

Description:

The purpose of the section is to highlight the current applicable standards for the design and construction of designated equipment related to food facility operations.

All work under this section shall be subject to the General Conditions for the project. Check each section for detail requirements. Requirements included under this section shall apply to all work under Division 22 a 23.

The work of all sections of Division 22 and 23 includes furnishing and installing the material, equipment, and systems completed as specified. The mechanical installation when finished shall be completed and coordinated, whole, ready for satisfactory service

Related Sections:

- TBD

Effective Date:

July 10, 2009

Applicable Standards:

- TBD

General Requirements:

1. Procedures

- The Contractor shall examine the premises and observe the conditions under which the work will be done or other circumstances which will affect the contemplated work. No allowance will be made subsequently in this connection for any error or negligence on the Contractor's part.
- The Contractor shall coordinate the work of the mechanical trades with the work and equipment specified elsewhere in order to assure a complete and satisfactory installation.
- Whenever the term "provide" is used, it shall mean "furnish and install in place, complete in all details".
- Manufacturer's catalog numbers or type of equipment, where specified herein are used for reference only. Similar products of approved equal equipment will be acceptable. The Engineer will evaluate all proposals and determine which, in his opinion, is acceptable.
- All work shall be in accordance with the latest applicable codes and regulations of the various regulatory bodies of the State of Maryland, the National Fire Prevention Association, and all other boards or departments having jurisdiction. Any items or requirements are permitted under the code and shall take preference.

2. Permits

- The Contractor shall procure all the necessary and usual permits, certificates of inspection, etc., which are required by the authorities having jurisdiction over this work, pay for all fees and charges connected herewith, including connection charges, and deliver same to the University.

3. Shop Drawings And Material

- Complete shop drawings and materials lists shall be submitted by the Contractor for the approval in accordance with the requirements of the GENERAL CONDITIONS. No work shall be fabricated or ordered by the Contractor until approval has been given.
- The Contractor shall submit for approval within 15 days of signing of contract, a schedule showing make, type, and manufacturer's name and trade designation, of all pieces of material and equipment.
- This schedule shall be accompanied by the manufacturer's specifications and shall give dimensions, kind of material, finish, etc., and such other detailed information as may be required.

- When approved, such schedule shall be an addition to the specifications herewith in that no variation will be permitted except with the approval of the Engineer.
- Complete shop drawings, showing dimensions, materials, arrangements, and other pertinent data shall be submitted; for materials and equipment readily identified in standard publications of various manufacturers, full descriptive catalog or other data shall be submitted.

4. Materials

- All materials shall be new; the best of their respective kinds, suitable for the conditions and duties imposed on them at the building and shall be of reputable manufacturers.
- The description, characteristics, and requirements of materials to be used shall be in accordance with qualifying conditions established in the following sections.

5. Workmanship

- All materials and equipment shall be installed and completed in a first class, workmanlike manner and in accordance with the best modern methods and practice.
- Any materials installed which shall not present an orderly and reasonably neat and/or workmanlike appearance shall be removed and replaced when so directed by the University.
- The removal and replacement of this work shall be done when directed in writing by the Contracting Officer, at the Contractor's expense.

6. Standards

- Where the following standards, codes or specifications are referred to in the Mechanical Section 22 and 23, the reference is to the particular standard, code, or specification, together with all amendments and errata applicable at the time bids are taken.

7. Abbreviations

- ADC Air Diffusion Council
- ASHRAE American Society of Heating Refrigerating and Air Conditioning Engineers
- ASTM American Society of Testing of Materials
- BOCA Building Officials Code Association
- NFPA National Fire Protection Association
- U.L. Underwriters Laboratories
- WSSC Washington Suburban Sanitary Commission

8. Drawing In General

- The general arrangement of mechanical ductwork and new dishwashing machine shall be as shown on the Contractor's shop drawings.
- Detailed drawings of proposed departures due to actual field conditions or other causes shall be submitted for approval and such changes shall be accomplished at no additional cost to the University.
- The Contractor shall carefully examine all contract drawings and shall be responsible for the proper fitting of materials and equipment in each location as indicated without substantial alteration.
- In as much as the drawings are generally diagrammatic and because of the small scale of the drawings, it is not possible to indicate all offsets, fittings, and accessories which may be required.
- The Contractor shall carefully investigate the structural and finish conditions affecting his work and shall arrange such work accordingly, furnishing such fittings, valves, transitions, accessories, etc., as may be required to meet such conditions, at no additional cost to the University.
- The right to make any reasonable change in location of sprinkler heads, routing of piping, valves, up to the time of roughing-in, is reserved without involving any additional expense to the University.

9. Electrical Work

- All electrical work regardless of the Section of these specifications under which it is performed or specified, shall conform to the applicable requirements of DIVISION 26 - ELECTRICAL.
- Electric heaters requiring electrical service shall be furnished complete with all internal wiring, controls, etc., as a part of that equipment under the section in which it is specified.

10. Work Schedule

- The Contractor shall coordinate, plan, and schedule all work to meet the work schedule as specified.

11. Cutting And Patching

- Under this section, the Contractor shall be responsible for cutting and patching necessary for the installation of his work.
- Cutting shall be done in a neat and workmanlike manner and no structural members shall be cut before receiving prior approval of the Engineer.
- Concrete walls and floors shall be core bored for piping.
- Patching shall be done by mechanics of the trade involved. All patch work finishes shall match the existing adjacent surfaces in finish and texture.
- During the floor and wall cutting operations, all equipment in the immediate area and the area below shall be covered with heavy gauge plastic sheets so as to protect equipment from dust and water damage applicable to work.

12. Demolition

- Unless indicated otherwise, all pipes, valves, fittings, and equipment that are removed shall become the property of the University. The University has the right to examine the materials. Those not accepted shall be the responsibility of the Contractor for disposal.
- The Contractor shall at all times keep the premises free from accumulation of waste materials and rubbish. At the completion of work, the Contractor shall remove all rubbish, tools, scaffolding, and surplus material from and about building and leave the area completely clear and clean.

13. Operating And Maintenance Manuals

- The Contractor shall furnish the University's Department of Physical Plant with three (3) manuals containing operating and maintenance instructions of the new dishwashing machine installed under this contract property indexed in a 3-ring binder.
- At the conclusion of installation, the Contractor shall train the University Operating Personnel in the satisfactory operation and maintenance of all items of the new dishwashing machine.
- Notify the Owner in writing at least 7 working days in advance prior to demonstration.
- Operating and maintenance manual must include the following:
 - Description of Machine
 - Operation/maintenance of machine
 - Shop drawing
 - Servicing, spare parts lists
 - Names and addresses of spare parts suppliers
 - Test reports
 - Certificates
 - Warranties
 - Narrative of System Operation

14. Outages

- The Contractor shall coordinate all outages affecting the operation of the facility with the University's Project Manager.

- The Project Manager shall be notified at least (10) working days in advance of any disruption in the existing sprinkler system, fire alarm, water, electrical or other service necessary for proper operation of the facility.
- Outages for water service tie-in shall be scheduled three (3) weeks in advance. Duration of the outage shall be kept to a minimum and may require work in evenings or weekends.

15. As-Built Drawings

- Upon the completion of work - the Contractor shall furnish to the FM-CAP Project Manager and Project Engineer two (2) sets of hard copies of As-Built Drawings showing the actual location of sprinkler heads and related piping work.

16. Tests

- All tests required in DIVISION 11 shall be performed.
- The Contractor shall demonstrate that all systems and equipment are operating satisfactorily.
- The University shall be notified at least seven (7) working days in advance of all tests and the tests shall be conducted to the University's entire satisfaction.
- Any imperfections or leaks found during the tests shall be corrected by repair or replacement and tests repeated until all defective pieces of equipment have been replaced and all systems and equipment operating in a satisfactory manner.

17. Guarantees

- The Contractor shall guarantee all materials and installation work for two (2) years from the date of satisfactory completion.

18. Protection

- The Contractor shall be responsible to protect existing installation from any damage caused by the Contractor's equipment/machine and labor.
- The Contractor shall be responsible to protect ductwork, equipment and other materials in the premises against any damage. Plastic covers and/or other suitable protective shields to be used to keep all items clean and free from debris or dirt.