



ICD 705 RF SHIELDING REQUIREMENTS: 2025–2027 COMPLIANCE

What Is RF Shielding in a SCIF?

RF (radio frequency) shielding prevents unintentional electronic emissions from escaping secure areas or being intercepted. It also blocks external signals from penetrating the space. Under the new ICD 705 guidelines, SCIFs must achieve ≥ 40 dB attenuation across the 10 kHz to 10 GHz frequency range.

RF SHIELDING CONSTRUCTION METHODS AND MATERIALS

RF FOIL (E.G., COPPER OR ALUMINUM)

- Installed behind drywall, overlapping seams, and taped with RF-conductive tape
- Acts as a Faraday cage to block EM emissions
- Seams must be bonded and sealed to maintain continuity

RF CAULK / CONDUCTIVE SEALANTS

- Applied at wall-floor/ceiling junctions, around penetrations, and at foil edges
- Ensures airtight and EM-tight seals

RF FILM (FOR GLASS/WINDOWS)

- Transparent RF shielding film applied to secure windows
- Must be grounded and often installed with conductive perimeter frames

26-GAUGE CONTINUOUS METAL SHEATHING

- Sometimes used as an alternative or supplement to foil
- Commonly installed on walls, ceilings, and floors in secure zones
- Grounded and bonded to ensure effectiveness

RF/STC-RATED DOORS

- Doors must be dual-rated for RF and Sound Transmission Class (STC)
- Equipped with compression gaskets, RF filters, and knife-edge seals
- Must be tested for leakage at joints, hinges, and handles

DIELECTRIC BREAKS

- Used at HVAC, conduit, and pipe penetrations
- Prevents RF from traveling through conductive materials into the SCIF
- Often installed using waveguides beyond cutoff or filtered penetrations

GROUNDING AND BONDING

- All conductive materials must be electrically continuous and tied into a common grounding system
- Grounding reduces impedance mismatch and RF leakage
- Must follow NSA 94-106 and MIL-STD-188-125 guidelines where applicable

TESTING AND ACCREDITATION FOR SCIFS

Before a SCIF can be certified for use, third-party testing is mandatory.

RF ATTENUATION TESTING (40 DB TARGET)

- Confirm shielding effectiveness across frequency bands
- Conducted by certified firms using calibrated equipment

VISUAL QC INSPECTIONS

- Ensure proper seam overlaps, grounding points, and RF caulking
- Review contractor workmanship and compliance with shop drawings

TEMPEST EVALUATION (IF APPLICABLE)

- Conducted by a certified TEMPEST authority
- Requires careful review of equipment placement, signal paths, and emission sources

ACCREDITATION PACKAGE (SAP/SAR)

- Includes shielding reports, as-built drawings, RF test results, and grounding plans
- Submitted to Cognizant Security Authority (CSA) for final approval

PRACTICAL CONSIDERATIONS FOR CONTRACTORS AND OWNERS

- Cost + Schedule Impact: RF shielding adds complexity. Material lead times, QA/QC testing, and remediation (if shielding fails) must be built into the schedule.
- Design Coordination: MEP, IT, security, and envelope trades must be coordinated early to ensure penetrations and shielding strategies align.
- Contractor Experience: Only use trade partners who are experienced in SCIF/RF work, with documented success in prior ICD 705 builds.

CONCLUSION: PROACTIVE PLANNING IS THE KEY TO ICD 705 SUCCESS

The upcoming ICD 705 changes are more than regulatory updates—they reflect a deeper awareness of the threats facing secure environments. For contractors and federal partners, meeting these RF shielding requirements isn't optional. It's the foundation of future-readiness.

By understanding the technical standards, investing in the right materials and partners, and aligning early on compliance timelines, facility owners can ensure accreditation is achieved without unnecessary delays or costs.



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Dustin Hoffman - Project Executive, DAVIS Construction

📞 240-290-3197

✉️ dhoffman@davisconstruction.com