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USACE / NAVFAC / AFCEC / NASA | UFGS-11 47 00 (August 2017)
Change 1 - 08/18

Preparing Activity: USACE | Superseding
UFGS-11 47 00 (February 2009)

UNIFIED FACILITIES GUIDE SPECIFICATIONS

References are in agreement with UMRL dated July 2023
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SECTION 11 47 00

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08/17, CHG 1: 08/18

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SECTION 11 47 00

ICE MACHINES
08/17, CHG 1: 08/18

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NOTE: This guide specification covers the requirements for equipment used to produce, store, autoclean, and dispense ice.

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).
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PART 1 GENERAL

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NOTE: This section does not address the manufacturing of block ice.

On the drawings, show:

1. A 1:50 1/4 inch scale floor plan with layout of all food service equipment and Naval Equipment Symbols.

2. Food Service Equipment Schedule laid out in accordance with NAVSUP41, current US Army Quartermaster Center and School equipment schedule, and specified design requirements.

3. Floor, wall, and ceiling penetrations.

4. Raised bases, retainer curbs, or depressions.

5. Recessed, grated floor drains required for equipment.

6. Disconnect switches.

7. Electrical chases and raceways and plumbing chases.

8. Utility connections to building water, sanitary, electrical, and other utility systems. Convenience outlets at point of use for plug-in equipment.

9. All Contractor built-to-order items, per Food Service Equipment Schedule, shown and coordinated with the specifications.

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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.

NSF INTERNATIONAL (NSF)

NSF/ANSI 12	(2018) Automatic Ice Making Equipment
NSF/ANSI 14	(2022) Plastics Piping System Components and Related Materials
NSF/ANSI 169	(2019)Special Purpose Food Equipment and Devices

U.S. DEPARTMENT OF ENERGY (DOE)

Energy Star	(1992; R 2006) Energy Star Energy Efficiency Labeling System (FEMP)

U.S. NATIONAL ARCHIVES AND RECORDS ADMINISTRATION (NARA)

29 CFR 1910-SUBPART D	Walking - Working Surfaces
29 CFR 1910.144	Safety Color Code for Marking Physical Hazards
29 CFR 1910.145	Specifications for Accident Prevention Signs and Tags
29 CFR 1910.306	Specific Purpose Equipment and Installations

1.2 SUMMARY

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NOTE: Indicate the configuration and layout for all ice making equipment, with elevations and equipment identified by number. Show "Food Service Equipment Schedule" on the drawings using the same identification numbers[as indicated on the current US Army Quartermaster Center and School equipment schedule]. Ensure that all Contractor built-to-order items, per Food Service Equipment Schedule", are shown and coordinated with the specifications.

Designer must coordinate with other sections for final connection of equipment.

Details of particular equipment and installations are provided on Naval Food Service Division drawings. Use these NAVFSD drawings as a basis for the project details. Contact Supported Command to assist with identification of kitchen equipment necessary to meet mission requirements.

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The work includes [furnishing and] [installing] [and modifying existing] ice making equipment, including dispensing, production, storage [, and autocleaning]equipment and related work. Include coordination of delivery through existing finished opening and vertical handling limitations within the building.

a. Provide rough-in and connect utilities to equipment in accordance with requirements specified in other sections of this specification and in conformance with the physical dimensions, capacities, manufacturer's instructions, and other requirements of the equipment furnished.

b. Equipment specified must also conform to the applicable requirements of the following reference standards: NSF/ANSI 12, NSF/ANSI 14, NSF/ANSI 169, and Energy Star for powered equipment.

c. Refer to Section 11 05 40 COMMON WORK RESULTS FOR FOOD SERVICE

EQUIPMENT for general requirements. Refer to Section 11 06 40.13 FOODSERVICE EQUIPMENT SCHEDULE for Food Service Equipment Schedule.

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, and corresponding submittal items in the text, to reflect only the submittals required for the project. The Guide Specification technical editors have classified 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 Army projects, fill in the empty brackets following the "G" classification, with a code of up to three characters 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.

The "S" classification indicates submittals required as proof of compliance for sustainability Guiding Principles Validation or Third Party Certification and as described in Section 01 33 00 SUBMITTAL PROCEDURES.

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" or "S" classification. Submittals not having a "G" or "S" classification are [for Contractor Quality Control approval.][for information only. When used, a code following the "G" classification identifies the office that will review the submittal for the Government.] Submit the following in accordance with Section 01 33 00 SUBMITTAL PROCEDURES:

SD-01 Preconstruction Submittals

Contractor's Field Verification Data; G[, [_____]]

SD-02 Shop Drawings

Detail Drawings; G[, [_____]]

Custom Fabricated Equipment; G[, [_____]]

Installation Instructions and Diagrams; G[, [_____]]

SD-03 Product Data

Ice Making Equipment

Ice Machine Autocleaning Equipment

Energy Star label for ice machine; S

SD-05 Design Data

Manufacturer's Applicable Literature; G[, [_____]]

SD-06 Test Reports

Manufacturer's Test Data; G[, [_____]]

Field Test Reports; G[, [_____]]

SD-07 Certificates

NSF Certification

UL Certification

SD-08 Manufacturer's Instructions

Manufacturer's Instructions; G[, [_____]]

SD-10 Operation and Maintenance Data

Ice Making equipment, Data Package 2; G[, [_____]]

Submit in accordance with Section 01 78 23 OPERATION AND MAINTENANCE DATA.

SD-11 Closeout Submittals

Manufacturer's Warranty

Contractor's Warranty for Installation

1.4 ADMINISTRATIVE REQUIREMENTS

1.4.1 Pre-Installation Meeting

Thirty [_____] days prior to the commencement of work, notify the Contracting Officer that the following items are prepared and ready for review:

1.4.1.1 Shop Drawings

Detail drawings, as specified, including insulation and utility requirements, product data, installation instructions and diagrams. Submit custom fabricated equipment drawings after approval of ice machine equipment drawings. Drawings must be 1:50 1/4 inch scale minimum.

1.4.1.2 Product Data

Submit the product data for the following equipment, as well as the associated manufacturer's data:

a. ice making equipment

b. ice machine autocleaning equipment

c. Manufacturer's applicable literature

d. Manufacturer's Test Data

e. Energy Star Labeled

f. Manufacturer's Instructions for shipping, handling, storage, installation, and start-up.

1.4.2 LIST OF EQUIPMENT

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NOTE: Edit the master "Food Service Equipment Schedule" in Section 11 06 40.13 carefully; retain items of equipment used for the project. The Equipment List is intended to be edited and included in the project Specification. List the information contained on the Equipment List on the Contract Drawings.

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Submit detailed Food Service Equipment List. Include submittal of NSF Certification, Energy Star Labeled and UL Certification for ice making equipment[and autocleaning equipment].

PART 2 PRODUCTS

2.1 MATERIALS

Provide ice making equipment conforming to OSHA standards 29 CFR 1910.144, 29 CFR 1910.145, 29 CFR 1910.306, Energy Star, and related NSF and UL standards. Floor areas adjacent to ice making equipment point of operation must conform to 29 CFR 1910-SUBPART D. Ice making equipment materials must conform to the requirements of Section 11 05 40 COMMON WORK RESULTS FOR FOOD SERVICE EQUIPMENT.

Provide ice machine that is Energy Star labeled. Provide data identifying Energy Star label for ice machine.

2.2 CONSTRUCTION OF FABRICATED EQUIPMENT

Construction and finish of fabricated equipment must conform to the requirements of Section 11 05 40 COMMON WORK RESULTS FOR FOOD SERVICE EQUIPMENT.

2.3 FACTORY TESTS AND CERTIFICATIONS

Submit [_____] copies of all Manufacturer's Test Data and certifications, including NSF Certification; UL Certification, and Energy Star Labeled

data to the Contracting Officer prior to the commencement of any installation work.

[2.4 AUTOMATIC CLEANING SYSTEM

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NOTE: Use automatic cleaning systems for ice machines, and schedule and perform routine ice machine cleaning automatically, reducing the need for a service technician to perform manual cleaning. Cleaning cycles are normally scheduled for 2, 4 or 12 week cycles or less frequently.
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Provide ice making equipment with [internal] [external] automatic cleaning system with cleaning and sanitizing capability. Provide [115/60/1] [208-230/50/60/1], 0.3 total amps, with 15 amp maximum fuse electrical system. Include one month supply of cleaning and sanitizing fluid plus initial start-up and testing supply.

]PART 3 EXECUTION

3.1 EXAMINATION

Do not install items that show visual evidence of biological growth.

After becoming familiar with all details of the work, verify all existing dimensions, contract drawings, product data and all related conditions prior to commencing rough-in work. Advise the Contracting Officer of any discrepancies prior to ordering equipment. Submit Contractor's Field Verification Data prior to the pre-installation meeting.

3.2 INSTALLATION

Refer to Section 11 05 40 COMMON WORK RESULTS FOR FOOD SERVICE EQUIPMENT for detailed installation procedures, operation and maintenance manual requirements, training and project closeout procedures. Include all ice making [and autocleaning]equipment Field Test Reports.[Coordinate ice machine equipment installation with water filter system as specified in section 11 46 00.]

3.3 MANUFACTURER'S WARRANTY

Submit all manufacturers' signed warranties to Contracting Officer prior to final commissioning and acceptance.

3.4 CONTRACTOR'S WARRANTY FOR INSTALLATION

Submit contractor's warranty for installation to the Contracting Officer prior to final commissioning and acceptance.

-- End of Section --