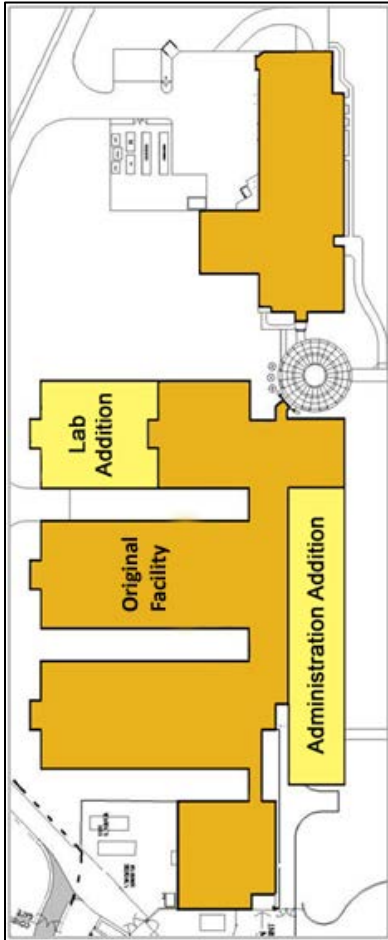


ADVANCED CHEMISTRY LAB & LAB EXPANSION

- Aberdeen Proving Grounds Edgewood Area



PROJECT DESCRIPTION...

The Advanced Chemistry Lab and its expansion is a combined \$71 million, 158,000-SF facility that houses a state-of-the-art, super-toxic research chemistry laboratory for chemical warfare defense. The expansion consisted of the north laboratory wing and the addition of an administration building on the east side of the existing ACL building.

SCOPE OF WORK...

As part of two Design-Build teams, The Robert B. Balter Company (Balter) provided comprehensive Geotechnical Engineering design services for both the original and expansion phases that included borings, piezometers and sophisticated geotechnical laboratory testing to supplement a preliminary US Army Corps of Engineers study. The project was managed by the US Army Corps of Engineers and all geotechnical design procedures were performed in accordance with US Army Corps of Engineers Design Manuals and Procedures.

Special issues included a high-security environment and the prior detection of Unexploded Ordinance (UXO) as well as subsurface soil and groundwater contamination. The contamination warranted chemical exposure blood testing for all field personnel. All work was performed by Balter's OSHA HAZWOPER trained personnel with required personnel protective equipment (PPE) and on-site decontamination procedures.

ADDED VALUE...

Due to its design requirements, the facility generated unusually heavy structural loads for its height. It also incorporated extensive settlement-sensitive laboratory equipment. These aspects presented geotechnical design challenges since the site includes weak moisture-sensitive surface clays and deep soft soils.

Using sophisticated interpretation of supplemental field and laboratory test data and advanced consolidation settlement analyses, **Balter's value-engineered approach saved \$750,000 in foundation costs.** In addition, during construction, geotechnical consulting was performed developing cost-effective solutions to many difficult soft and wet soils issues.

Additionally, **Balter assisted with the LEED certification** by facilitating constructive re-use of materials from the demolition of the adjacent Weide Airfield runway as structural fill materials.



The ACL is the only laboratory of its kind designed for working with the world's most super-toxic compounds. It allows Edgewood Chemical Biological Center's world-leading scientist to conduct groundbreaking chemical research that will benefit our nation's war fighters on the field today and tomorrow.



THE ROBERT B. BALTER COMPANY.

*Geotechnical Engineering, Subsurface Exploration
Construction Inspection and Materials Testing*