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USACE / NAVFAC / AFCEA / NASA UFGS-31 31 16.21 (August 2008)  
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Preparing Activity: USACE Superseding  
UFGS-31 31 16.21 (April 2006)

UNIFIED FACILITIES GUIDE SPECIFICATIONS

References are in agreement with UMRL dated April 2010

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08/08

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### SECTION 31 31 16.21

#### MESH TERMITE BARRIER 08/08

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NOTE: This guide specification covers the requirements for mesh termite barrier for termite control. This UFGS is not for a soil treatment.

Edit this guide specification for project specific requirements by adding, deleting, or revising text. For bracketed items, choose applicable items(s) or insert appropriate information.

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

Comments and suggestions on this guide specification are welcome and should be directed to the technical proponent of the specification. A listing of technical proponents, including their organization designation and telephone number, is on the Internet.

Recommended changes to a UFGS should be submitted as a Criteria Change Request (CCR).

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## PART 1 GENERAL

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NOTE: Termite infestation exists throughout the United States and overseas areas with the exception of Alaska. Mesh termite barriers can be prescribed for installation at all sites where termites are likely to establish colonies and make concealed access to wood construction, when it is deemed appropriate and cost effective.

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### 1.1 REFERENCES

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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 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.

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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.

ASTM INTERNATIONAL (ASTM)

ASTM A 478 (1997; R 2008) Standard Specification for Chromium-Nickel Stainless Steel Weaving and Knitting Wire

ASTM A 580/A 580M (2008) Standard Specification for Stainless Steel Wire

## 1.2 SYSTEM DESCRIPTION

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**NOTE: The mesh physically prevents termites from entering the building.**

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Place the stainless steel mesh across all openings to the building (shrinkage cracks in concrete slabs and built penetrations in slabs and walls that termites may use). The mesh shall be bonded to the material surrounding the opening using bonding cement, when directed by the Contracting Officer, after determining that a quality bond can be obtained. A correct and complete installation with no gaps, penetrations or damage to the mesh is essential to achieve and effective barrier. [System Installers](#) shall be trained in the behavior of termites and the installation techniques of the mesh barrier.

## 1.3 SUBMITTALS

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**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. Submittals should be kept to the minimum required for adequate quality control.**

A "G" following a submittal item indicates that the submittal requires Government approval. Some

submittals are already marked with a "G". Only delete an existing "G" if the submittal item is not complex and can be reviewed through the Contractor's Quality Control system. Only add a "G" 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.

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

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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.] Submit the following in accordance with Section 01 33 00 SUBMITTAL PROCEDURES:

#### SD-02 Shop Drawings

Installation[; G][; G, [\_\_\_\_\_]]

Shop drawings of mesh installation at perimeter, joint, and penetration conditions.

#### SD-03 Product Data

##### Materials

Descriptive data for materials used in this work.

##### Barrier Mesh

Manufacturer's label and Material Safety Data Sheet (MSDS) proposed for use.

##### Manufacturer's guidance

Manufacturer's installation instruction manual.

##### Visual Inspection Guide

Manufacturer's visual inspection guide.

##### Site Verification

Written verification that site conditions are as required and other site work will not disturb the installation.

#### SD-04 Samples

##### Barrier Mesh

Samples of stainless steel mesh to be used in this work, 102 x 102 mm 4 x 4 inches.

#### SD-07 Certificates

##### System Installers

Qualifications of installer's personnel, level of accreditation and the effective time period of the accreditation level.

##### Materials

Written verification from the manufacturer that the material furnished meets the specified requirements.

#### 1.4 DELIVERY, STORAGE, AND HANDLING

Deliver materials to the site in original, unbroken packaging and containers, with original labels in place. The bonding cement shall be in the original sealed containers with all labels intact to include any EPA designation. Store materials in conformance with manufacturer's recommendations.

#### 1.5 WARRANTY

Provide a minimum 1-year warranty.

#### PART 2 PRODUCTS

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NOTE: Check with local agencies to determine the local building code requirements and specifications to ensure conformance where required.  
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#### 2.1 MATERIALS

##### 2.1.1 Asbestos Prohibition

No asbestos containing materials or equipment are permitted at the job site. Ensure that materials proposed for the project are asbestos free.

##### 2.1.2 Barrier Mesh

Stainless steel mesh shall conform to ASTM A 478 and ASTM A 580/A 580M, Type A1AA marine grade 316 stainless steel mesh of 0.18 mm 0.007 inch diameter wire with mesh openings of 0.66 x 0.45 mm 0.026 x 0.018 inches.

##### 2.1.3 Accessories

Parging adhesives, bonding cement, clamps, ties, and other accessories as recommended by the manufacturer.

## PART 3 EXECUTION

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NOTE: The stainless steel mesh must be installed in a manner to provide maximum protection to the dwelling. The material provides a physical barrier to the termites, thus, preventing entry. A range of techniques and material widths may be required to meet site conditions. The designer is required to determine the extent of openings to be covered to provide quantity estimates for the material installed.

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### 3.1 SITE VERIFICATION

#### 3.1.1 Site Preparation

Site preparation shall be in accordance with Sections 31 11 00 CLEARING AND GRUBBING, 31 00 00 EARTHWORK, 32 92 19 SEEDING, 32 92 23 SODDING, 32 92 26 SPRIGGING, AND 32 93 00 EXTERIOR PLANTS. Work related to final grades, landscape plantings, foundations, or any other alterations to finished construction that might alter the condition of the site, shall be coordinated with this specification. Do not proceed until any unsatisfactory conditions detrimental to timely and proper completion of the work have been corrected.

#### 3.1.2 Ground Preparation

Eliminate termite food sources by removing debris from the clearing and grubbing operations and construction wood scraps such as ground stakes, form boards, and scrap lumber from the work area, before installing the mesh barrier.

#### 3.1.3 Verification

Before installing the mesh, verify that final grades are as indicated and smooth grading has been completed. Soil particles in the work area shall be finely graded with particles no larger than 25 mm 1 inch and compacted to eliminate soil movement to the greatest degree. The condition of the site shall meet the manufacturer's recommendations prior to installing the mesh barrier.

### 3.2 INSTALLATION

Install the mesh barrier in accordance with the manufacturer's recommendations. The stainless steel mesh shall be lap-jointed 10 to 15 mm 0.39 to 0.59 inch. The joint may be strengthened by using bonding cement a minimum distance of 500 to 1000 mm 20 to 40 inches along the joint. Penetrations and shrinkage cracks through concrete slabs shall be sealed as recommended.

### 3.3 PROTECTION

The installed mesh shall be protected as required or directed.

### 3.4 VISUAL INSPECTION GUIDE

To maintain resistance to termites, the system shall be complete and not disturbed, penetrated or damaged during the remaining contract time period. The installer shall provide [manufacturer's guidance](#) for performing a visual assessment of the installed mesh barrier to ensure the mesh barrier provides the designed termite physical barrier.

### 3.5 REPAIRS

If live subterranean termite entry is discovered during the warranty period, provide an evaluation of the site and repair the installed mesh barrier and any damage occurred, as required.

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