

WASHINGTON STATE UNIVERSITY

Aggregated Intermediate Preservation - Abelson Hall HVAC Restoration (Academic Building Air Quality and Safety)

2009 – 11 Request:	\$2,510,000	Project Type:	Preservation (Rennovation)
Institution Priority:	#8	Project Phase:	Design/Constr
		Gross Square Ft:	101,546

This preservation project will renovate the existing deteriorating heating, ventilating, and air conditioning systems (HVAC) in Abelson Hall which was originally built in 1935.

The Abelson Hall project is combined with several similar renewal projects to improve air quality in older academic buildings. The building provides space for the Schools of Biological Sciences and Molecular Biosciences, the Conner Museum, Electron Microscopy Center and the Science Learning Instruction Center and one large general university classroom.

Abelson Hall was built in 1935 and was remodeled in 1984 and 1988. A portion of the building HVAC system was replaced. The building programs for classrooms and offices have not changed much since the remodels, but the programs for the labs have expanded significantly.



Many pieces of the antiquated HVAC equipment have reached the end of their useful life and are in poor condition. The system relies on pneumatic air control technology which does not provide a feedback mechanism to allow remote monitoring and control by the operations staff, as is available with current electronic control system technologies. The system's age and condition result in poor energy performance, improper air and temperature delivery, and increased maintenance. The building has had additional lab ventilation added but the air flow to the building spaces is out of balance, creating areas that have too little or too much air and major temperature fluctuations.

Establishing proper air flow in lab spaces is especially critical in order to maintain the correct pressure and temperature relationships between rooms and to minimize air quality hazards. The present unbalanced airflows result in unstable pressure relationships which can cause lab ventilation safety hazards, as well as diminished occupant comfort. The four major fan systems will be replaced with fan walls. New lab room pressurization controls and direct digital controls for the other rooms will be installed. In addition, the entire HVAC system will be balanced.

This project will help reduce the deferred maintenance backlog by renovating a major building system in Abelson Hall. Postponing the project will result in the continual deterioration of the systems that could ultimately result in the shut down of classrooms, offices, labs and research in this building.