

LUNCH AND LEARN | 1 HOUR



Quiet Is Not Private

Speech Privacy and Sound Masking in Military Installations

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About the Numbers in This Course

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Course Description

Military installations handle information at every level of sensitivity, from routine personnel matters to classified operations. This course explains speech privacy as a relationship between speech and background sound, introduces the Absorb, Block, Cover framework and its ratings, and applies them to military facilities, including how ICD 705 treats acoustic protection and sound masking in SCIFs. Participants will learn where speech leaks in command, operations, legal, behavioral health and advocacy spaces, how design supports CUI and confidentiality programs, and where fixed and adaptive masking help or do not belong.



AUDIENCE

Architects, interior designers,
engineers, owners



LEVEL

Introductory to intermediate



FOCUS

Installations, SCIFs, command, legal
and support offices

Learning Objectives



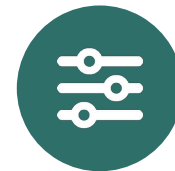
Explain why speech privacy depends on the relationship between speech level and background sound, and why quiet, modern spaces are often less private.



Apply the Absorb, Block, Cover framework and interpret the ratings behind it (NRC, AC, STC, SPC, Privacy Index) to protect occupant well-being.



Identify where classified, controlled and confidential conversations leak on military installations, and apply ICD 705 acoustic requirements and design strategies for unclassified sensitive spaces.



Evaluate where fixed and adaptive sound masking should and should not be used in military facilities, including accredited spaces, briefing rooms and life safety systems.

Our Hour Together

Part 1

How Speech Privacy Works

Signal and background, the ABCs, the ratings, and how masking is tuned

25 min

Part 2

Military, Space by Space

ICD 705 acoustics, confidential programs, where speech leaks, and the quick fix

25 min

Wrap Up

Takeaways and Questions

Design meeting questions and open Q&A

10 min

PART 1

How Speech Privacy Works

The physics, the tools, and the numbers behind them

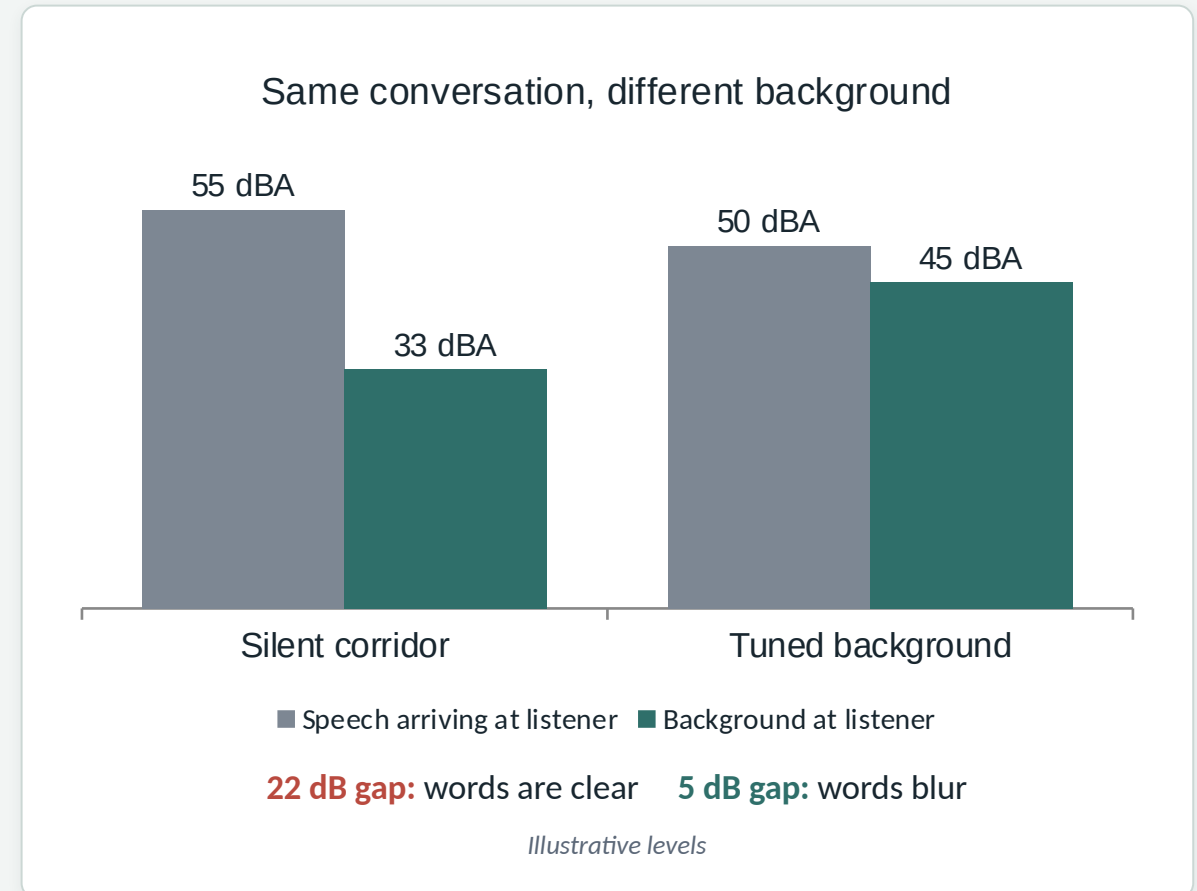
Quiet Is Not Private

Privacy comes down to one relationship at the listener's ear:

- How loud is the conversation when it arrives?
- How loud is the background where the listener stands?

When speech rises well above the background, the listener understands it. When the background is close to the speech, the words blur into sound the brain stops decoding.

Two ways to improve privacy: reduce the speech that arrives, or raise the background in a controlled, comfortable way.



What Changed in the Buildings We Design



Open plans

Fewer walls, more shared and flexible space.



More glass

Visual connection, with acoustic leaks at joints and doors.



Quieter buildings

Efficient HVAC and equipment removed the old background sound.



Higher expectations

Service members expect legal, health and advocacy talks to stay private.

Each is a good design decision. Together, they let speech travel further and stand out more.

Conversations Are Information

The question is not "Can someone hear something?"

It is "Can someone understand something they were never meant to hear?"



Classified

Operations and intelligence
in accredited spaces



CUI

Personnel, logistics, export-
controlled data



Health and advocacy

Behavioral health, SARC,
family matters



Legal

Legal assistance and
discipline

What the Research Shows

~50% vs 18%

of open-plan occupants dissatisfied with sound privacy, compared with people in private offices

42,764 survey responses from 303 office buildings. The "ease of interaction" open plans promise did not make up for the lost privacy.

Kim and de Dear, Journal of Environmental Psychology, 2013

40% fewer

attempts at an unsolvable puzzle after three hours of low-level open-office noise

Stress hormone levels rose. The workers did not report feeling more stressed. The noise cost them without their noticing.

Evans and Johnson, Cornell University, Journal of Applied Psychology, 2000

Speaking the Language of Sound



Decibel

A logarithmic scale. About +10 dB sounds twice as loud. A 3 dB change is just noticeable.



A-weighted level

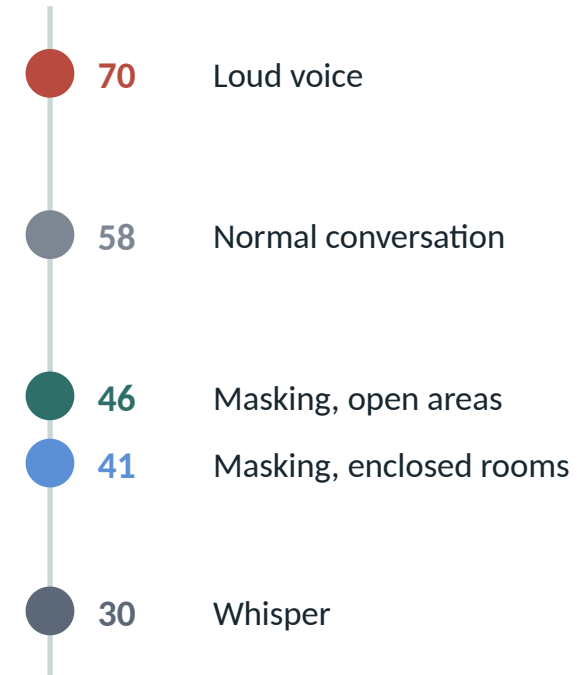
One number weighted the way human hearing responds. Masking is specified in dBA.



One-third octave bands

The frequency slices of a sound. One dBA number can hide a harsh or rumble spectrum.

Typical levels (dBA)



Masking values from GSA Sound Matters targets. Conversation and whisper levels are typical approximations and vary with distance and effort.

Privacy Is Not One Thing

Freedom from distraction

Nearby conversations stop pulling attention. Some speech may still be understood.

Open work areas, lobbies

Normal privacy

You can tell someone is talking and may catch a word, but can't follow it without effort.

Offices, service points

Confidential privacy

Conversations are essentially unintelligible to anyone outside the group.

Closed consult rooms

Speech security

Information is protected by regulation or contract; a motivated listener may try to overhear.

Secure and accredited spaces

How Privacy Is Measured

Open plan spaces: ASTM E1130

Rating	Articulation Index	Privacy Index
Confidential	0.05 or less	95% or more
Normal	0.20 or less	80% or more
Poor	Above 0.20	Below 80%



A Privacy Index of 80% is normal privacy, not confidential. That distinction trips up a lot of marketing material.

Closed rooms: ASTM E2638, Speech Privacy Class

SPC	Category	A listener outside can expect
70	Minimal privacy	Speech frequently intelligible
75	Standard privacy	Occasionally intelligible
80	Speech security	Very rarely intelligible
85	High security	Essentially unintelligible
90	Very high security	Unintelligible, essentially inaudible

SPC adds the room's level reduction to the background outside, so it captures the speech-to-background idea directly.

SPC categories per Gover and Bradley, National Research Council Canada. Other SPC tables use different listener assumptions; name the table you cite.

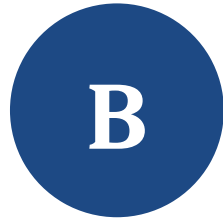
The ABCs of Speech Privacy



Absorb

Reduce the speech that reflects off ceilings and hard surfaces toward a neighbor.

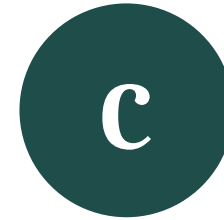
Ceilings, wall panels, soft finishes



Block

Stop sound from passing between spaces, and seal the paths around the barrier.

Walls, doors, glass, plenum barriers, seals



Cover

Raise the background at the listener with a tuned, comfortable masking sound.

Engineered sound masking

Take away any one and privacy drops, because each tool covers a gap the others leave. (The framework behind GSA's Sound Matters guidance.)

Absorb: Start With the Ceiling



Where absorption does the most good

The ceiling first. It is the largest surface and the main reflection path. GSA calls for NRC 0.90 or higher over open office ceilings.

Ask for AC in open plans. Articulation Class describes how well a ceiling limits speech reflected between workstations.

Walls at speaking height in meeting rooms, glass offices and corridors.

Operations centers: many consoles and screens need absorption so communication stays clear inside the room.



Absorption traps

Treating NRC as the whole story. Ask for the full coefficient table.

Foam finishes without fire testing. Foam plastics typically need NFPA 286 room-corner testing under the IBC.

Expecting it to stop sound through walls. That is blocking.

Over-treating. A room that is too dead makes people raise their voices.

Block: The Weak Links Decide



Doors
Undercut or ungasketed doors are often the weakest element in the room.



Walls that stop at the ceiling
Sound goes up, across the plenum, and down next door.



Ducts and transfer grilles
Shared returns act like speaking tubes.



Glass and mullions
Gaps at joints and doors rarely match the adjoining wall.

STC is a lab number. Rooms perform in the field.

Partition STC	Typical experience next door
25 to 30	Speech easily understood
35 to 45	Loud speech audible, less clear
50 to 55	Normal speech generally private
60 to 65	Loud sounds barely audible

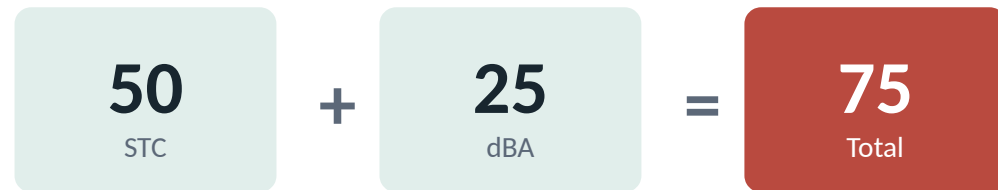
Descriptions assume a quiet background and a well-built room. Field ratings (ASTC, NIC) often land several points below lab STC once flanking paths are included.

STC descriptions adapted from Riverbank Acoustical Laboratories guidance. STC per ASTM E90 and E413; field ratings per ASTM E336.

Why Blocking and Covering Work as a Team

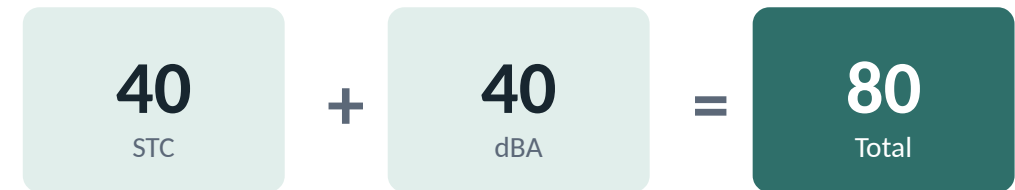
Wall STC + Background dBA at the listener ≈ 75 for basic speech privacy

An expensive wall, a silent corridor



Barely reaches the target. Any leak at the door or plenum and it falls short.

A standard wall, a tuned background



Beats the heavier wall, and the corridor background protects every room along it.

A consultant rule of thumb for screening, not a design method. It ignores flanking paths; critical rooms need a design and field test.

Cover: What Sound Masking Is, and Is Not



Sound masking is

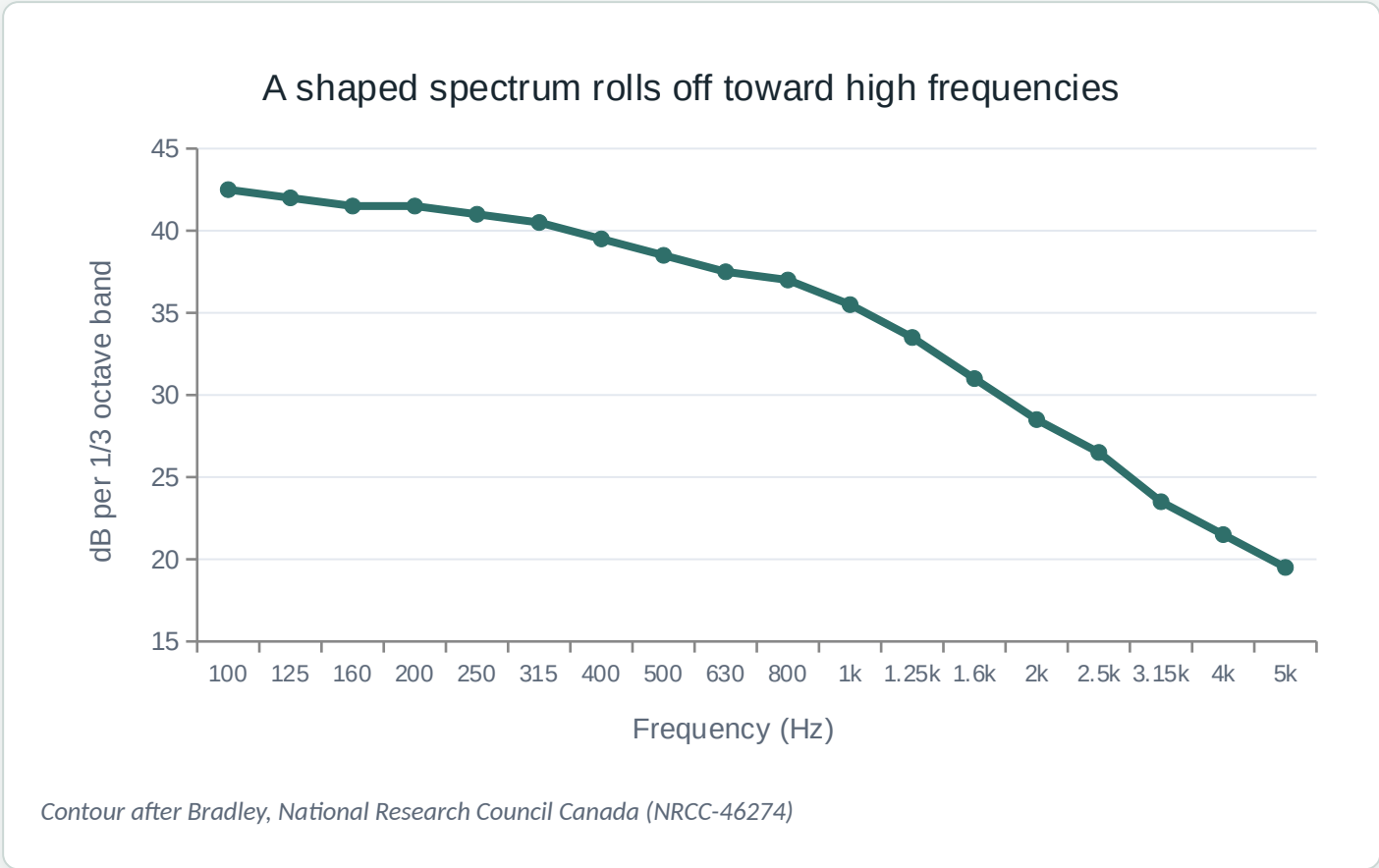
- An engineered background sound played through a network of speakers
- Shaped across frequency bands to cover the sounds that carry speech
- Tuned zone by zone and measured (ASTM E1573)
- Heard as soft, even airflow when done well
- A way to shrink the distance at which speech is understood



Sound masking is not

- White noise, which is harsh and hissy at privacy levels
- A way to reduce echo or reverberation (it adds sound)
- A replacement for walls, doors and seals
- A fix for loud or tonal HVAC noise
- A substitute for accredited SCIF construction

Tuned, Not Just Turned On



Typical design targets

45 to 48 dBA

Open work areas

40 to 42 dBA

Enclosed offices

Tuned on site

Counters, corridors and waiting areas outside sensitive offices

Specify tolerances for overall level and each band, zone by zone, and verify by measurement. An average that hides quiet spots leaves privacy holes.

Open and enclosed targets from GSA Sound Matters. Measurement and reporting per ASTM E1573.

Where Masking Should Not Go, or Needs Great Care



Classrooms and lecture rooms

ANSI/ASA S12.60 limits classroom background noise to 35 dBA so students can hear. Mask the offices instead.



Accredited spaces without approval

Every device in a SCIF, including masking, follows the Tech Spec and needs the AO's approval.



Conference, video and courtrooms

People inside need clear speech and microphones pick up masking. Mask the corridor outside.



Anywhere life safety depends on hearing

Masking, music and paging should mute when the fire alarm or mass notification activates.



Spaces for people with hearing loss

Added background sound can make conversation harder: senior living common areas, audiology suites.

Rule of thumb: put masking where the listener is, not inside the room you are trying to protect.

Design It, Tune It, Measure It

Plenum-mounted

Speakers above a suspended ceiling; the plenum and tiles diffuse the sound. Hardware stays hidden, but results depend on plenum depth, obstructions and tile performance.

Direct-field

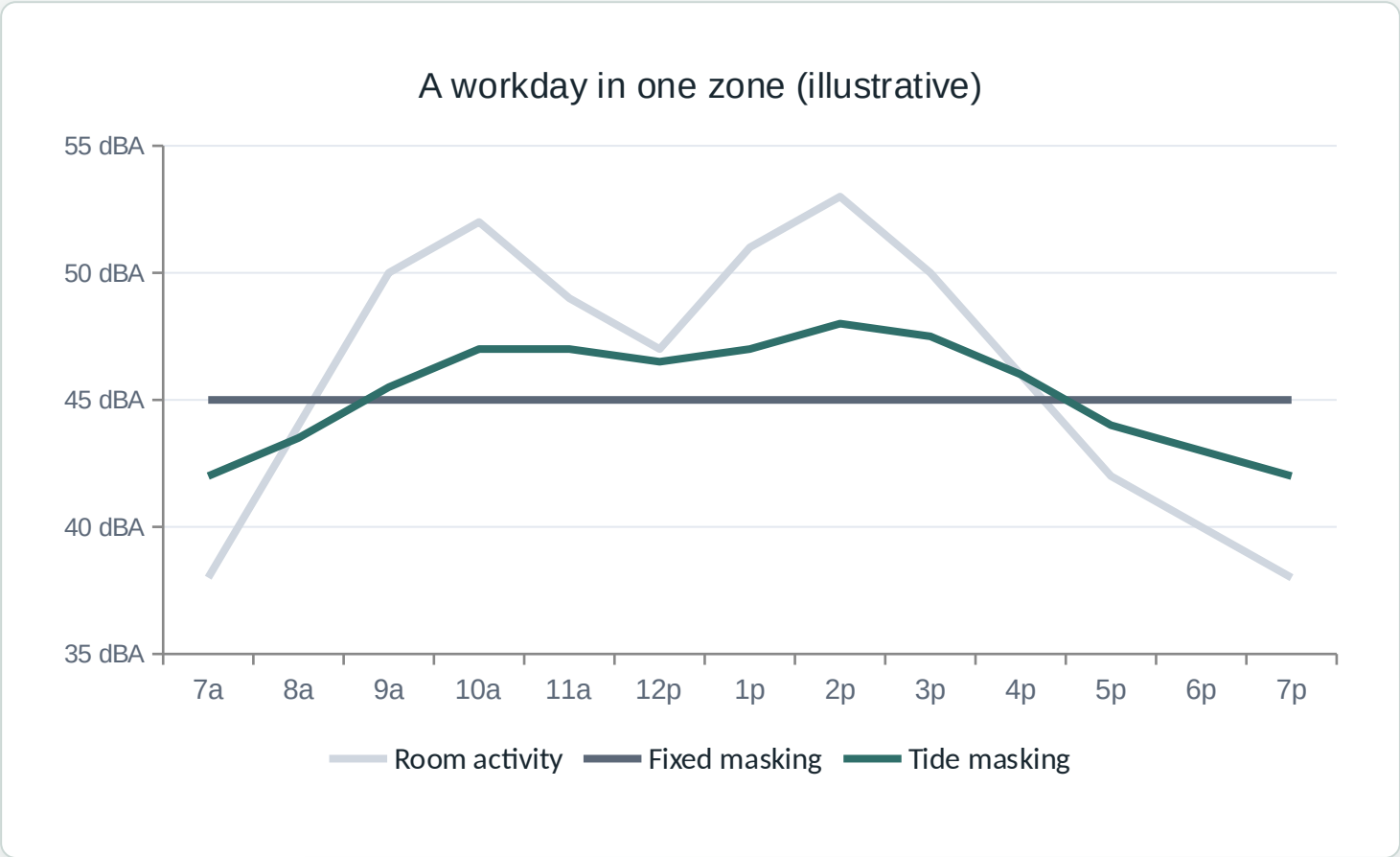
Small speakers in or on the ceiling plane facing into the space. Generally more uniform and controllable, and works with open ceilings, with visible devices.

The right choice depends on the ceiling, architecture, budget and the uniformity required.

Commissioning checklist

- ✓ Measure the background with masking off, so everyone knows what HVAC contributes
- ✓ Tune each zone to the target spectrum, not just the dBA number
- ✓ Check uniformity near walls, columns and transitions
- ✓ Listen: if you can locate a speaker by ear, adjust
- ✓ Ramp up gradually over days or weeks in occupied spaces
- ✓ Document by zone and revisit after occupancy

The Tide Principle





Quiet morning
Settles low, so no one notices it.



Busy afternoon
Rises so conversations stay covered.



Always in bounds
Inside set limits, changing too slowly to hear.

Getting the Tide Right



Sense each zone

Sensors measure ambient conditions where people actually are, not one reading for the whole floor.



Set the shoreline

A floor and a ceiling around the design target, for example 42 to 48 dBA around 45.



Move slowly

Changes of a small fraction of a decibel per second, so occupants never hear a shift.



Verify and log

Measure it like any fixed system, and keep a history to see how zones behave over time.



Sensors listen to the room. In SCIFs any sensor or network device needs AO approval, so fixed perimeter masking is the norm there.

The Most Expensive Myths



"Quiet is private."



Silence makes speech easier to understand.



"Masking is just white noise."



It is a shaped, tuned, measured spectrum.



"Masking reduces echo."



Reverberation is controlled with absorption.



"We'll just use the HVAC."



It varies with load, has the wrong spectrum and often tones.



"STC 50 walls guarantee privacy."



Not with an undercut door, a shared plenum and a silent corridor.



"Privacy Index 80% is confidential."



Under ASTM E1130, 80% is normal. Confidential is 95%.

PART 2

Military, Space by Space

Installations and secure spaces: ICD 705, confidential programs, where speech leaks, and the quick fix

Two Jobs: Protect the Mission, Protect the People



Security

Classified spaces: ICD 705

SCIFs follow the IC Technical Specifications, which define acoustic protection in Sound Groups and treat masking as supplemental.

Controlled Unclassified Information

CUI rules require reasonable precautions so unauthorized people cannot overhear conversations discussing CUI (32 CFR 2002.14).



Care and readiness

Confidential programs

Victim advocacy restricted reporting, family advocacy and legal assistance depend on conversations staying in the room.

Military health

Behavioral health clinics follow HIPAA privacy rules. Service members seek care when they trust it stays private.

IC Tech Spec for ICD/ICS 705; 32 CFR Part 2002; DoDI 6495.02; DoDM 6025.18. Confirm current editions.

Military Privacy Rules and Acoustics: The Straight Facts



What the rules do

- Set Sound Group acoustic protection for SCIF perimeters (STC 45 or 50) under ICD 705
- Allow masking in SCIFs only as a supplemental, AO-approved measure
- Require reasonable precautions so CUI conversations are not overheard



What they do not do

- Set acoustic ratings for unclassified legal, health or advocacy offices
- Let masking replace required SCIF construction
- Require SCIF construction for CUI, PII or health information

The SCIF has a rulebook. The offices next to it usually do not, and that is where design has to step up.

Inside the SCIF: What ICD 705 Says About Sound

Acoustic protection: the Sound Groups

Sound Group	Rating	What it means outside the perimeter
Group 3	STC 45 or better	Loud speech from inside can be faintly heard but not understood
Group 4	STC 50 or better	Very loud sounds (loud singing, brass music, a radio at full volume) heard faintly or not at all

Group 4 applies where amplified audio, conferencing or higher risk is present. The rating covers the whole perimeter: walls, doors, ceilings, floors, ducts and every penetration.

Where sound masking fits

- ✓ A supplemental measure, not a substitute for required construction
- ✓ Transducers placed close to or on the paths audio can leave: doors, windows, vents, ducts
- ✓ Sound source generators located within the SCIF; wires and transducers inside the perimeter to the greatest extent possible
- ✓ Any cable leaving the SCIF in rigid conduit; no AM/FM receivers; recording functions disabled
- ✓ Subject to inspection during TSCM evaluations, under the Accrediting Official's direction

IC Tech Spec for ICD/ICS 705, Version 1.5.1 (July 2021); DoD SCIF design per UFC 4-010-05 (2023). Confirm the current version and all requirements with your Accrediting Official.

Beyond the SCIF: Where Sensitive Conversation Really Happens



Victim advocacy (SARC)

Restricted reporting lets a survivor get care without triggering an investigation. Confidentiality starts at the door.



Behavioral health

Military health follows HIPAA privacy rules, often behind weaker walls than the SCIF next door.



Legal assistance

Attorney-client conversations about family, finances and discipline on a shared corridor.



Family advocacy

Sensitive family matters discussed with counselors and case workers.



Personnel and finance counters

PII and CUI spoken at a counter with a line behind it.



Command suites

Personnel actions, discipline and planning talks next to open offices.

These offices often get the least acoustic attention and hold conversations that matter most to the people having them.

DoDI 6495.02 (Sexual Assault Prevention and Response); DoDM 6025.18 (HIPAA implementation in DoD). Confirm current editions.

Anatomy of an Installation Building: Where Speech Leaks



Simplified composite plan for discussion

- 1 Personnel and finance counters
- 2 Command suite
- 3 Briefing room next to open offices
- 4 Operations floor
- 5 Legal assistance office
- 6 Behavioral health and advocacy
- 7 Shared corridor
- 8 SCIF perimeter: doors, ducts, penetrations

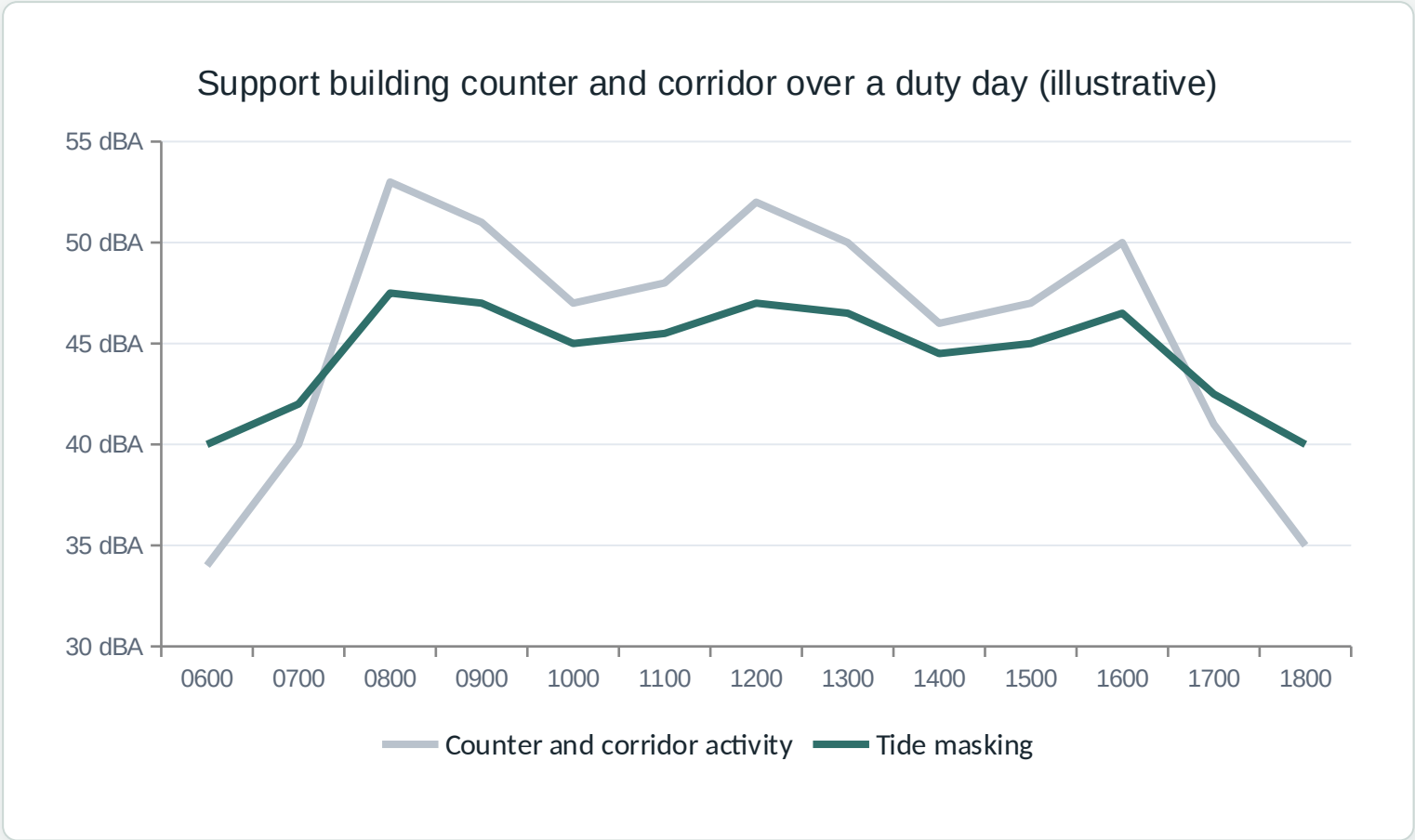
Character, Flaw and Quick Fix

Space	Character	The flaw	Quick fix
1 Personnel and finance counters	Service members share PII, pay and family details with a line behind them	The next person in line hears everything	Queue set back, partial barriers, absorption overhead, masking over the counter and waiting area
2 Command suite	Personnel actions, discipline and planning discussions	Often shares walls and a plenum with open offices	Walls to deck, sealed doors, masking in the outer office and corridor
3 Briefing room	Presentations and discussions, sometimes with amplified audio	Amplified audio carries into adjoining open offices	Closed-room construction, sealed penetrations, no masking inside, mask adjoining areas
4 Operations floor	Many consoles, radios and phones in one room	Crews struggle to hear each other; voices carry to nearby offices	Absorption for clarity inside; separation from sensitive offices; masking only where approved

Character, Flaw and Quick Fix

Space	Character	The flaw	Quick fix
5 Legal assistance office	Attorney-client talks about divorce, debt and discipline	Walls to the ceiling and a shared corridor	Walls to deck, gasketed doors, masking in the corridor and waiting area
6 Behavioral health and advocacy	Long, emotional conversations; restricted reporting depends on confidentiality	Often the weakest walls in the building, next to a waiting room	Highest blocking in the building, no transfer grilles, masking just outside the door
7 Shared corridor	Everyone passes every sensitive door	A silent corridor is the listening side of every office	Masking in the corridor raises the background outside every door at once
8 SCIF perimeter	Accredited space built to a Sound Group	Doors, ducts, vents and penetrations carry speech out	Build to the Tech Spec; perimeter masking at doors and ducts only as the AO approves

The Tide on an Installation: A Duty Day



0800 in-processing
Counters fill after PT and formation; masking rises to cover the line.



Midday appointments
Holds near its upper limit as legal and health appointments turn over.



After duty hours
Settles to its floor for leadership and staff working late.

The Quick Recipe for Military Speech Privacy



Classify the conversations

Classified, CUI, health, legal or routine: each needs a different tool.



Build the SCIF right

Meet the Sound Group across the whole perimeter; supplemental masking only as the AO approves.



Protect the forgotten offices

Legal, behavioral health and advocacy: walls to deck, sealed doors, no transfer grilles.



Cover

Masking at counters, waiting areas and the corridors outside sensitive offices.



Let it tide

Adaptive masking with set limits in unclassified spaces; fixed masking at secure perimeters.



Integrate and verify

Mute on fire alarm and mass notification, coordinate with security, measure per ASTM E1573.

Traps We See in Military Projects



Treating masking as an accreditation shortcut

It is supplemental and must be designed, installed and documented under the rules that apply.



Installing unapproved devices in secure spaces

Receivers, sensors and network connections need security approval first. Involve the SSM early.



Forgetting the unclassified sensitive offices

Behavioral health and advocacy offices often have weaker walls than the SCIF next door.



Skipping life safety integration

Masking, music and paging must mute on fire alarm and mass notification.

From the Field: Strategy Rooms and Command Areas



The situation

A military client needed strong confidentiality in strategy rooms and command areas where sensitive discussions took place, alongside open workspaces.

The change

The design followed a security review, and the masking system covered open workspaces and private areas under the requirements that applied.

The result

"Personnel noticed the improvement in privacy and focus right away."

WORTH KNOWING

The security team is part of the design team

The Site Security Manager, the Construction Security Plan and the Accrediting Official shape what can be installed, where wiring runs, and who is cleared to work on site. Their review comes before equipment selection, not after.

Ask on day one: who is the AO, and what Sound Group applies?

Questions for Your Next Military Design Meeting



Which spaces are accredited or planned for accreditation, and who is the Accrediting Official?



What Sound Group applies to each secure perimeter, including doors, ducts and penetrations?



Has the security manager approved all audio equipment, sensors and wiring paths?



Which unclassified offices handle legal, health, advocacy or CUI conversations?



Do those offices have walls to deck, sealed doors and masking in the corridor outside?



Is all audio integrated with fire alarm and mass notification, and who verifies results?

Key Takeaways



Quiet is not private

Privacy is the relationship between the speech that arrives and the background at the listener.



Use all three tools

Absorb, Block and Cover work as a system, and the ratings tell you whether they are working.



Build the SCIF to its Sound Group

Masking there is supplemental, perimeter-focused and approved by the Accrediting Official.



Protect the offices next door

Legal, behavioral health and advocacy spaces deserve real walls and a tide in the corridor.

Questions?

Thank you for spending the hour with us.

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LET'S TALK

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Email Alex

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Book a lunch and learn for your team.