

## SECTION 114000 - FOODSERVICE EQUIPMENT

### PART 1 - GENERAL

#### 1.1 RELATED DOCUMENTS

- A. Drawings and general provisions of the Contract, including General and Supplementary Conditions and Division 01 Specification Sections, apply to this Section.
- B. Refer to additional items specified on the Drawings that are not included in this Specification.

#### 1.2 SUMMARY

- A. Section Includes:
  - 1. Fabricated items and equipment.
  - 2. Cooking equipment.
  - 3. Walk-in refrigeration equipment.
  - 4. Powered food-preparation equipment.
  - 5. Ware washing equipment.
  - 6. Serving equipment.
  - 7. Tables, shelving, and storage racks.
- B. Refer to Drawing Sheet A-3.7 for a complete list of all equipment.
- C. Owner-Furnished Equipment: Where indicated, Owner will furnish equipment for installation by Contractor.
- D. Related Sections:
  - 1. Division 21, 22, and 23 Sections for supply and exhaust fans; exhaust ductwork; service roughing-ins; drain traps; atmospheric vents; valves, pipes, and fittings; fire-extinguishing systems; and other materials required to complete foodservice equipment installation.
  - 2. Division 23 Section "Commercial-Kitchen Hoods" for ventilation hoods.
  - 3. Division 26 Sections for connections to fire-alarm systems, wiring, disconnect switches, and other electrical materials required to complete foodservice equipment installation.

#### 1.3 SUBMITTALS

- A. Product Data: For each type of product indicated. Include the following:
  - 1. Manufacturer's model number.
  - 2. Accessories and components that will be included for Project.
  - 3. Clearance requirements for access and maintenance.
  - 4. Utility service connections for water, drainage, power, and fuel; include roughing-in dimensions.

- B. Shop Drawings: For fabricated equipment. Include plans, elevations, sections, roughing-in dimensions, fabrication details, utility service requirements, and attachments to other work.
- C. Samples for Initial Selection: For units with factory-applied color finishes.
- D. Samples for Verification: For each factory-applied color finish required, in manufacturer's standard sizes.
- E. Coordination Drawings: For foodservice facilities.
  - 1. Indicate locations of foodservice equipment and connections to utilities.
  - 2. Key equipment using same designations as indicated on Drawings.
  - 3. Include plans and elevations; clearance requirements for equipment access and maintenance; details of equipment support; and utility service characteristics.
  - 4. Include details of seismic bracing for equipment.
- F. Operation and Maintenance Data: For foodservice equipment to include in emergency, operation, and maintenance manuals. In addition to items specified in Division 01 Section "Operation and Maintenance Data," include the following:
  - 1. Product Schedule: For each foodservice equipment item, include the following:
    - a. Designation indicated on Drawings.
    - b. Manufacturer's name and model number.
    - c. List of factory-authorized service agencies including addresses and telephone numbers.
- G. Warranty: Samples of special warranty.

#### 1.4 QUALITY ASSURANCE

- A. NSF Standards: Provide equipment that bears NSF Certification Mark or UL Classification Mark certifying compliance with applicable NSF standards.
- B. BISSC Standards: Where applicable, provide bakery equipment that complies with BISSC/Z50.2.
  - 1. Provide BISSC-certified equipment.
- C. UL Certification: Provide electric and fuel-burning equipment and components that are evaluated by UL for fire, electric shock, and casualty hazards according to applicable safety standards, and that are UL certified for compliance and labeled for intended use.
- D. Steam Equipment: Provide steam-generating and direct-steam heating equipment that is fabricated and labeled to comply with ASME Boiler and Pressure Vessel Code.
- E. Regulatory Requirements: Install equipment to comply with the following:
  - 1. ASHRAE 15, "Safety Code for Mechanical Refrigeration."
  - 2. NFPA 54, "National Fuel Gas Code."
  - 3. NFPA 70, "National Electrical Code."

- 4. NFPA 96, "Ventilation Control and Fire Protection of Commercial Cooking Operations."
- F. Seismic Restraints: Comply with SMACNA's "Kitchen Ventilation Systems and Food Service Equipment Fabrication and Installation Guidelines," Appendix A, "Seismic Restraint Details," unless otherwise indicated.
- G. Preinstallation Conference: Conduct conference at Project site.

#### 1.5 PROJECT CONDITIONS

- A. Field Measurements: Verify actual dimensions of construction contiguous with foodservice equipment by field measurements before fabrication. Indicate measurements on Coordination Drawings.

#### 1.6 COORDINATION

- A. Coordinate foodservice equipment layout and installation with other work, including layout and installation of lighting fixtures, HVAC equipment, and fire-suppression system components.
- B. Coordinate locations and requirements of utility service connections.
- C. Coordinate sizes, locations, and requirements of the following:
  - 1. Overhead equipment supports.
  - 2. Equipment bases.
  - 3. Floor depressions.
  - 4. Insulated floors.
  - 5. Floor areas with positive slopes to drains.
  - 6. Floor sinks and drains serving foodservice equipment.
  - 7. Roof curbs, equipment supports, and penetrations.

#### 1.7 WARRANTY

- A. Refrigeration Compressor Warranty: Manufacturer's standard form in which manufacturer agrees to repair or replace compressors that fail in materials or workmanship within specified warranty period.
  - 1. Failure includes, but is not limited to, inability to maintain set temperature.
  - 2. Warranty Period: Five years from date of Substantial Completion.

### PART 2 - PRODUCTS

#### 2.1 FABRICATED ITEMS AND EQUIPMENT

- A. Stainless-Steel Dish Table. Refer to Drawings. Also refer to Drawings for pre-rinse unit.

1. Description: Dish table with trough and garbage disposal sink. Fabricate unit of welded stainless steel, sound deadened, with custom guide assembly and strainer per Drawings.
    - a. Bowl / Trough: Stainless steel, Type 304, 0.078 inch (1.98 mm) ( 14 gage) thick.
    - b. Integral Drainboard: Stainless steel, Type 304, 0.078 inch (1.98 mm) thick.
    - c. Body: Stainless steel, Type 304, 0.078 inch (1.98 mm) thick.
      - 1) Back Splash: 13 inches (330 mm).
      - 2) Side Splash: 13 inches (330 mm).
      - 3) Bullnose front edge.
    - d. Legs and Feet: Stainless-steel tubing legs with adjustable bullet feet.
    - e. Accessories:
      - 1) Faucets and Spouts. See Drawings.
      - 2) Prerinse Faucet.
      - 3) Vacuum breaker.
      - 4) Dam strainer.
      - 5) Continuous waste.
      - 6) Scrap trough.
      - 7) Scrap hole with collar.
  2. Stainless-Steel Sheet: ASTM A 240/A 240M, austenitic stainless steel, type as indicated.
  3. Fabrication: Prepare dish table and sink for installation of the following equipment items:
    - a. Booster water heater on dish machine.
    - b. Garbage disposal.
  4. Stainless-Steel Finish: Directional satin finish, No. 4.
- B. Stainless-Steel Prep / Clean Tables (Counters): Refer to Drawings. Also refer to Drawings for faucets and pre-rinse unit.
1. Top Construction:
    - a. Material: Stainless steel, Type 304, 0.0781-inch (14 gage) specified thickness, reinforced and sound deadened.
    - b. Back Splash: Manufacturer's standard height.
    - c. Edge: Bullnose.
  2. Undershelf:
    - a. Stainless steel, Type 304, 0.0500-inch (1.3-mm) specified thickness.
    - b. Welded.
  3. Cross bracing:
    - a. Welded to legs.
    - b. Stainless-steel tubing.

4. Sinks: Stainless steel, Type 304, 0.0781-inch (2.0-mm) specified thickness, welded into table top and including the following at the two-compartment sink and three-compartment sink:
    - a. Faucet and Spout: See Drawings.
    - b. Vacuum breaker.
    - c. Lever waste.
    - d. Basket strainer.
  5. Legs: Stainless-steel tubing.
  6. Feet: Stainless-steel adjustable bullets.
- C. Stainless-Steel Restroom Shelving: 14 gauge stainless steel per details on Drawings.

## 2.2 COOKING EQUIPMENT

- A. (Refer to Kitchen Equipment Schedule for additional items and accessories)
- B. Ovens:
1. Products: Subject to compliance with requirements, provide the following:
    - a. Vulcan VC44GD – Double Stack.
  2. Description: Gas Convection
    - a. Double stack.
    - b. Accessories:
      - 1) Oven Rack(s):
      - 2) Stacking kit.
      - 3) 4" Castors, front with locks.
    - c. Electrical Service: Equip unit for connection to service indicated on Drawings.
- C. Hot Food Warmer Cabinets:
1. Products: Subject to compliance with requirements, provide the following:
    - a. Warmer: Metro C539-CDC
  2. Description: Electric warmer cabinets.
    - a. Accessories:
      - 1) 5" Castors.
    - b. Electrical Service: Equip unit for connection to service as indicated on Drawings.

D. Combi Ovens:

1. Products: Subject to compliance with requirements, provide the following:
  - a. Rational iCombi Pro 20-Half NG
2. Description: Stainless steel, Type 304.
  - a. Type: Gas
  - b. Steam Mode Output: 36kW
  - c. Convection Mode Output: 36kw
  - d. Accessories:
    1. (4) Perforated stainless steel containers per unit.
    2. (4) Solid stainless steel containers per unit.
    3. (4) Stainless steel grids per unit.
  - e. Electrical Service: Equip unit for connection to service indicated on Drawings.
3. Stainless-Steel Sheet: ASTM A 240/A240M, austenitic stainless steel, type as indicated.
4. Stainless-Steel Finish: Directional satin finish, No. 4.

E. Food Mixers:

1. Products: Subject to compliance with requirements, provide the following:
  - a. Hobart HL300-1STD, Floor model.
  - b. Hobart HL600-1STD, Floor model
2. Description: Stainless steel, Type 304.
  - a. Capacity: 30 quart and 60 quart.
  - b. Accessories:
    1. Provide standard package of manufacturer's accessories.
    2. Slicer / grater attachment.
    3. Bowl cart.
  - c. Electrical Service: Equip unit for connection to service indicated on Drawings.

F. Steam Jacketed Kettles:

1. Products: Subject to compliance with requirements, provide the following:
  - a. "Cleveland" KGT-12-T with ST-28

2. Description: Stainless steel, Type 304.
  - a. Type: Tilting.
  - b. Steam Source: Self-contained, gas powered.
    1. Operating Steam Pressure: 50 psig (345 kPA).
  - c. Capacity: 12 gal.
  - d. Accessories:
    1. Basket insert.
    2. Spring assisted Lift-off cover.
    3. Single-pantry water filler.
    4. Tangent Draw off: 2 inches (50 mm).
    5. Disc Strainer: 1/8 inch (3 mm), perforated.
    6. Interior Finish: Manufacturer's standard.
    7. Cold-water jacket cooling.
    8. Steam trap assemblies.
    9. Kettle brush kit.
    10. Hot and cold-water faucet with swing spout.
    11. 2" tangent draw off value and spring assist stainless steel cover.
  - e. Electrical Service: Equip unit for connection to service indicated on Drawings.
3. Stainless-Steel Sheet: ASTM A 240/A240M, austenitic stainless steel, type as indicated.
4. Stainless-Steel Finish: Directional satin finish, No. 4.
5. See Drawings for Pot and Kettle Filler.

## 2.4 REFRIGERATION EQUIPMENT

### A. Walk-in Refrigeration Units:

1. Products: Subject to compliance with requirements, provide the following:
  - a. Kolpak Custom Walk-ins – Refer to Drawings for size.
2. Description: Cooler and Freezer.
  - a. Wall and Ceiling Panels: 4" interlocking insulating panels.
  - b. Floors: 4" insulated floor panels with slip resistant finish.
  - c. Doors:
    - 1) Hinges: Two per door.
    - 2) Latch: Edge-mounted, positive-type latch with cylinder lock.
    - 3) Include safety-release handle that opens door from inside when door is locked.
  - d. Door Accessories:

- 1) Pressure relief port.
  - 2) Threshold: Stainless steel, factory installed.
- e. Vaporproof Lighting Fixtures: Incandescent fixture with 100-W lamp.
- 1) Control: Neon pilot light and toggle switch located on exterior of door panel.
  - 2) Quantity: One per compartment, located on door panel.
- f. Refrigeration System: Remote system with preassembled condensing unit and evaporator assemblies.
- 1) Exterior Condensing Units: Include winter control, crankcase heater, and enclosed weatherproof housing.
  - 2) Mechanical platform for roof mounted installation provided by Mechanical. Platform to be Miro Industries Heavy Duty mechanical galvanized roof support with adjustable support legs. Support shall extend a minimum of 6” beyond equipment in each direction. Bolt equipment to mechanical support, refer to Mechanical Sheets.
- g. Temperature Monitoring System: Electronic monitoring and remote audible alarm system that warns when temperatures register 10 deg F (6 deg C) above or below set temperature.
- h. Closure Panels and Trim: Include closure panels and trim.
- i. Electrical Service: Equip unit for connection to service indicated on Drawings.
3. Finishes:
- a. Exposed Exterior Finish: Stucco-patterned aluminum with white baked-on polyester enamel finish.
  - b. Unexposed Exterior Finish: Stucco-patterned, metallic-coated steel.
  - c. Interior Finish: Stucco-patterned aluminum with slip resistant finish at floor.
  - d. Closure Panels and Trim: Matched to exposed exterior finish of panels. Extend panels to the adjacent wall and ceiling surfaces.

B. Reach-in Refrigeration Unit:

1. Products: Subject to compliance with requirements, provide the following:
  - a. Beverage Air, Model HRS2HC-1G
  - b. Double glass doors.

## 2.5 WARE WASHING EQUIPMENT

A. Ware washing Machines:

1. Products: Subject to compliance with requirements, provide the following:
  - a. ADS HT – 25, with Built-On Booster Heater.

- b. Electric service.
  - 2. Description: Dishwashing, single tank.
    - a. Accessories: 4-Pegged Dish Racks, 4-sheet pan racks.
    - b. Electrical Service: Equip unit for connection to service indicated on Drawings.
- B. Booster Heater:
- 1. Products: Subject to compliance with requirements, provide the following:
    - a. ADS HT-25/34 Built-On.
    - b. Electric service.
    - c. Make connection to the ware washing machine. Mount undercounter.
- C. Food Waste Disposer:
- 1. Products: Subject to compliance with requirements, provide the following:
    - a. Insinkerator SS-300.
    - b. Electric service.
  - 2. Accessories:
    - a. Short body model.
    - b. CC-101 control center.

## 2.6 SERVING EQUIPMENT

- A. Serving Table Drop-In-Units:
- 1. Products: Subject to compliance with requirements, provide the following:
    - a. Advance Tabco Slimline, DISLSW-2-240
  - 2. Description: Hot food drop-in set in custom stainless steel counter.
    - a. Construction: Heavy gauge, 300 series stainless steel.
    - b. Accessories:
      - 1. Stainless steel spillage pans SP-S.
      - 2. Drain plug.
    - c. Electrical Service: Equip unit for connection to service indicated on Drawings.
- B. Food Shields:
- 1. BSI – XGUARD Food Shields. Model No. ZG3500-3 with SSU5-H.

- a. 1/4" tempered glass.
- b. Through-counter mounted. Attach to serving counter mounting plates. Provide manufacturer mounting accessories as required.
- c. Brushed aluminum finish.
- d. Refer to Drawings for quantities and lengths.

## 2.7 ICE MAKERS

- A. Manitowoc RNP0620A with D-420 bin and water filter.
- B. Manitowoc CNF0201A above-counter with AR10000P water filter. (Locate at Faculty Room).

## 2.8 FOOD SLICER

- A. Hobart HS-7, table top model.

## 2.9 WIRE SHELVING

- A. Metro Super Erecta epoxy-coated units with Microban protection. See Drawings for size and tier requirements, and cooler / freezer unit requirements.
- B. Metro PR48VX3-XDR mobile drying rack.

## 2.10 STAINLESS STEEL TABLES, SHELVING, AND RACKS

- A. See Drawings for models, sizes, and accessories.
  - 1. Duke tables with drawers, bins, and undershelves as noted on Drawings.
  - 2. John Boos wall shelves with pot hooks as noted on Drawings.
  - 3. Lakeside #335 can rack. Size per Drawings.

## 2.11 FINISHES, GENERAL

- A. Stainless-Steel Finishes:
  - 1. Surface preparation: Remove tool and die marks and stretch lines or blend into finish.
  - 2. Polished Finishes: Grind and polish surfaces to produce uniform finish, free of cross scratches.
    - a. Run grain of directional finishes with long dimension of each piece.
    - b. When polishing is completed, passivate and rinse surfaces. Remove embedded foreign matter and leave surfaces chemically clean.
- B. Powder-Coat Finishes: Immediately after cleaning and pretreating, electrostatically apply manufacturer's standard, baked-polymer, thermosetting powder finish. Comply with resin manufacturer's written instructions for application, baking, and minimum dry film thickness.

## 2.12 MISCELLANEOUS MATERIALS

- A. Installation Accessories, General: NSF certified for end-use application indicated.

- B. Elastomeric Joint Sealant: ASTM C 920; silicone. Type S (single component), Grade NS (nonsag), Class 25, Use NT (nontraffic) related to exposure, and Use M, G, A, or O as applicable to joint substrates indicated.
  - 1. Public Health and Safety Requirements:
    - a. Sealant is certified for compliance with NSF standards for end-use application indicated.
    - b. Washed and cured sealant complies with the FDA's regulations for use in areas that come in contact with food.
  - 2. Cylindrical Sealant Backing: ASTM C 1330, Type C, closed-cell polyethylene, in diameter greater than joint width.

## PART 3 - EXECUTION

### 3.1 INSTALLATION

- A. Install foodservice equipment level and plumb, according to manufacturer's written instructions.
  - 1. Connect equipment to utilities.
  - 2. Provide cutouts in equipment, neatly formed, where required to run service lines through equipment to make final connections.
- B. Complete equipment assembly where field assembly is required.
  - 1. Provide closed butt and contact joints that do not require a filler.
  - 2. Grind field welds on stainless-steel equipment until smooth and polish to match adjacent finish.
- C. Install equipment with access and maintenance clearances that comply with manufacturer's written installation instructions and with requirements of authorities having jurisdiction.
- D. Install cabinets and similar equipment on bases in a bed of sealant.
- E. Install closure-trim strips and similar items requiring fasteners in a bed of sealant.
- F. Install joint sealant in joints between equipment and abutting surfaces with continuous joint backing unless otherwise indicated. Produce airtight, watertight, vermin-proof, sanitary joints.

### 3.2 CLEANING AND PROTECTING

- A. After completing installation of equipment, repair damaged finishes.
- B. Clean and adjust equipment as required to produce ready-for-use condition.
- C. Protect equipment from damage during remainder of the construction period.

3.3 DEMONSTRATION

- A. Engage a factory-authorized service representative to train Owner's maintenance personnel to adjust, operate, and maintain foodservice equipment.

END OF SECTION 11400