# SECTION 23 05 90 - TESTING, ADJUSTING AND BALANCING

## pART 1 GENERAL

1.1 DESCRIPTION

A. Work Included: After completion of the work of installation, test and regulate all components of the new heating, air conditioning and ventilating systems to verify air volumes and heating-cooling flow rates indicated on the Drawings.

B. Related Work: The requirements of Section 23 05 00, Common HVAC Materials and Methods, also apply to this section.

C. Balancing Organization:

1. Balancing of the Heating and Air Conditioning Systems: Performed by a firm providing this service established in the State of Oregon.

2. Provide all necessary personnel, equipment, and services.

D. TAB will be responsible to carry out the commissioning requirements specified in Section 23 08 00, 01 91 00 and other Sections referenced in 01 91 00.

1.2 SUBMITTALS

A. Balancing Data: Include the following minimum information in the Operation and Maintenance Data, as specified in Section23 05 00.

1. Names or initials of personnel performing the balancing.

2. Dates balancing was performed.

3. List of balancing instruments utilized.

4. Weather conditions at the time of the test.

5. Mechanical system descriptions.

6. All motor rated voltages, amps, starter and overload protective device sizes.

7. All motor operating data.

8. Fan cfm, rpm, operating static pressures, driven and motor sheave data, and all drive changes necessitated to obtain design capacities. List actual minimum outside air volumes measured for each system.

9. All supply, return and exhaust air outlet cfm readings.

1.3 DETAILED REQUIREMENTS

A. Adjusting and Balancing:

1. Prior to beginning the balancing work, obtain from the Architect the latest version of the mechanical drawings including addenda, revisions, change orders, etc.

2. Adjust and balance all portions of the mechanical systems to produce indicated results within limits of minus 5 or plus 10 percent.

3. Adjust diffuser throws as shown on the drawings (shown as directional arrows).

END OF SECTION 23 05 90