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UNIFIED FACILITIES GUIDE SPECIFICATIONS

Latest change not indicated by CHG tags

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## UNIFIED FACILITIES GUIDE SPECIFICATIONS

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### SECTION 01 75 00

#### STARTING AND ADJUSTING 10/06

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NOTE: This specification covers the requirements  
for system testing and acceptance.

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

##### 1.1 SUMMARY

Requirements of this Section apply to, and are a component part of, each  
section of the specifications.

##### 1.2 REFERENCES

Not Used

##### 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.] [for 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:

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NOTE: Edit the following Submittals to fit the requirements of the project.

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#### SD-01 Preconstruction Submittals

Submit [Verification of Prior Experience](#) [; G] [; G, [\_\_\_\_]] and expertise with similar project scope

Submit [Documentation of Manufacturer's Prior Experience](#) [; G] [; G, [\_\_\_\_]] and expertise with similar project materials and systems

[Quality Control Plan](#) [; G] [; G, [\_\_\_\_]] including testing and start-up schedule

[Manufacturer's Sample Warranty](#) and [Operation and Maintenance Data](#) [; G] [; G, [\_\_\_\_]]

[Provide Evidence](#) that products used within this specification are manufactured in the United States.

#### SD-02 Shop Drawings

- [ Drawings, Diagrams and Schedules[; G][; G, [\_\_\_\_]] specifically prepared to illustrate [some portion of the work][\_\_\_\_]]
- [ Diagrams and Instructions[; G][; G, [\_\_\_\_]] from a manufacturer or fabricator for use in producing the product and as aids to the Contractor for integrating the product or system into the project]
- [ Drawings[; G][; G, [\_\_\_\_]] prepared by or for the Contractor to show how multiple systems and interdisciplinary work will be coordinated]

#### SD-03 Product Data

Catalog cuts[; G][; G, [\_\_\_\_]], illustrations, schedules, diagrams, performance charts, instructions and brochures illustrating size, physical appearance and other characteristics of materials, systems or equipment for some portion of the work

Samples of warranty language[; G][; G, [\_\_\_\_]] when the contract requires [extended][no dollar limit] product warranties

#### SD-05 Design Data

Design Calculations[; G][; G, [\_\_\_\_]], mix designs, analyses or other data pertaining to [a part of work][\_\_\_\_]

#### SD-06 Test Reports

Submit test reports in accordance with the paragraphs entitled, "Factory Tests[; G][; G, [\_\_\_\_]]", "Functional Field Test[; G][; G, [\_\_\_\_]]" and "Final Acceptance Test,[; G][; G, [\_\_\_\_]]" of this section.

Submit test procedures and the recording forms according to paragraph entitled, "Test Procedures[; G][; G, [\_\_\_\_]]."

#### SD-07 Certificates

- [ Qualification of Manufacturer[; G][; G, [\_\_\_\_]]]
- Qualification of [Applicator][Installer][; G][; G, [\_\_\_\_]]
- Certify that the [applicator][installer] meets requirements specified under paragraph entitled "Qualification of [Applicator][Installer]."

#### SD-08 Manufacturer's Instructions

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**NOTE: Edit the manufacturer's instructions submission requirements as necessary for the system specified. Include bracketed requirements only as applicable to the system being specified.**  
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- [ Submit Manufacturer's Administrative Requirements[; G][; G, [\_\_\_\_]]]
- [ Demonstration and Training Information[; G][; G, [\_\_\_\_]]]

[ Submit **Manufacturer's Procedural Requirements**[; G][; G, [\_\_\_\_]]  
for initial checkout, startup, and adjusting to ensure safe  
operation during acceptance testing and commissioning.]

#### **SD-09 Manufacturer's Field Reports**

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NOTE: Edit the manufacturer's field reports  
submission requirements as necessary for the system  
specified. Include bracketed requirements only as  
applicable to the system being specified.  
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**Documentation of the Testing and Verification Actions**[; G][; G,  
[\_\_\_\_]] taken by manufacturer's representative [at the job  
site][, in the vicinity of the job site][, or on a sample taken  
from the job site], on a portion of the work, [during][after]  
installation, to confirm compliance with manufacturer's standards  
or instructions

#### **SD-10 Operation and Maintenance Data**

Refer to Section **01 78 23 OPERATION AND MAINTENANCE DATA** for detailed  
requirements and procedures.

**Operation and Maintenance Data** provided by the manufacturer to  
ensure the safe and efficient operation, maintenance and repair of  
the system or equipment provided.

[ **Safety and Security Data or Posters** provided by the manufacturer]

#### **1.3.1 Preconstruction and Pre-Testing Requirements**

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NOTE: Edit the following testing information based  
on the requirements of the scope, equipment, and/or  
system. For NASA projects, refer to the 2004  
version of the Reliability Centered Building and  
Equipment Acceptance Guide (RCBEA) to select the  
recommended Predictive Testing and Inspection (PT&I)  
procedures as stated in Article 2.1.

For other UFGS members, the acceptance testing  
criteria may be defined by their respective  
established guidelines, and must be verified prior  
to editing this section.

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The Contractor is responsible to deliver equipment and services to meet the  
requirements and specifications of their respective contract. All  
equipment must be free of latent manufacturing and installation defects.  
Acceptance criteria must be clearly defined to establish required baselines  
for future maintenance and life-cycle evaluations. The Government reserves  
the option to elect performance of acceptance testing by internal  
personnel, or a designated third party. Regardless of who performs the  
acceptance testing, the requirements of acceptance must be met by the  
Contractor.

Submit the following for review and approval prior to the commencement of work and any testing, whether such testing is on site or elsewhere:

\*\*\*\*\*  
NOTE: Edit the following Submittals to fit the requirements of the project as selected in the Submittal Article above.  
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- a. [Verification of prior experience](#) and expertise with similar project scope
- b. [Documentation of manufacturer's prior experience](#) and expertise with similar project materials and systems
- c. [Quality control plan](#)
- d. [Manufacturer's Sample Warranty](#) and [Operation and Maintenance Data](#), with details regarding start-up procedures
- e. [Manufacturer's administrative requirements](#)
- f. [Manufacturer's procedural requirements](#)
- g. [Demonstration and Training Information](#)

Contractor must submit the following certifications:

- a. [Provide evidence](#) that products used within this specification are manufactured in the United States.
- b. [Qualification of Manufacturer](#), including current licenses and insurance.
- c. [Qualification of \[Applicator\] \[Installer\]](#), including licenses and insurance.

#### 1.3.2 Shop Drawings and Diagrams

Submit the following shop drawings, record drawings, and diagrams as required to correctly execute the installation of the work:

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NOTE: Edit the following Submittals to fit the requirements of the project as selected in the Submittal Article above.  
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- [ a. [Drawings, diagrams and schedules](#) specifically prepared to illustrate [some portion of the work] [\_\_\_\_\_] ]
- [ b. [Diagrams and instructions](#) from a manufacturer or fabricator for use in producing the product and as aids to the Contractor for integrating the product or system into the project ]
- [ c. [Drawings](#) prepared by or for the Contractor to show how multiple systems and interdisciplinary work will be coordinated ]

### 1.3.3 Product and Design Data

Contractor must submit all product data and any [design calculations](#), mix designs, analyses or other data pertaining to [a part of work] [\_\_\_\_\_] to ensure a complete functional installation; including, but not limited to:

- a. [Catalog cuts](#), illustrations, schedules, diagrams, performance charts, instructions and brochures illustrating size, physical appearance and other characteristics of materials, systems or equipment for some portion of the work
- b. [Samples of warranty language](#) when the contract requires [extended] [no dollar limit] product warranties
- c. [Operation and Maintenance Data](#) provided by the manufacturer to ensure the safe and efficient operation, maintenance and repair of the system or equipment provided.
- d. [Safety and Security Data or posters](#) provided by the manufacturer to be posted in a conspicuous visible location for operational and maintenance personnel.

### 1.3.4 Tests Required

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**NOTE: Edit the following testing information based on the requirements of the scope, equipment, and/or system. Clearly define the acceptance criteria testing parameters and the recommended Predictive Testing and Inspection (PT&I) procedures.**  
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Perform tests to verify proper functioning of fire protection, fire suppression, HVAC, compressed air, electrical switchgear, protective relaying, fluid and gas systems, pump/motor combinations, boiler systems, hydraulic and pneumatic control, condition/performance monitoring systems, energy control and monitoring systems, and other assemblies and components that need to be tested as an interrelated whole.

#### 1.3.4.1 [Factory Tests](#)

Submit certified copies of required tests performed at the factory to verify proper build. These test results will be used in the "Final Acceptance Test" section to verify no shipping damage and proper installation.

#### 1.3.4.2 [Functional Field Test](#)

Contractor must perform functional field tests to verify that the system and components have been properly installed and are functioning properly. Perform test(s) in the presence of the Contracting Officer. Acceptance will be issued when system has performed per other sections and referenced industry standards.

Coordinate and submit [documentation of the testing and verification actions](#) taken by manufacturer's representative [at the job site] [, in the vicinity of the job site] [, or on a sample taken from the job site], on a portion of the work, [during] [after] installation, to confirm compliance with manufacturer's standards or instructions.

#### 1.3.4.3 Final Acceptance Test

Perform a formal test with full documentation using the approved recording form. Contracting Officer will witness this test and issue a written final acceptance. Provide final test data to the Contracting Officer with a cover letter clearly marked with the system name, date, and the words "Final Test Data - Forward to the Systems Engineer/Condition Monitoring Office/Predictive Testing Group for inclusion in the Maintenance Database."

#### 1.3.4.4 Test Procedures

Submit test procedure and recording forms that document the test steps for approval to the Contracting Officer 21 calendar days prior to the proposed test date. Procedure must clearly state step by step instruction to verify system parameters, components, and functions.

### PART 2 PRODUCTS

Not Used

### PART 3 EXECUTION

Not Used

-- End of Section --