

HNC FURNITURE CONSTRUCTION STANDARDS

This is a living document and will be updated periodically by USACE HNC.

This is not a specification or contractual document.

Designers must thoroughly research each furniture item to ensure there are at least three equal products with the same salient features required in the RFQ or design specification, IAW UFC 3-120-10.

REQUIREMENTS AND BEST PRACTICES FOR FF&E DESIGN

1. Complete the FF&E package per UFC 3-120-10.
2. Confirm that all items in the FF&E package are currently on GSA schedule or could be quoted within the open market threshold for a GSA RFQ.
3. Include at least two alternates for each product. Items must be researched & vetted to be equals and on GSA schedule (unless under the open market threshold).
4. Describe all shared salient design features of the three researched products for each item. (Any salient features listed but not shared by all three products referenced in the FF&E package will not be considered required by the HNC designer. Only design features that are shared by all three products referenced in the FF&E package will be considered required when HNC develops the furniture specifications.)
5. Avoid specifying proprietary features in description section. Proprietary features cannot be included in the furniture procurement specification without the appropriate contractual documentation for Limited Source Justifications and should not be included in the FF&E package.
6. Consider facility type when specifying furniture.
7. Coordinate Furniture Requirements with Building's Electrical & Telecom Plans
 - Example of Uncoordinated Furniture Plans: Workstations requiring hardwire connection specified but only wall outlets are included in the electrical drawings (Workstations in this situation are often either modified with open tiles at wall out locations or a different product is specified).
8. Consider including funding sources in the FF&E Package - If the end user is willing to fund item(s) that IMCOM will not, including this information in the FF&E package will make it more likely that the items are included in the final furniture procurement documents.

PROCUREMENT CHALLENGES

TIME: FF&E procurement tends to be 3-5 yrs after initial design. Potential challenges may include:

- POC & User Group changes
- Products & fabrics may be discontinued and require reselection
- Changes to facilities based on organizational & operational needs closer to procurement timeline that result in changes to original FFE specifications

HNC may participate in design reviews, but this does not prevent user requested changes later in the procurement process.

- HNC design reviews help with identifying any user funded FFE, electrical and AV/IT concerns
- Also allows for the integration of HNC in overall execution of design and through construction versus HNC coming in late and identifying issues that must be worked in last phases of construction

HNC is obligated to IMCOM for Army FF&E procurement and is responsible for ensuring facilities are outfitted per policy and regulations. Customer preferences can usually be accommodated within reason. Contact HNC Furniture POCs with questions. Contact info may be found at the following link: <https://mrsi.erdcdren.mil/furniture/>

MINIMUM WARRANTIES

Panel Supported Workstations: 10 years

Workstation Panel Fabric: 3 Years

Metal/Laminate Desks: 12 years

Metal/Laminate Open Frame Technical Workstations: 12 years

Benching Systems: 10 years

Console Systems: 10 years

Laminate, Wood Veneer Surfaces: 5 years

Metal Furniture (Lateral Files, Vertical Files, Storage Towers/Cabinets, and Bookcases): 12 years

Laminate Tables, Metal Bases: 10 years

Laminate Casegoods and Conference Tables: 10 years

Wood Casegoods Executive III: 10 years; 5 years for Wood Veneer

Wood Frame Seating:

1.10 year – Frame, suspension, and glides.

2.3 year – Upholstery and finishes.

Executive, Ergonomic Task (including Ergonomic Stools), and Conference Seating:

1. 10 year – Mechanisms, pneumatic cylinders, casters, arms, and seat pan adjustment.

2. 5 year – Foam and upholstery.

3. 5 year – Thermoplastic/Polypropylene

4. Warranty for task and conference seating shall cover users up to 300 pounds.

5. When 24/7 use is required, warranty for task seating shall cover 24/7 application and users up to 300 pounds.

Multi-shift applications shall not cause warranty to be pro-rated.

FURNITURE TESTING, STANDARDS

ANSI/BIFMA X5.1 General Purpose Office Chairs

ANSI/BIFMA X5.3 Vertical Files

ANSI/BIFMA X5.5 Desk/Table Products

ANSI/BIFMA X5.6 Panel Systems

ANSI/BIFMA X5.9 Storage Units

ANSI/BIFMA X5.4 Lounge Seating **OR GSA 3FNE-CO 00-594A/596A** Lounge Seating Traditional and Transitional

Task Lighting:

1.Task lights shall be UL approved and shall meet the requirements of NFPA 70.

Laminate Worksurface Material

- 1.ANSI 208.1-2009 Particleboard Classifications.
- 2.ANSI A208.2-2009 Medium Density Fiberboard.
- 3.ANSI/NEMA LD 3-2005 High Pressure Decorative Laminates (HPDL).

1.All proposed products shall be certified as compliant with Indoor Air Quality (IAQ) requirements and shall meet or exceed ANSI/BIFMA X7.1-2011 (R2016)-VOC.

2.The product submitted shall have certification for Indoor Air Quality (GREENGUARD or equivalent).

Panel and Demountable Wall Glazing, as applicable:

- 1.Glazed panel inserts shall be comprised of tempered glass in accordance with ANSI Z97.1-2004.
- 2.Tempered glass shall conform to ASTM C1048-04, Kind FT, Condition A, Type 1, Class 1 Transparent for transparent glass and Class 3 Light reducing, tinted or translucent for translucent glass.

Panel Acoustics:

- 1.All acoustical panels shall have a minimum noise reduction coefficient (NRC) of 0.65 when tested in accordance with ASTM C423-09a and ASTM E795-05.
- 2.All panels shall have a minimum sound transfer coefficient (STC) of 7 when tested in accordance with ASTM E90-09 and ASTM E413-10.

Panel Flammability:

- 1.Components shall meet requirements for flame spread and smoke development as specified by NFPA 101.
- 2.Testing shall be conducted in accordance with either ASTM E84, UL 723, or NFPA 255 on the entire assembled panel and each different combination of fabric and interior construction. In addition, the fabric shall meet the requirements of NFPA 265.

Panel and Benching Electrical System:

- 1.The electrical system shall meet the requirements of UL 1286.
- 2.Receptacles shall be 15 amp (NEMA 5-15R) commercial grade conforming to NEMA WD 1 and NEMA WD 6.

Panel and Benching Systems Cabling:

Raceways and interfaces to the raceways shall be designed to accommodate the bend radius as shown in TIA-569-B for Category 6 and fiber optic cables communication wiring.

Demountable Wall Flammability:

- 1.Components shall meet requirements for flame spread and smoke development as specified by NFPA 101.
- 2.Testing shall be conducted in accordance with either ASTM E84, UL 723, or NFPA 255 on the entire assembled panel and each different combination of fabric and interior construction. In addition, the fabric shall meet the requirements of NFPA 265.

Pedestal and Low Storage Fabric:

Manufacturer's standard, woven, stain resistant, mid-grade selection; minimum 100,000 double rubs.

MINIMUM FURNITURE CONSTRUCTION STANDARDS

Upholstery

1. Manufacturer's standard, woven, stain resistant, mid-grade patterned, textured, and/or solid selection
2. 100,000+ double rubs, unless noted otherwise in FF&E package and RFQ.

Worksurfaces & Laminate Tabletops

1. Worksurfaces and tops shall be constructed of a Grade M2 or M3 particleboard or a 45 lb. medium density fiberboard core with a minimum VGS General Purpose Grade High Pressure Laminate on the face and a backer material on the underside.
2. Laminates shall be bonded to the core with a PVA adhesive in a cold press or hot press process to prevent separation of the laminate from the core.
3. Do not specify low pressure laminate or thermally fused laminate.
4. Edges shall be totally finished and sealed against moisture with a flat edged, impact resistant vinyl/ABS or similar plastic, have a radius of at least 1/8", and be 2mm – 3mm thick.
5. Console tops shall be 1 3/16" – 1 1/4" thick.

Metal Furniture (Lateral Files, Vertical Files, Storage Towers/Cabinets, and Bookcases)

1. Storage towers/cabinets and file cabinets shall have a body constructed of a minimum of 22-gauge steel with reinforced braces or channels constructed of a minimum of 18 to 20-gauge steel. All reinforcements shall be welded.
2. Storage towers/cabinets and file cabinets shall have a minimum 22-gauge steel top spanning the width and depth of the case.
3. Storage towers/cabinets and drawers shall be of a minimum 22-gauge steel construction.
4. Storage towers/cabinets and drawer fronts shall be a minimum of 22-gauge steel construction.
5. Units shall be shipped fully assembled.
6. Vertical Files: A safety interlock system that allows only one drawer to be opened at a time shall be standard on all files.
7. Bookcases: All steel shall be minimum 22 gauge.

Storage Pedestals Desks, Workstations

1. Drawer fronts shall be 22-gauge steel, minimum, and drawer bodies shall be 22-gauge steel, minimum.
2. Drawers for consoles shall be 5-sided.
3. Box drawers shall have full access or minimum 90% extension slides.
4. File drawers shall have full extension slides.
5. All 12" file drawers shall be equipped with rails or high sides for hanging folders front-to-back and side-to-side.
6. Do not specify suspended pedestals.

Overhead Storage Units on Desks, Workstations

1. Overhead storage units shall be constructed of steel in the following gauges:
 - a. Shelves shall be 18 to 22-gauge steel.
 - b. Tops shall be 20 to 22-gauge steel.
 - c. Doors shall be 20 to 24-gauge steel.
 - d. Up-mounted overheads: Backs shall be 20 to 24-gauge steel.
2. The inside clearance depth shall accommodate a 3-ring binder for 8.5" x 11" paper and shall be a minimum overall depth of 12".
3. Units shall be 5-sided with a door, end panels and fully finished enclosed back.

Task Lighting on Desks, Workstations

- 1.Task lights shall be a standard component of the manufacturer's furniture products.
- 2.Task lights shall recess into the bottom of overhead cabinets and shelves.
- 3.Task lights for 72"W, and greater, overhead storage bins shall be the no less than 46"W.
- 4.All other task lights shall be sized appropriately for the overhead storage bin.
- 5.LED task lights shall have a minimum 50,000-hour life span and 3500K color temperature.
- 6.LED Color Rendering Index (CRI) shall range from 83-84.
- 7.Electronic ballasts shall be provided to eliminate fluorescent lamp flicker and computer screen interference. Do not specify shared ballasts.
- 8.Task lights shall provide glare control.
- 9.Task lights shall have an easily accessible on-off switch.
- 10.Daisy chain cords shall be available for the modular connection of shelf lights.
- 11.Task lights shall be UL or ETL listed and labeled.
- 12.OCONUS task lights shall have CE mark.

Ergonomic Task and Conference Seating

1.Chairs shall either have:

a.Synchronized tilt with a minimum 2:1 back-to-seat recline ratio with a user adjustment for tilt and a means of adjusting the backrest tension. The tension adjustment shall be achieved by a user-adjustable control.

OR

b.The user adjustment for tilt shall be achieved by a weight sensing mechanism.

2.Chairs shall have a tilt lock or stop position mechanism that the user can adjust while seated.

3.Chairs shall have a 5-star base with a minimum dimension of 25" in diameter.

4.Seat depth mechanism shall allow the seat to move independently of the back.

5.Recline angle shall have an adjustment of 15 degrees or more that falls between 90-120 degrees from horizontal.

Adjustable Arm Requirements, as applicable:

- 1.Arm adjustments shall be made without the use of any tools.
- 2.The arm depth adjustment shall be independent of the seat depth adjustment.
- 3.The arm depth adjustment and pivot adjustment shall be independent of one another.
- 4.User shall be able to make all arm adjustments while seated.

NOTE: Rigid plastic outer back does not meet the design intent for Steelcase, Think, Haworth, Very, and Allsteel, Relate (uph seat, mesh or polymer back)

Wood Casegoods, Executive Level II

Drawer Construction:

1. Drawer fronts shall be solid wood or a veneered panel.
2. Drawers shall be 5-sided with a separate removable front for field replacement without disturbing the contents of the drawer.
3. Drawer sides and backs shall be minimum 7/16" thick solid hardwood assembled with dowels or with dovetailed joints, or 1/2" thick plywood assembled with dowels. Variance from the thickness requirement for file drawer sides shall only be permitted when the metal file rails attached to the top-drawer edge require the dimension to be less. In no instance shall the thickness of the drawer side be reduced to less than 3/8".
4. Drawer bottoms shall be a 3-ply construction of particleboard, MDF or a similarly engineered wood core, with a veneer face and backer sheet on the underside of the panel. Drawer bottoms shall be captured in a dado groove on all four sides or let into the bottom of the drawer with a rabbet joint on all sides and glued/stapled.
5. File drawers shall have full extension ball bearing slides with a dampened start/stop feature and a positive stop.
6. Box drawers shall have the same slides as file drawers, except that the suspension must allow access to a minimum 3/4 of the drawer's depth.
7. File drawers shall have full height sides with metal file rails for front-to-back and side-to-side filing.
8. File drawers and hanging systems shall support hanging file folders without the folders binding or falling through and shall allow the drawer to close with index tabs in place.
9. Drawers of a composite core miter-fold construction, laminated with vinyl material, shall be considered non-conforming.
10. File drawers that require a separate metal file frame to accommodate hanging folders shall be considered non-conforming.

NOTE 1: Executive Level II is typically found in appropriate spaces (e.g., executive offices and conference rooms) in the following facility types: BN HQ, BDE HQ, WTU.

NOTE 2: If you have need to specify very high-end wood casegoods (e.g. Army War College), please coordinate with HNC Interior Designers to inquire further.

Wood Casegoods, Level III

Drawer Construction:

1. Drawer fronts shall be solid wood or a veneered panel. Veneered drawer fronts shall be totally finished on all edges, and edges shall have the same final topcoat as the desk.
2. Drawers shall be 5-sided with a separate, removable front for field replacement without disturbing the contents of the drawer.
3. Drawer sides and backs shall be a minimum $\frac{1}{2}$ " thick particleboard with veneer faces assembled with dowels. Variance from the thickness requirement for file drawer sides shall only be permitted when the metal file rails attached to the top-drawer edge require the dimension to be less. In no instance shall the thickness of the drawer side be reduced to less than $\frac{3}{8}$ ".
4. Drawer bottoms shall be a 3-ply construction of particleboard, medium density fiberboard or similarly engineered wood core, with a veneer or melamine face and a backer sheet on the underside of the panel. Drawer bottoms shall be let into all sides of the drawer with a rabbet joint, glued and stapled.
5. File drawers shall have full extension ball bearing slides with a dampened start/stop feature and a positive stop.
6. Box drawers shall have the same slides as file drawers, except that the suspension must allow access to a minimum $\frac{3}{4}$ of the drawer's depth.
7. File drawers shall have full height sides with metal file rails for front-to-back and side-to-side filing.
8. File drawers and hanging systems shall support hanging file folders without the folders binding or falling through and shall allow the drawer to close with index tabs in place.
9. Drawers of a composite core miter-fold construction, laminated with vinyl material, shall be considered non-conforming.
10. File drawers that require a separate metal file frame to accommodate hanging folders shall be considered non-conforming.

NOTE: Executive Level III is typically found in appropriate spaces (e.g. executive offices and conference rooms) in the following facility types: Basic - AIT, COF, Fire Stations, GIB, ORTC, TBUP.