualified manufacturers' representative who is knowledgeable about the Project.

C. For equipment or systems requiring seasonal operation, Contractor shall perform demonstration for other season within six months of completion or, if possible, artificially create a load in the building.

D. Contractor shall utilize operation and maintenance manuals as basis for instruction. Contractor shall review contents of manual with University's personnel in detail to explain all aspects of operation and maintenance.

E. Contractor shall demonstrate start-up, operation, control, adjustment, trouble-shooting, servicing, maintenance, and shutdown of each item of equipment at scheduled agreed time and at equipment/designated location.

F. Contractor shall prepare and insert additional data in operations and maintenance manuals when need for additional data becomes apparent during instruction.

G. The amount of time required for instruction on each item of equipment and system is that specified in individual sections. If no time is specified in individual sections, Contractor shall include in his/her bid sum a reasonable sum to perform instruction to the satisfaction of the University.

**1.6 TESTING, ADJUSTING, AND BALANCING**

A. Testing Agency: Contractor shall appoint, employ, and pay for services of an independent firm to perform testing, adjusting and balancing.

B. Reports will be submitted by the independent firm to University's Representative, Architect and Project Inspector indicating observations and results of tests and indicating compliance or non-compliance with the requirements of the Contract Documents.

C. University reserves the right to hire its own independent testing and balancing company to check the work and the report submitted by the Contractor’s testing and balancing firm.

**PART 2 - PRODUCTS**

Not Applicable to this Section.

**PART 3 - EXECUTION**

Not Applicable to this Section.

**END OF SECTION**