

# Flexible Solutions for Complex Environments

CyberSheath helped Barge Design Solutions achieve CMMC Level 2 certification with a hybrid approach that protected both digital and physical CUI.



## Client

Barge Design Solutions is a full-service, employee-owned engineering and architecture company founded in 1955. Headquartered in Nashville, Tennessee, Barge provides comprehensive design services across multiple sectors, including healthcare, education, transportation and government facilities. With expertise spanning architecture, engineering, environmental services and planning, Barge serves individual clients, public agencies and municipal authorities on complex infrastructure projects.

## Situation

The Department of Defense/War (DOD/DOW) has issued a final rule requiring CMMC compliance in contracts starting Nov. 10, 2025, and Barge Design Solutions needed to certify its secure handling procedures for Controlled Unclassified Information (CUI) across its operations, a key to compliance. The company's work involves resource-intensive design software like Autodesk AutoCAD and Revit for government projects requiring a solution that could maintain both security and operational efficiency.

Barge's challenge was multifaceted: It needed a secure environment capable of handling demanding design applications while also addressing legacy physical CUI that could not be migrated to digital formats. Historical project files and documentation from decades of government work presented unique compliance obstacles that traditional cloud-only solutions couldn't address.

The company operates from multiple locations, including Nashville headquarters and a Dayton, Ohio, facility, each with different operational requirements and varying amounts of legacy CUI requiring protection.

## Process

Barge engaged CyberSheath to develop a comprehensive CMMC compliance strategy. CyberSheath's approach began with a detailed use case analysis to understand exactly how CUI flowed through Barge's operations and where it resided across its organization.

The collaborative process included:

- **Hybrid solution design:** Creating an Azure Virtual Desktop (AVD) environment in Microsoft's Government Community Cloud (GCC High) while also developing physical protection strategies for legacy CUI that couldn't be digitized.
- **Resource-optimized virtual environment:** Configuring high-performance virtual desktops capable of running demanding design software, ensuring no compromise in design capabilities.
- **Scope management and optimization:** Identifying opportunities to minimize the compliance scope by securing legacy CUI in controlled physical spaces rather than expanding digital requirements across entire facilities.



- **Technical staging and documentation development:**

Preparing all technical controls, system security plans and compliance documentation while working through CyberSheath's proven AIM™ (Assess, Implement, Manage) methodology.

## Solution

CyberSheath delivered a tailored hybrid approach that addressed Barge's unique operational requirements. The solution centered on an AVD enclave hosted in GCC High, one of CyberSheath's go-to offerings that helps many contractors become compliant.

For legacy physical CUI at the Dayton facility, CyberSheath worked with Barge to establish a secure CUI room with controlled access and a locked cage within that space. This approach allowed Barge to maintain necessary historical project files without expanding compliance requirements across its entire building infrastructure.

The virtual environment served as the primary secure workspace, with all new CUI contained within the digital enclave. Physical protections were implemented only where absolutely necessary, keeping the compliance scope minimal and manageable.

CyberSheath's flexible methodology meant meeting Barge where it was operationally, rather than forcing the company to conform to a predetermined solution framework. This approach preserved Barge's existing workflows while ensuring full compliance with CMMC requirements.

## Results

Barge achieved perfect CMMC Level 2 certification with a score of 110 out of 110 points through an assessment conducted by Cybersec Investments. The assessment concluded ahead of expectations, underscoring improved efficiency and assessment readiness.

The streamlined assessment process demonstrated thorough preparation and effective collaboration between the CyberSheath and Barge teams. Throughout the entire compliance process, Barge maintained full operational continuity with no disruption to ongoing design work. The cost-effective solution minimized the physical compliance scope while maximizing security effectiveness, creating a scalable framework that can accommodate future growth and additional government contracts.



## Insights

The Barge engagement demonstrates several key principles for organizations with complex CUI environments:



### **Flexible solutions drive better outcomes.**

Companies with unique operational requirements benefit from partners who adapt their approach rather than forcing clients into predetermined frameworks.



### **Hybrid environments can be more effective than all-digital solutions.**

Sometimes, securing legacy physical CUI in controlled spaces is more practical and cost-effective than attempting full digitization.



### **Thorough preparation accelerates compliance.**

Understanding all use cases and properly staging technical controls enables faster, smoother assessments.



**Partnership approach reduces risk.** Working collaboratively with experienced cybersecurity providers helps identify optimal solutions that balance security, compliance and operational efficiency.



**Scope management is critical.** Strategic decisions about what to include in the compliance scope can significantly impact both cost and complexity while maintaining security effectiveness.

**CyberSheath** is a longtime leader in the DOD/DOW cybersecurity space and an expert in DFARS, NIST and CMMC regulations. CyberSheath solves the whole problem with a flexible approach that meets each customer exactly where they are and guides them to full compliance at the lowest possible cost.