
USACE / NAVFAC / AFCEC / NASA UFGS-12 35 70 (August 2016)

Preparing Activity: USACE Superseding
UFGS-12 35 70 (August 2010)

UNIFIED FACILITIES GUIDE SPECIFICATIONS

References are in agreement with UMRL dated April 2018

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08/16

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SECTION 12 35 70

HEALTHCARE CASEWORK 08/16

NOTE: This guide specification covers the requirements for metal and wood casework for medical and dental facilities.

Adhere to UFC 1-300-02 Unified Facilities Guide Specifications (UFGS) Format Standard when editing this guide specification or preparing new project specification sections. Edit this guide specification for project specific requirements by adding, deleting, or revising text. For bracketed items, choose applicable item(s) or insert appropriate information.

Remove information and requirements not required in respective project, whether or not brackets are present.

Comments, suggestions and recommended changes for this guide specification are welcome and should be submitted as a Criteria Change Request (CCR).

PART 1 GENERAL

NOTE: This specification covers metal and wood casework, normally preassembled, for installation as fixed or built-in elements in medical and dental facilities. The "casework" includes: Cabinets, singularly or in assemblies; treatment room units wardrobes; deck units; reagent racks; countertops and sink; plus their components; hardware and service fixture trim. All casework must be shown on the drawings.

A schedule of casework, shown in alpha-numerical order, will be included on the drawings. Schedules will include the Joint Schedule Number (JSN) designator, and dimensions. The schedule or elevations should indicate the number of shelves

required. Joint Schedule Numbers (JSN) or the National Stock Numbers are specified in MIL-STD-1691. Any additional specially required casework items which are not covered by MIL-STD-1691 should be described herein and identified on the drawings and schedule.

On the drawings, show:

1. Sizes and spacing of casework units, plumbing fixtures and utility outlets.
2. Schedule of casework including all component parts and accessories.
3. Details of connections and anchorage where special conditions exist. Size and spacing of anchors.

1.1 REFERENCES

NOTE: This paragraph is used to list the publications cited in the text of the guide specification. The publications are referred to in the text by basic designation only and listed in this paragraph by organization, designation, date, and title.

Use the Reference Wizard's Check Reference feature when you add a Reference Identifier (RID) outside of the Section's Reference Article to automatically place the reference in the Reference Article. Also use the Reference Wizard's Check Reference feature to update the issue dates.

References not used in the text will automatically be deleted from this section of the project specification when you choose to reconcile references in the publish print process.

The publications listed below form a part of this specification to the extent referenced. The publications are referred to within the text by the basic designation only.

AMERICAN FOREST FOUNDATION (AFF)

ATFS STANDARDS	(2015) American Tree Farm System Standards of Sustainability 2015-2020
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ASTM INTERNATIONAL (ASTM)

ASTM C920	(2018) Standard Specification for Elastomeric Joint Sealants
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CALIFORNIA AIR RESOURCES BOARD (CARB)

CARB 93120 (2007) Airborne Toxic Control Measure
(ATCM) to Reduce Formaldehyde Emissions
from Composite Wood Products

CALIFORNIA DEPARTMENT OF PUBLIC HEALTH (CDPH)

CDPH SECTION 01350 (2010; Version 1.1) Standard Method for
the Testing and Evaluation of Volatile
Organic Chemical Emissions from Indoor
Sources using Environmental Chambers

CSA GROUP (CSA)

CSA Z809-08 (R2013) Sustainable Forest Management

FOREST STEWARDSHIP COUNCIL (FSC)

FSC STD 01 001 (1993; Am 1996; Am 1999; Am 2002)
Principles and Criteria for Forest
Stewardship

PROGRAMME FOR ENDORSEMENT OF FOREST CERTIFICATION (PEFC)

PEFC ST 2002:2013 (2015) PEFC International Standard Chain
of Custody of Forest Based Products
Requirements

SUSTAINABLE FOREST INITIATIVE (SFI)

SFI 2015-2019 (2015) Standards, Rules for Label Use,
Procedures and Guidance

U.S. DEPARTMENT OF DEFENSE (DOD)

MIL-STD-1691 (1994; Rev F) Construction and Material
Schedule for Military Medical and Dental
Facilities

1.2 SUBMITTALS

**NOTE: Review submittal description (SD) definitions
in Section 01 33 00 SUBMITTAL PROCEDURES and edit
the following list to reflect only the submittals
required for the project.**

The Guide Specification technical editors have
designated those items that require Government
approval, due to their complexity or criticality,
with a "G." Generally, other submittal items can be
reviewed by the Contractor's Quality Control
System. Only add a "G" to an item, if the submittal
is sufficiently important or complex in context of
the project.

For submittals requiring Government approval on Army
projects, a code of up to three characters within

the submittal tags may be used following the "G" designation to indicate the approving authority. Codes for Army projects using the Resident Management System (RMS) are: "AE" for Architect-Engineer; "DO" for District Office (Engineering Division or other organization in the District Office); "AO" for Area Office; "RO" for Resident Office; and "PO" for Project Office. Codes following the "G" typically are not used for Navy, Air Force, and NASA projects.

Use the "S" classification only in SD-11 Closeout Submittals. The "S" following a submittal item indicates that the submittal is required for the Sustainability eNotebook to fulfill federally mandated sustainable requirements in accordance with Section 01 33 29 SUSTAINABILITY REPORTING.

Choose the first bracketed item for Navy, Air Force and NASA projects, or choose the second bracketed item for Army projects.

Government approval is required for submittals with a "G" designation; submittals not having a "G" designation are for [Contractor Quality Control approval.] [information only. When used, a designation following the "G" designation identifies the office that will review the submittal for the Government.] Submittals with an "S" are for inclusion in the Sustainability eNotebook, in conformance to Section 01 33 29 SUSTAINABILITY REPORTING. Submit the following in accordance with Section 01 33 00 SUBMITTAL PROCEDURES:

SD-02 Shop Drawings

Detail Drawings; G[, [_____]]

SD-03 Product Data

Casework

SD-04 Samples

Casework; G[, [_____]]

Wall Hung Cabinets; G[, [_____]]

Floor Mounted Cabinets; G[, [_____]]

Countertops; G[, [_____]]

Laminated Plastic Sheets; G[, [_____]]

SD-07 Certificates

Certified Sustainably Harvested Wood; G[, [_____]]

SD-08 Manufacturer's Instructions

Installation

SD-11 Closeout Submittals

Recycled Content for Baked Enamel Carbon Steel Medical Casework; S

Recycled Content for Corrosion Resisting Steel Medical Casework; S

Recycled Content for Wood Core Medical Casework; S

Recycled Content for Carbon Steel Medical Casework; S

Recycled Content for Wood Core Dental Casework; S

Recycled Content for Carbon Steel Dental Casework; S

Recycled Content for Baked Enamel Carbon Steel Dental Prosthetics Casework; S

Recycled Content for Corrosion Resisting Steel Dental Prosthetics Casework; S

Recycled Content for Corrosion Resisting Steel Countertops; S

Recycled Wood Content for Plastic Laminate Countertops; S

Certified Sustainably Harvested Wood for Medical Casework; S

Certified Sustainably Harvested Wood for Countertops; S

Indoor Air Quality for Composite Wood and Agrifiber Products Used In Countertops; S

1.3 CERTIFICATIONS

1.3.1 Certified Sustainably Harvested Wood

NOTE: Use certified sustainably harvested wood where suitable for application and cost effective. Sustainably Harvested Wood is a product which comes from a third-party Forestry Certification Program and thus carries certain characteristics: 1) Protection of biodiversity, species at risk and wildlife habitat, sustainable harvest levels, protection of water quality, and prompt regeneration (e.g., replanting and reforestation); 2) Third-party certification audits performed by accredited certification bodies; 3) Publicly available certification audit summaries; 4) Multi-stakeholder involvement in a standards development process; 5) Complaints and appeals process.

Designer must verify suitability, availability within the region, cost effectiveness and adequate competition before specifying these sustainably harvested wood certifications - if these conditions are verified for the project locale, include the following section. For projects pursuing LEED, delete certifications other than FSC; for all other

**projects pursuing third-party certification allow
the entire list of third party certifications.**

Provide wood certified as sustainably harvested by FSC STD 01 001[, ATFS STANDARDS, CSA Z809-08, SFI 2015-2019, or other third party program certified by PEFC ST 2002:2013]. Provide a letter of Certification of Sustainably Harvested Wood signed by the wood supplier. Identify certifying organization and their third party program name and indicate compliance with chain-of-custody program requirements. Submit sustainable wood certification data; identify each certified product on a line item basis. Submit copies of invoices bearing certification numbers.

[1.3.2 Indoor Air Quality Certification

**NOTE: Include this subparagraph when composite wood
or agrifiber products are included in project.**

For purposes of this specification, composite wood and agrifiber products include particleboard, medium density fiberboard (MDF), wheatboard, strawboard, panel substrates, and door cores. Products must contain no added urea-formaldehyde resins. Provide products certified to meet emissions requirements of either CARB 93120 or CDPH SECTION 01350 (limit requirements for either office or classroom spaces regardless of space type). Provide current product certification documentation from certification body.

]1.4 DELIVERY, STORAGE, AND HANDLING

Deliver casework to the jobsite in the original individual containers, complete with screws, keys, and instructions. Mark each container with the manufacturer's name and catalog number. Store casework in an adequately ventilated, dry location that is free of dust, water, or other contaminants and in a manner to permit access for inspection and handling. Handle casework carefully to prevent damage to the surfaces. Replace damaged items that cannot be restored to like-new condition.

PART 2 PRODUCTS

2.1 PRODUCT SUSTAINABILITY CRITERIA

For products in this section, where applicable and to extent allowed by performance criteria, provide and document the following:

[2.1.1 Recycled Content for Healthcare Casework Materials

**NOTE: Use materials with recycled content,
calculated on the basis of post-industrial and
post-consumer percentage content where appropriate
for use. Designer must verify suitability,
availability within the region, cost effectiveness
and adequate competition (including verification of
bracketed percentages included in this guide
specification) before specifying product recycled
content requirements.**

Recycled content is identified for some products in this section; provide documentation in accordance with Section 01 33 29 SUSTAINABILITY REPORTING paragraph RECYCLED CONTENT. Other products listed in this section may be available with recycled content; identify those products that meet project requirements for recycled content, and provide documentation in accordance with Section 01 33 29 SUSTAINABILITY REPORTING paragraph RECYCLED CONTENT.

]2.1.2 Certified Sustainably Harvested Wood

NOTE: Use certified sustainably harvested wood where suitable for application and cost effective. Designer must verify suitability, availability within the region, cost effectiveness, and adequate competition before specifying these certifications.

Certified sustainably harvested wood is identified for some products in this section; provide documentation in accordance with Section 01 33 29 SUSTAINABILITY REPORTING paragraph BIOBASED PRODUCTS. Other products listed in this section may be available as certified sustainably harvested wood; identify those products that meet project requirements for certified sustainably harvest wood, and provide documentation in accordance with Section 01 33 29 SUSTAINABILITY REPORTING paragraph BIOBASED PRODUCTS.

]2.1.3 Reduce Volatile Organic Compounds (VOC) (LOW-EMITTING MATERIALS) for Products

Reduced VOC content is identified for some products in this section; provide documentation in accordance with Section 01 33 29 SUSTAINABILITY REPORTING paragraph REDUCE VOLATILE ORGANIC COMPOUNDS (VOC) (LOW-EMITTING MATERIALS). Other products listed in this section may be available with reduced VOC content; identify those products that meet project requirements for reduced VOC content, and provide documentation in accordance with Section 01 33 29 SUSTAINABILITY REPORTING paragraph REDUCE VOLATILE ORGANIC COMPOUNDS (VOC) (LOW-EMITTING MATERIALS).

2.2 CASEWORK

NOTE: Joint schedule numbers used in MIL-STD-1691 provide the Military Medical Services a uniform basis for identifying casework items in medical and dental facilities. Any items required which are not covered by MIL-STD-1691 should be described appropriately and identified on the drawings with a new assigned number.

Submit for approval Drawings showing layout of casework at 1:20 3/4 inch equals one foot scale. Indicate details of construction and rough-in requirements. Indicate whether cabinets are metal or wood, whether countertop is corrosion-resisting steel or plastic laminate, and whether sink is coated with [modified epoxy resin] [polypropylene] [polyethylene] or corrosion-resisting steel. All wood products must be formaldehyde free. Verify job condition affecting the work and obtain accurate field measurements for incorporation into drawings. Locate structural members, required utilities and services provided by other sections of this

specification. Submit details and information necessary for fabrication and installation, manufacturer's printed data, catalog cuts, and instructions for installation and cleaning. Provide casework as scheduled on the detail drawings. Factory fabricate of manufacturer's standard sizes and finishes and conform to MIL-STD-1691, and the requirements specified below. Supplementary ordering data are as follows: [____]. Casework items are identified on drawings with numbers preceded by the letters "C" and "D". These numbers are Joint Schedule Numbers in MIL-STD-1691.[Material finish and color shall be [in accordance with Section 09 06 00 SCHEDULES FOR FINISHES] [____].]

2.2.1 Medical Casework

NOTE: Plastic laminated casework may be used in non corrosive areas such as hospital rooms and nursing stations. Corrosion resisting steel should be specified for areas, such as laboratories, where highly corrosive chemicals are handled. Enameled carbon steel casework should be utilized to the maximum practicable extent in lieu of corrosion-resistant steel.

Provide medical casework of [baked enamel carbon steel] [corrosion resisting steel] [wood core or carbon steel covered with laminated plastic sheets]. Color of finish [____] [in accordance with color schedule as indicated] [selected by the Contracting Officer from the manufacturer's standard colors].

2.2.1.1 Recycled Content

NOTE: Use materials with recycled content, calculated on the basis of post-industrial and post-consumer percentage content where appropriate for use. Designer must verify suitability, availability within the region, cost effectiveness and adequate competition (including verification of bracketed percentages included in this guide specification) before specifying product recycled content requirements.

Research shows the product is commonly available above the minimum recycled content percentages shown below. However, higher percentages may be available. Based on research, insert desired minimum percentages into the empty set of brackets.

[Baked enamel carbon steel must contain a minimum of [40][____] percent recycled content, as calculated by the sum of the percentage of pre-consumer and 1/2 the percentage of post-industrial recycled steel content. Provide data identifying percentage of recycled content for baked enamel carbon steel medical casework.] [Corrosion resisting steel must contain a minimum of [40][____] percent recycled content, as calculated by the sum of the percentage of pre-consumer and 1/2 the percentage of post-industrial recycled steel content. Provide data identifying percentage of recycled content for corrosion resisting steel medical

casework.] [Wood core must contain a minimum of [50][____] percent recycled content, as calculated by the sum of the percentage of pre-consumer and 1/2 the percentage of post-industrial recycled wood content. Provide data identifying percentage of recycled content for wood core medical casework.] [Carbon steel covered with laminated plastic sheets must contain a minimum of [40][____] recycled content, as calculated by the sum of the percentage of pre-consumer and 1/2 the percentage of post-industrial recycled steel content. Provide data identifying percentage of recycled content for carbon steel medical casework.]

2.2.1.2 Sustainably Harvested Wood

NOTE: Use certified sustainably harvested wood where suitable for application and cost effective. Designer must verify suitability, availability within the region, cost effectiveness, and adequate competition before specifying this certification.

Wood materials must contain a minimum of [50][____] percent wood that is certified sustainably harvested. Provide documentation that certified sustainably harvested wood for medical casework is used and identify percentage.

2.2.2 Dental Casework

NOTE: When selection is to be made from manufacturer's standard samples, specify whether solids or woodgrains are required.

Provide dental operator casework of [wood core] [carbon steel] covered with laminated plastic sheets. Pattern, color and finish of decorative laminated plastic for exteriors of casework [____] [in accordance with color schedule as indicated] [selected by the Contracting Officer from the manufacturer's standard [color] [woodgrain] samples].

NOTE: Use materials with recycled content, calculated on the basis of post-industrial and post-consumer percentage content where appropriate for use. Designer must verify suitability, availability within the region, cost effectiveness and adequate competition (including verification of bracketed percentages included in this guide specification) before specifying product recycled content requirements.

Research shows the product is commonly available above the minimum recycled content percentages shown below. However, higher percentages may be available. Based on research, insert desired minimum percentages into the empty set of brackets.

Wood core covered laminated plastic sheets must contain a minimum of [50][____] percent post-industrial recycled wood content. Provide data

identifying percentage of recycled content for wood core dental casework.]
 [Carbon steel covered laminated plastic sheets must contain a minimum of
 [40][____] percent post-industrial recycled steel content. Provide data
 identifying percentage of recycled content for carbon steel dental casework.
]

2.2.3 Dental Prosthetics Casework

Provide dental prosthetics casework of [baked enamel carbon steel]
 [corrosion resisting steel]. Color of finish [____] [in accordance with
 color schedule as indicated] [selected by the Contracting Officer from the
 manufacturer's standard colors].

**NOTE: Use materials with recycled content,
 calculated on the basis of post-industrial and
 post-consumer percentage content where appropriate
 for use. Designer must verify suitability,
 availability within the region, cost effectiveness
 and adequate competition (including verification of
 bracketed percentages included in this guide
 specification) before specifying product recycled
 content requirements.**

**Research shows the product is commonly available
 above the minimum recycled content percentages shown
 below. However, higher percentages may be
 available. Based on research, insert desired minimum
 percentages into the empty set of brackets.**

Baked enamel carbon steel must contain a minimum of [40][____] percent
 post-industrial recycled steel content. Provide data identifying
 percentage of recycled content for baked enamel carbon steel dental
 prosthetics casework.] [Corrosion resisting steel must contain a minimum
 of [40][____] percent post-industrial recycled steel content. Provide data
 identifying percentage of recycled content for corrosion resisting steel
 dental prosthetics casework.]

2.2.4 Countertops

Provide countertops of [corrosion-resisting steel] [plastic laminate
 covered plywood] [plastic laminate covered particleboard] [modified epoxy
 resin] [or] [resin coated laminated pressed wood fiber]. In lieu of
 individual samples, complete minimum size casework may be submitted as
 samples. Mock-up units are not acceptable. Samples shall be of sufficient
 size to show color, pattern, and method of assembly. Some requirements are:

Countertop and backsplash	One section, containing both
Door and drawer front	One of each, with hardware mounted
Melamine plastic color samples	approx 50 X 75 mm 2 X 3 inch size
Stain/color samples	approx 50 by 75 mm 2 by 3 inch size

[2.2.4.1 Recycled Content

NOTE: Use materials with recycled content, calculated on the basis of post-industrial and post-consumer percentage content where appropriate for use. Designer must verify suitability, availability within the region, cost effectiveness and adequate competition (including verification of bracketed percentages included in this guide specification) before specifying product recycled content requirements.

Research shows the product is commonly available above the minimum recycled content percentages shown below. However, higher percentages may be available. Based on research, insert desired minimum percentages into the empty set of brackets.

[Corrosion-resisting steel must have a minimum of [40][_____] percent post-industrial recycled steel content. Provide data identifying percentage of recycled content for corrosion resisting steel countertops.]
[Plastic Laminate (plywood or particleboard) must have a minimum of [50][_____] percent post-industrial recycled wood content. Provide data identifying percentage of recycled wood content for plastic laminate countertops.]

]2.2.4.2 Sustainably Harvested Wood

Wood materials must contain a minimum of [50][_____] percent wood that is certified sustainably harvested. Provide documentation that certified sustainably harvested wood for countertops is used and identify percentage.

Provide certification of indoor air quality for composite wood and agrifiber products used in countertops.

2.3 PLUMBING FIXTURES

Provide faucet, trap and drain fittings, gas, air and vacuum cocks as required. Provide connection conforming to the requirements specified in Section 22 00 70 PLUMBING, HEALTHCARE FACILITIES.

PART 3 EXECUTION

3.1 INSTALLATION

Install casework in a manner that does not damage the work of other trades. Secure the casework in place in true alignment, level, and plumb. Secure units with screws through backs to cleats that have been anchored to building structure with toggle or expansion bolts.

Do not install building construction materials that show visual evidence of biological growth.

3.1.1 Wall Hung Cabinets

Install wall-hung cabinets to support the weight of the cabinets plus the normally expected weight of the contents of the cabinets. Space fasteners

300 mm 12 inch on center using at least three bolts in each 900 or 1200 mm 3 or 4 foot unit width. Join adjacent cabinets in an assembly together at top and bottom with inconspicuous bolts or clips. Seal joints between the casework and wall surfaces which are not larger than the joints between casework sections with sealant conforming to ASTM C920, Type M, Grade NS, Class 25, Use NT. Close larger joints with filler strips of the same material and finish as adjacent casework. Cut filler strips to the contour of the wall surface and secure to the casework with concealed nails or screws. Use filler strips no wider than 150 mm 6 inch.

3.1.2 Floor Mounted Cabinets

Set floor-mounted metal cabinets on a common metal base or integral base, in assemblies up to 1800 mm 6 feet in length in rooms having concrete or resilient flooring. Bolt cabinets to bases at cabinet corners. Face metal bases with resilient material to match wall base in space where the cabinets are located. Fasten together adjoining cabinets at top and bottom of front and back with bolts placed inconspicuously inside cabinets. Set metal cabinets in rooms having terrazzo or ceramic-tile floors on concrete or masonry bases with exposed faces finished the same as other bases in the room. Seal flush openings between cabinet and wall surfaces, due to irregularity of surfaces, with Type S or M, Grade NS, Class 12.5, use NT, conforming to ASTM C920. Close exposed-to-view openings larger than joints in tile work with filler or scribing strip of the same material and finish as adjacent casework. Cut filler to contour of wall surface and secure to casework with concealed sheet-metal screws. Use minimum width and number of fillers consistent with need and in no case shall filler exceed 150 mm 6 inch in width.

3.1.3 Countertops

Height of counter tops as indicated. Where required, toe space at front of cabinets shall be provided by installing front face of cabinets 75 mm 3 inch in front of face of base. Where toe space is not required, face of base and cabinets shall be flush. Bases must have a height of approximately 100 mm 4 inch. Install all items as required for proper operation in accordance with the manufacturer's directions.

3.2 INSPECTION AND CLEANING

Inspect placed items for proper location, fastening, connection to utilities, operation, and for damage which may have occurred during installation. Put each item into service to prove proper operation. Correct defects disclosed during inspection. Clean cabinets and countertops in accordance with manufacturer's instructions.

-- End of Section --