SCIF Design and Construction Overview

**Information Brief**

**16 APR 2020**

**Task**
For Information

**Purpose**
Provide an informational brief to SAME on the basics of SCIF design and construction derived and condensed from USACE PDC SCIF design course

**End State**
Individuals understand the basics of SCIF design and construction
Agenda

- **** All information derived and condensed from USACE PDC SCIF design course*****
- History and purpose of SCIF design and construction
- Definitions and key documents
- Threats
- SCIF stakeholders
- OCONUS differences
- Physical construction
- TEMPEST
- Accrediation
SCIF design and construction

History

Ronald Reagan suspends construction of the new embassy in Moscow
UNCLASSIFIED

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Definitions and key documents

• SCI Types:
  - CONFIDENTIAL, SECRET, or TOP SECRET information
  - Derived from Intelligence Sources, Methods or Analytical Processes under control of DNI
  - SCI can only be handled in an Accredited SCIF

• SCIF classifications:
  - Conventional (minimum), Enhanced, or Vault
  - Protection depends on both Asset and Threat Analysis
  - Discussion Only, Open Storage, Closed Storage, Temporary
  - Mobile, Airborne, Shipboard (Permanent or Tactical)
  - Secure Working Area (no SCI Storage)
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Definitions and key documents

• Intelligence Community (IC):
  - Originally defined by National Security Act, 1947

• IC Directive, 26 May 2010:
  - Ensures protection of SCI
  - All IC SCIF shall comply
  - Physical and technical requirements
  - Provides for consistency, reciprocal use of space

  - Directive relies on standards and Tech Specs for Technical details
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Definitions and key documents

• IC Standard 705-1, 17 SEP 2010:
  - Sets forth Physical and Technical Security Standards for SCIF
  - Requires Risk Management during SCIF Planning, Design, Construction
  - Security in Depth Required for Overseas SCIF
  - Defines Open VS Closed storage of SCI
  - Requires Construction Security Plan (CSP)
  - Requires Protection of Design and Construction Documentation
  - Calls for Site Security Manager (SSM)
  - Defines Physical Security of SCIF boundary construction
  - Calls for Acoustical Shielding, Photonics Shielding, Physical Security, RF Shielding (if required)
  - Requires Access Control and IDS
  - Establishes roles and responsibilities of key personnel
  - Sets forth Accreditation and Reciprocal use standards for SCIF
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Definitions and key documents

• ICD Tech Specs, V 1.3 10 SEP 2015:
  - A ‘How to’ manual to satisfy the standards
  - Defines steps of Analytical Risk Management process
  - Further Refines SCIF construction requirements
  - Includes additional requirements for SCIF overseas
  - Gives technical requirements of IDS, Acoustics, TEMPEST, Building systems
  - Restricts use of Portable Electronic Devices in SCIF
  - Limits selection of Unclassified Telephone Equipment

• UFCs
  • UFC 4-010-01 & 02: DoD Minimum Antiterrorism Standards/Standoff Distances for Buildings
  • UFC 4-010-05: Sensitive Compartmented Information Facilities Planning, Design and Construction
Threats

• Threat Types:
  - Physical Compromise
  - Visual collection or theft of Documents
  - Eavesdropping, Audio Recording
  - Technical Collection and Compromise

- Threat Analysis is critical to an effective SCIF
SCIF Stakeholders

• Accrediting Official (AO)
  − Person designated by the Cognizant Security Authority (CSA) who is responsible for all aspects of SCIF management and operations to include security policy implementation and oversight.

• Site Security Manager (SSM)
  − Person designated by the AO who is responsible for all aspects of SCIF management and operations to include security policy implementation and oversight.

• Certified TEMPEST Technical Authority (CTTA)
  − US Government appointed employee who has met established certification requirements in regard to TEMPEST
SCIF Stakeholders continued

• Mission Users
  – Persons who will work, operate, handle SCI in the facility once the facility becomes operational

• Architect – Engineer
  – Design of SCIF shall be performed by US Companies utilizing US Citizens or US Persons
  – A-E’s with past experience in SCIF planning and design provides a big benefit to the Government

• Construction Contractor
  – Construction of SCIF shall be performed by US Companies utilizing US Citizens or US Persons
  – Construction teams with past experience in SCIF construction techniques also provides a benefit to the Government
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OCONUS differences during construction

• Personnel:
  - Cleared Employees – contractor employees granted a Personnel security clearance
  - Cleared commercial carrier – carrier authorized by law or regulation to transport SECRET material and has a SECRET facility clearance
  - Constant Surveillance Service – protective transportation service provided by a commercial carrier qualified by MTMC, requires constant surveillance

• Materials:
  - Usually procured from CONUS and shipped in secure containers
  - Tracked and stored in secure site on location
  - Escorted to and from sites
  - If materials procured locally (example concrete) will have inspector on site throughout manufacturing process
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Physical Construction

• Wall type:
  - Will go from true floor to true ceiling, may contain expanded metal mesh, usually has multiple layers of drywall
  - Utilities should be ran in a visible manner to allow for inspection

• Doors:
  - Only ONE Primary SCIF entrance door with vestibule for protection
  - GSA approved deadbolt
  - Combination Lock
  - Equipped with Automatic Closer
  - Alarmed
  - Tamper resistant Hinges and Hinge pins
  - Additional emergency exits to include egress deadbolt and no external hardware. Also includes ACS alarm and local audible alarm
Physical Construction

**Controlled Area**

- Bottom of Deck
- Fire-safe or non-shrink grout in all voids above track.

**Uncontrolled Area**

- Sealant all around Duct Openings or Pipe/Conduit Penetrations
- Wall Finish as scheduled with finish continuous above any false ceiling

**5/8” gypsum wallboard**

- Continuous track (Top & Bottom) w/ anchors at 32” o.c. maximum – Bed in continuous beads of acoustical sealant

**3 ½” sound attenuation material, fastened in such a way as to prevent it from sliding down and leaving void at the top.**

**5/8” gypsum wallboard – sound group 4 requires additional layer of 5/8” wallboard**

**Wall Base and Scheduled flooring**
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Physical Construction

Controlled Side

- Bottom of Deck
- Fire safe non-shrink grout, or acoustic sealant in all voids above track (note 2) - both sides of partition
- Acoustical ceiling

Uncontrolled Side

- Entire wall assembly shall be finished and painted from true floor to true ceiling
- 5/8” Gypsum Wall Board (GWB)
- 3 ½” (89mm) sound attenuation material, fastened to prevent sliding down and leaving void at the top

- Two layers of 5/8” Gypsum Wall Board (GWB) mounted on 3-5/8” 16 gauge metal framing or 2x4 studs at 16” o.c.
- 16 gauge continuous track (top & bottom) w/ anchors at 32” o.c. maximum – bed in continuous bead of acoustical sealant (note 2)

- Scheduled wall finish to be continuous above false ceiling and below raised floor

- Scheduled wall Base (both sides of partition)
- Continuous acoustic sealant in void (note 2) - both sides of partition

- Finished floor
- Structural floor
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Physical Construction
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Physical Construction

• Windows:
  - Highly Discouraged!!!
  - If unavoidable must not open
    - Protected by security alarms when they are within 18 feet of ground or from an accessible platform
    - Protected against forced entry
    - Photonic protection
    - Acoustic Protection
    - TEMPEST/RF shielding protection when directed by CTTA

• Electronic Security Systems:
  - IDS, CCTV, Access control system
  - Multiple IDS devices utilized in high risk areas
  - Layered or nested security
• What is it?:
  - Science of light generation, detection and manipulation; through emission, transmission, modulation, signal processing, switching and amplification.

• Examples of Photonic data that can be compromised:
  - Low light level cameras
  - Detection of vibration created by sound
  - Visible via infrared and ultraviolet detection
  - High quality photography and video
  - Image transference to surrounding materials

• Mitigation techniques:
  - Thin film or laminate that can be frosted, silvered or tinted
  - Smart glass
  - Shades, blinds, Louvers
  - Partition wall that blocks window
  - Interior wall that blocks windows
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Photonics
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Acoustics

• What is it?:
  - Sound and how to mitigate transference of sound

• Acoustical paths:
  - Airborne: sound that radiates from a source directly through the air
  - Structural: Sound that travels through Solid materials and building materials

• Acoustic design principles:
  - Increase mass, increase rigidity, increase layers, eliminate apertures, eliminate waveguides

• Mitigation techniques:
  - Wall construction, usually uses gypsum wall board but can also use plywood. Must have offset seams!!
  - Seal all holes with acoustical foam
  - Install baffles or utilize acoustical duct lining
  - Avoid straight lines in ducts
  - Windows must have multiple glass layers and air gaps
  - Install sound masking devices
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Acoustics
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Tempest

• What is it?:
  - Any electronic or radio frequency signal that can be exploited, compromised, or intercepted by technical devices or means.

• Most current and common definition:
  - EM technical security referring to the investigation, study and control of EM emanations from telecom, Datacom, computers, and electronic devices

• Mitigation techniques:
  - Wall construction, same as other types but includes RF shielding
  - Floor and ceiling must also include shielding
  - Shielding must overlap at all seams
  - Keep all penetrations to a minimum
  - Avoid galvanic corrosion
  - Seals and gaskets must be approved for RF
  - Include a dielectric break at all piping penetrations
  - HVAC systems can have a dielectric break, Honeycomb filter, or waveguide
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Tempest
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Red/Black Data communications

• What is it?:
  - Red = secret or above
  - Black = encrypted classified or non classified data

• Red/Black data communications principals:
  - Eliminate emanation of signals from communications cabling systems
  - Reduce electromagnetic interference
  - Provide physical protection

• Mitigation techniques:
  - Six design techniques: Physical separation, physical protection, shielding, filtering and isolation, bonding, grounding
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Accreditation

• Requirements:
  - Testing and certification
  - Documentation
  - Walkthroughs
  - Decommissioning plan
Closing

• History and purpose of SCIF design and construction
• Definitions and key documents
• Threats
• SCIF stakeholders
• OCONUS differences
• Physical construction
• TEMPEST
• Accreditation
• SCIF design and construction is costly, detailed and long in duration
Questions?