

FOREST ECOSYSTEM RESEARCH LABORATORY



BUILDING:	Forest Ecosystem Research Laboratory
OWNER:	Oregon State University Corvallis, OR, USA
CLIENT	SRG Partnership, Inc. Portland, OR, USA
AREA:	500 sf
COMPLETION:	1999

This project is a new laboratory building at the Oregon State University Campus in Corvallis, Oregon. The building is intended to be used for research in Forest Ecology. Specific fields to be developed include Forest Ecology as related to forest production and biological control of forest pests. The facility incorporates BSL-3 containment laboratories for work with nonindigenous arthropods herbivores, parasitoids and predators per USDA APHIS requirements. The project includes 500 sf of greenhouse space divided in 3 compartments. Two compartments are BSL-2 and one greenhouse compartment is BSL-3.

Agritechnove is responsible for the design of the greenhouse mechanical systems as well as for consulting on the functionality of the greenhouse structure and glazing and reviewing shop drawings and answering RFI's from the Contractor.

SPECIAL FEATURES - The rooftop greenhouse is divided into three independent climate zones. Two zones are to be used for standard production. The third zone is to be part of the BSL-3 containment suite. This zone is configured to operate in a non-containment mode if required. The contained zone is thus air-conditioned and heated through its own air-handling system, independent from the contained laboratory suite. The glazing system has been coordinated to meet the functional greenhouse requirements while being integrated into the building esthetic concept.



TECHNICAL SYSTEMS - Custom design structure and architectural glazing, integrated into the main building. Exterior automated shade curtain system. Supplemental high pressure sodium lighting. Standard production compartments have hot water unit heaters for heating and exhaust fans for cooling with rooftop motorized airinlets. Air inlets are screened. Evaporative cooling is provided by high pressure fog in the standard production zones. High pressure fog is also available in the contained greenhouse for humidification and can be used for evaporative cooling when the compartment is not operating in the contained mode. Custom sized benching is provided throughout. A dedicated greenhouse computer control system is used to control the greenhouse climate including the use of the exterior shade curtains. Piped services to each compartment include hot, cold and tempered water.

PROJECT PHASING - The project has been carried out in phases with several bid packages for each phase with Owner Furnished and Owner Installed packages to be coordinated by the contractor.