

## **SECTION 11 40 00**

### **FOOD SERVICE EQUIPMENT – PRIMARY SCHOOL**

#### **PART 1 GENERAL**

##### **1.01 RELATED DOCUMENTS**

- A. *The provisions of the General Conditions, Supplementary conditions, and the Sections included under Division 1, General Requirements, are included as a part of this Section as though bound herein.*
- B. *K.E.C. may offer voluntary alternates by submittal in writing, along with supporting literature and other data, at the time the bid is submitted. Voluntary Alternates shall not be confused with items listed as "equals" in the item specifications. Although they will be given consideration after award of the Contract, voluntary alternates will not be considered in the judgment about award of the Contract. Change in the Contract price proposed for the voluntary alternate(s) shall reflect all possible costs to be encountered should the voluntary alternate(s) be accepted and incorporated in the work.*
- C. *If the K.E.C. discovers an apparent conflict or discrepancy between portions of the Contract Documents that appears to be inconsistent or is not reasonably inferred from the intent of the Contract Documents, the Contractor shall include in their bid the most stringent and demanding, or highest cost, requirement.*
- D. *The utility schedule information is based on the prime spec equipment shown in the specifications. In the event the K.E.C. proposes to furnish an approved equal to the prime spec equipment, the K.E.C. shall be responsible for any upcharges incurred because of plumbing, mechanical, or electrical changes necessary for the equipment being provided*

##### **1.02 SUMMARY**

- A. *Provide labor and materials required to deliver, uncrate, assemble, set in place, level, install, supervise, and coordinate the installation of the food service equipment and accessories as indicated on drawings and as specified, exclusive of utility connections.*
- B. *Utility roughs-ins, final connections, and interconnection of components will be performed by others. Refer to Division 1 specifications.*
  - 1. *Plumbing work provided by others shall include, but not be limited to, the following:*
    - a. *Rough-in mechanical and plumbing services*

- b. Drain line piping and components from the rough-in to the equipment connections.*
  - c. Supply line piping and components from the rough-in to the equipment connections.*
  - d. Traps, strainers, unions, piping, service valves and vents.*
  - e. Install escutcheons on utility lines which extend through equipment.*
  - f. Install faucets, pre-rinse assemblies, quick disconnect assemblies, hose station, pot fillers, and vacuum breakers, and check valves and flow control valves as furnished with the equipment.*
  - g. Disconnection of existing equipment which is to be removed or relocated.*
  - h. Paint, or chrome sleeve, all exposed water and gas piping (above counter height or in a direct line of sight) as directed by the Architect.*
- 2. Electrical work provided by others shall include, but not be limited to the following:*
  - a. Rough-in electrical service.*
  - b. Conduit and conductors from the rough-in to the equipment and between remote controls and the equipment.*
  - c. Electrical outlets in walls, floor, and ceiling.*
  - d. Disconnect switches as required by the electrical code.*
  - e. Disconnection of existing equipment which is to be removed or relocated.*
- 3. Work provided by various other trades shall include, but not be limited to, the following:*
  - a. Raised concrete or masonry bases and platforms.*
  - b. Floor depressions, wall openings, recesses and holes through walls, floor, and ceiling as required for piping and ducts.*
- 4. Refer to item specifications for additional work and requirements.*

### **1.03 DEFINITIONS**

- A. The term "Kitchen Equipment Contractor", "Contractor", or "K.E.C." is defined as the person or company that will contract for the work specified in this section.*

- B. *The Consultant for this section of the work is FOOD SERVICE CONSULTANTS, INC., DBA VORNDRAN AND ASSOCIATES, 3125 STERLING RIDGE COVE, FORT WAYNE, INDIANA 46825-1704. The Consultant is responsible to the Architect for ascertaining that the work complies with the requirements of this section.*
- C. *The term "provide" is defined as "Contractor furnish and install."*
- D. *Transmit reports, submissions, questions, or correspondence to the Architect for distribution.*

#### **1.04 SUBMITTAL**

- A. *Refer to Section 01 33 23 and Section 01 77 00.*
- B. *Submit one (1) set of shop drawings (in PDF format) for review. Upon final review of drawings, distribute prints to the various trades.*
- C. *Shop drawings to include a plan, elevation, and cross sections through each equipment item. Indicate anchor devices, reinforcements, dimensions, gauges, holes, radii, cutouts and details of construction, installation, and relation to adjoining work. Do not start fabrication until final reviews are received. Draft shop drawings at 1 inch per foot scale.*
- D. *Rough-in drawings to show accurately the curbs, platforms, gutters, sleeves, pipe stubs, refrigerant lines, water supply lines, drains, floor drains, electrical services and other utility connections required. Coordinate work with the various trades. Draft rough-in drawings at ½ inch per foot scale.*
- E. *Submit product data brochures for review prior to equipment purchase. Brochure to contain a product data sheet for each manufacturer, along with a typewritten cover sheet indicating the item number, quantity, manufacturer, and model number, mechanical and electrical services required, and a listing of accessories specified. Assemble cover sheet and literature in order. Partial lists submitted from time to time will be rejected. Bind brochure in a three (3) ring hard back black binder.*
- F. *Ventilation system shop drawings shall include a scaled roof plan indicating the locations of the exhaust duct termination in comparison to other roof equipment in the same area and information on automatic power/fuel shut-off to cooking appliances in accordance with provisions in Ohio Mechanical Code and Ohio Building Code.*
- G. *Submit, when requested, a copy of the manufacturer's order acknowledgement for each item of pre-fabricated equipment. Acknowledgement to show date item was ordered and the scheduled shipping date.*
- H. *Submit samples when requested. Samples will not be returned unless specifically requested.*

- I. Guarantee equipment and accessories for one (1) year from date of substantial completion. covering replacement cost and/or labor cost of defective material and adjustment of controls. School projects shall be guaranteed for one (1) year from the date of the first day of the school opening. Provide a five (5) year parts and labor warranty for ALL remote refrigeration components for the walk-ins, and a five (5) year compressor only warranty for all self-contained refrigerated units.*
- J. Submit operating / maintenance manuals prior to completion of work. Manual to contain directions and recommendations for the operation, care, adjustment, service, and maintenance of equipment. Provide parts list and diagrams showing parts location and assembly. Provide one (1) copy of the manual in PDF format. Identify each item of equipment with bookmarks. Arrange in alphabetical order. Reference Division 00 / 01 for additional O&M requirements.*
- K. Submit a listing of the name and address of equipment manufacturers used, along with the name and address of the local service agencies. Include listing as a part of the maintenance and operation manuals.*
- L. Submit three signed copies of pressure vessel inspection report. Inspector's report to be completed by a qualified pressure vessel inspector. Test all pressure equipment.*

#### **1.05 QUALITY ASSURANCE**

- A. Manufacture and install equipment and accessories in strict compliance with and, if applicable, bear the seal of UL, NEMA, ASME, NSF, AGA, ANSI, OSHA and NFPA.*
- B. Manufacture and install equipment in strict conformity with Public Health Service Publication - "Food Service Sanitation Manual" and applicable governmental codes and regulations.*
- C. Provide safety guards on equipment in compliance with codes.*
- D. Approval of contractor's drawings and other data does not relieve the Contractor from responsibility of complying with codes and regulations.*
- E. Provide, at no extra charge, equipment, trim and accessories which may be required by codes and regulations.*
- F. The custom equipment fabricator will be subject to the acceptance of the Architect, Consultant, and Owner. Fabricator must have the plant, personnel, and engineering facilities to properly design, detail and fabricate high quality equipment. Equipment shall be of standard unit assembly, manufactured by one manufacturer and of uniform design, material, and finish.*

- G. *Manufacturer's catalog designations are intended to represent the standards required. Equipment furnished must closely conform thereto in design, construction, capacity, and function, to the manufacturer and model specified. Where catalog designations are given, the items shall be complete as described and shown in the catalog, unless exceptions are specified.*

#### **1.06 DELIVERY STORAGE AND HANDLING**

- A. *Acquire approved "off-site" storage to house equipment if provisions cannot be made at the job site.*
- B. *Ship fittings to the job site as follows:*
  - 1. *Wrap and identify with tag naming the job, the supplier, the items enclosed and the item to which it is to be attached at the job.*
  - 2. *Fittings to be delivered to various trades involved. Obtain a signed receipt for confirmation of delivery.*
  - 3. *Do not ship fittings or accessories inside larger items of equipment.*
- C. *Continuously maintain protection of work from damage. Protect the Owner's property and that of other contractors from injury or loss arising about this contract, and repair or replace damage, injury or loss. Damage to equipment not directly attributed to separate trades shall be the responsibility of the K.E.C.*
- D. *Permanently fasten manufacturer's nameplates to the equipment. One nameplate of the fabricator will be allowed in each room.*
- E. *Equipment of a like nature (cooking batteries, carts, self-leveling dispensers, etc.) shall be of one manufacturer to insure uniformity of design and to simplify service and maintenance.*

#### **1.07 PROJECT CONDITIONS**

- A. *Prior to fabrication of equipment, field measure and verify in-place construction.*
- B. *Fit equipment into the space provided regardless of the manufacturer's standards. Variations in equipment not recessed or built into fixed spaces, shall in no case be sufficient to materially change capacity of the equipment.*
- C. *Field inspect conditions at site and verify that the rough-ins were properly installed. Compensate the various trades for relocations of rough-ins caused by inaccuracy of drawings.*
- D. *Notify the Consultant and Architect in writing of discrepancies between the contract documents and the actual conditions on the job site prior to equipment fabrication.*

- E. *Pay for the cost incurred for special equipment; for removal or replacement of portions of the building if required for delivery and installation of equipment specified; as well as other costs incurred if work specified under this section must be done by others due to jurisdictional agreements or other conditions.*
- F. *Coordinate work specified under "WORK BY OTHERS", or other work that may arise incidental to completing the project. Furnish installing trades with information and assistance for the proper installation of equipment and components. See specifications for additional coordination requirements.*
- G. *Supervise the installation of the equipment and components. Submit to the Architect the name, address, and telephone number of the supervisor.*

## **PART 2 PRODUCTS**

### **2.01 MECHANICAL WORK INCLUDED IN KITCHEN EQUIPMENT CONTRACT**

- A. *Work provided by this section shall include, but not be limited to, the following:*
  - 1. *Chrome plated faucets with check valves, swing spout, soft flow aerators, and union coupling inlets. Equip faucets for 160° to 180° hot water with heat resistant red handle.*
  - 2. *Waste outlets with stainless steel twist handle, stainless steel drain valve body, a self centering face flange, a flat stainless steel "snap-in" strainer plate and a chrome plated tailpiece. Overflow fittings will not be required unless specifically stated in the item specifications.*
  - 3. *Control valves required for operation, located convenient to the operator. Extension stems with supports shall be chrome plated. Equip steam valves with heat resistant red handles.*
  - 4. *Chrome plated vacuum breakers on threaded faucets, hose stations and on fixtures where the water inlets are placed below the water level.*
  - 5. *Backflow preventers on pre-rinse units.*
  - 6. *Anti-siphon pressure type vacuum breakers on hose reels.*
  - 7. *Angle flange or deck and wall flange where vacuum breakers extend through equipment.*
  - 8. *Special valves, regulators, strainers, pressure reducing valves, control valves, thermometers, pressure gauges, keyed water flow restrictors and accessories required by code or necessary for the operation of equipment.*

9. Quick disconnect with couplers and flexible double wall stainless steel hose with built in restraining device and double shut-off at ends. Disconnect hoses for steam lines to be insulated. Assemblies to be color coded: Yellow for gas, green for steam, red for hot water and blue for cold water. Provide equipment chain retainer.

## **2.02 ELECTRICAL WORK INCLUDED IN KITCHEN EQUIPMENT CONTRACT**

A. Work provided by this section shall include, but not be limited to, the following:

1. Plugs matching the receptacles specified in the Electrical Section of specifications. Plugs to be manufactured by Hubbell, Leviton, or GE.
2. Grounded receptacles mounted in type "IB" enclosures equipped with stainless steel faceplates and boxes where receptacles are exposed. Do not furnish twist lock unless specified. Receptacles mounted on tables and counters shall be equipped with ground fault interrupts (GFI).
3. Controls, thermostats, starters, motor control switches, switches and contactors. Furnish remote mounted components to Division 26 for mounting.
4. Magnetic starters with NEMA enclosure for motors sized as required by codes.
5. Type "ND" single throw heavy duty industrial, quick make - quick break disconnect switch with interlocked cover control where called for in the item specifications.
6. NEMA type 4 enclosures for controls, disconnects, magnetic starters and other components which are located in wet or damp areas.
7. Bolted type circuit breaker where called for in the item specifications. Verify with Architect as to the manufacturer.
8. Three wire or four wire type "SO" neoprene cord and plug sets with one leg grounded to equipment.
9. Anaconda Sealtite Type "EF", Electri-Flex, or Cantex conduit and waterproof boxes. Unprotected flexible metal conduit will not be accepted.
10. Conduit and conductors in conduit raceway for fabricated equipment.
11. Low voltage control circuits on equipment operating on voltages over 120 volts.
12. Totally enclosed, fan cooled motors where exposed to damp and wet areas.

13. *Motors less than ½ horsepower, for solenoid valves and lighting shall be 120 volt, single phase. Unless otherwise noted motors greater than ½ horsepower shall be three phase. Motors shall have ball and thrust type bearings, totally enclosed, 55° rise above 40° ambient continuous duty. Motors shall have low starting torque, current characteristics, with NEMA frames.*

## **2.03    *HARDWARE***

- A. *Hardware other than stainless steel shall be heavy duty chrome plated brass, with concealed fasteners.*
- B. *Provide master keyed locks. Refrigeration equipment locks shall be keyed alike and fabricated equipment door and drawer locks shall be keyed alike. Submit keys to CMR and obtain signed transmittal.*

## **2.04    *FABRICATED EQUIPMENT***

- A. *Material shall be new prime quality, full gauge thickness, of composition indicated by names or abbreviations stated in item specifications.*
- B. *Stainless Steel shall be type 302 or type 304, with a No. 4 finish, as designated by the American Iron and Steel Institute and shall be austenitic.*
- C. *Galvanized steel angles, bars, channels, piping, tubing, and sheets shall be uniformly ductile in quality and free from hard spots, runs, blisters, spelter, checks and other surface defects. Material shall be mild steel, galvanized by the hot dip process, unless otherwise specified.*
- D. *Welds shall be of same basic composition as sheets or parts welded. Joints shall be fully welded. Pits, cracks, discolorations, distortion and depressions will not be acceptable. Grind smooth and polish welded joints, flush with the adjoining material and neatly finish to harmonize therewith. Soldered, lapped, fillet corners and bolted joints will not be acceptable in place of welded seamless construction.*
- E. *Burrs, projections and fins are not acceptable on sheared edges. Neatly grind miters and bullnosed corners to a uniform condition.*
- F. *Bolts, screws and rivets are not acceptable on exposed surfaces of equipment. Where bolts or studs are welded to the underside of stainless steel surfaces, the reverse side of the weld shall be neatly finished to blend in with the adjacent surface. Depressions at these points will not be acceptable. Cap bolt threads and studs with a suitable lock washer and chromium plated brass acorn nut. Bolts used to fasten trim shall be stainless steel.*
- G. *Fabricate metal table tops, sinks and drainboards of 14 gauge stainless steel. Sound deaden underside of tops, drainboards, and sinks with an NSF approved sound deadening product. Provide tacky tape between all support channel and metal table tops. Exposed table top corners shall be radiused 1¼".*



- H. *Edges, corners, rims and backsplash shall be die formed of same sheet as top. Cove intersection of tops at backsplash and rims on a  $\frac{3}{4}$ " radius. Rim and backsplash tops shall be level.*
- I. *Backsplash shall be flanged back a minimum of 2" at 45° and down 1" at 45°. Enclose ends and rear of exposed backsplash.*
- J. *Provide raised die formed ferrule around punch or drilled holes in table tops and shelves.*
- K. *Sink back, bottom and front shall be formed of one continuous sheet with the ends welded into place. Construct bottom by creasing or forming the metal downward from each wall a minimum of one degree distinct slope toward the waste receptacle which shall be recessed a minimum of  $\frac{3}{8}$ " below the adjoining surfaces. Provide double wall partition between each pair of sink compartments with rounded top edge. Provide sinks having two or more compartments with full length, full height flush stainless steel front panel to conceal joint between sinks. Turn back panel at sides and bottom and weld to sink bowl. Cove sink corners on a  $\frac{3}{4}$ " radius.*
- L. *Slope drainboards, dishtable tops and beverage stand tops, urn drainers and troughs with an integral pitch towards the drain water receptor to ensure positive drainage and to eliminate water pockets.*
- M. *Reinforce tops with 12 gauge channels, one channel provided on tops up to 36" wide and two channels on tops over 36" wide. Provide open base tables with channel runner at each pair of legs. Exposed channels shall be stainless steel. Attach top to the channel reinforcements with studs welded to the underside of top. Seal intersection of channel edge and underside of top with silicone.*
- N. *Cabinet type enclosures shall be 16 gauge stainless steel. Round exposed vertical corners on a  $\frac{3}{4}$ " radius die. Flange top and bottom off at 2" right angles to the body and weld in corner gusset plates. The walls of cabinet shall be a fully welded seamless assembly with channels and box sections corners. A STRUCTURAL ANGLE FRAMEWORK SUPPORTING THE ENCLOSURE IS NOT ACCEPTABLE. Provide individual compartments separated by a partition, enclosing sinks, machinery and drawers from the balance of the base cabinet. Weld partition to the cabinet body.*
- O. *Doors shall be flush mounted double pan construction, with  $\frac{1}{2}$ " thick semi-rigid fiberglass board between the two panels. Door face shall be 16 gauge steel and back face shall be 20 gauge stainless steel. Internally reinforce doors 24" wide and greater with a 4" wide channel to prevent warpage. Tack weld intersection of front and rear door face around inside perimeter. Corners shall be fully welded. Space tack welds no greater than 6" apart. Grind smooth and polish all welds. Balance of space to be sealed with silicone.*

- P. *Provide sliding doors with rubber button bumpers, die stamped stainless steel flush mounted door pull, sheaves, nylon rollers with stainless steel ball bearings, overhead aluminum door track and a bronze or stainless steel door guide bar attached to the bottom of cabinet.*
- Q. *Provide lockable hinged doors with rubber button bumpers, stainless steel lift off hinge, die stamped stainless steel flush mounted door pull and a Component Hardware Model M27-2490, FMP, or Kason catch. Provide locks on all doors housing machinery and power panels.*
- R. *Drawer assembly to be flush mounted double pan construction the same as described for doors. Provide two (2) rubber button bumpers, one on each side of drawer face, drawer insert, self closing drawer slides, die stamped stainless steel flush mounted door pull and a cylinder lock. Provide 20" × 20" × 5" deep Component Hardware Model S80-2020, FMP, or Kason drawer insert, set loosely in a perimeter supporting channel frame with drawer face welded to the frame. Provide Component Hardware model S-52, FMP, or Kason ball bearing roller drawer slides with adjustable stops at the fully opened position mounted to the channel frame. Enclosed drawers on open base table in an 18 gauge stainless steel enclosure.*
- S. *Fabricate shelves of 16 gauge stainless steel with formed edges, reinforced with channels, the same as specified for tops.*
- T. *Construct stationary shelves on open base tables formed with edge set on tangent point of leg and fully welded to leg.*
- U. *Provide solid stationary shelves in enclosed base cabinets with back and ends turned up 2" and coved on a ¼" minimum radius. Tack weld turn up to cabinet body and calk joint with silicone. Provide ¾" diameter perforations spaced on 4" center on shelves in heated base cabinets.*
- V. *Construct pipe slots through undershelves with turned up edge on four sides. Provide cabinets with an inner duct to conceal vertical piping.*
- W. *Tubular leg assemblies shall consist of 1⅝" diameter 16 gauge stainless steel tubular legs and 1" diameter 16 gauge stainless steel crossrails. Fit top of legs into fully enclosed stainless steel sockets. Continuously weld sockets to reinforcing channel on underside of table tops, or to the reinforced stainless steel corner pads under sink corners. Bottom of pipe legs to be finished off smoothly and overlap the foot or caster stem. Crossrails shall be mitered and fully welded to each leg.*
- X. *Provide NSF labeled casters. Medium and heavy duty casters of 4", 5", and 6" diameter shall have a minimum capacity of 200 lbs. with double ball bearing raceway and non-marking neoprene soft tread ball bearing wheels with drilled axle and grease fittings. Casters shall be Component Hardware Group, Darnell, or Jarvis.*
- Y. *Provide fully enclosed bullet shaped stainless steel feet with a slightly rounded foot at bottom and an extra long threaded stem at the top.*

## **2.05 FINISHES**

- A. *Polish exposed stainless steel to a No. 4 commercial mill finish. Where unexposed, polish to a No. 2B finish. Satin finish exposed surfaces.*
- B. *Paint and coatings shall be durable, non-toxic, non-dusting, non-flaking and mildew resistant, complying with NSF standards and governing regulations. Apply in accordance with the manufacturer's recommendations.*
- C. *Clean metal prior to painting and paint with a rust inhibiting primer. Finish with two (2) coats of enamel in color selection determined by the Architect. Do not paint galvanized shelving.*

## **2.06 REFRIGERATION SYSTEMS**

- A. *Provide refrigeration systems complete with components required for operation, designed for direct expansion, employing thermostatic expansion valves and pressure switches. Refrigeration systems must meet all required code criteria noted in OBC Mechanical Code Section 11, and/or all state and local codes as required.*
- B. *Rate compressors on the American Society of Refrigeration Engineers Standards, based on a maximum operating time of 16 hours per day on 100° F days. Mount compressor, condenser, motor, and auxiliary equipment on a single rigid base. Automatically control each unit by a suction pressure switch and a high pressure cut-off. Provide relief lines required by the codes, capped with screen vent fittings.*
- C. *Provide the following components:*
  - 1. *Sporlan, Ansul, or Cooper liquid line dryer.*
  - 2. *Suction line accumulators on air cooled condensers which are located remote and outside the building.*
  - 3. *Room temperature thermostats and solenoid valves.*
  - 4. *Strainers ahead of all valves.*
  - 5. *Type "L" copper refrigerant piping.*
  - 6. *Vibration eliminators and flexible tubing in suction and liquid lines.*
  - 7. *Wrought copper recessed solder fittings for refrigeration lines.*
  - 8. *Type "L" copper piping with cast brass or wrought copper water line piping.*
  - 9. *Sta-Brite, Sil-Fos 15, or Stay-Silv 15 silver solder.*
  - 10. *Drip gutters under uncovered pipes, valves, and fittings.*

11. *Pipe hangers spaced a maximum of 96" on center and adjusted to the drop required.*
  12. *Packless shutoff valves with port area equal to pipe area.*
  13. *Charging valves located at the compressor.*
  14. *Sporlan, Alco or Detroit Lubricator Thermostatic expansion valves.*
  15. *Liquid line solenoid valves with port area equal to pipe area.*
  16. *Cover refrigerant lines and chilled water lines with ¾" minimum thickness refrigerant pipe insulation with joints neatly cut and glued with adhesive. Exposed exterior insulation shall be UV protected or wrapped.*
  17. *Pipe sleeves constructed of steel and molded vinyl large enough to permit covered insulated pipes to pass through.*
  18. *Oil traps located at base of vertical risers in suction lines and at outlet of evaporator. Depth of trap to be three times the suction pipe diameter with a minimum horizontal dimension.*
  19. *Equalizing line from expansion valve on compressor side of expansion bulb. Suction lines to be pitched from high point at coil to compressor. It may be necessary to rise to avoid pipes, ducts, etc. There shall be a trap of minimum dimensions at base of each vertical rise if over 48".*
- D. *Design system for not over two lbs. loss between compressor and evaporator. Dehydrate system and hold at 150 lbs. pressure for a period of twelve hours without loss of pressure.*
- E. *Test the refrigeration system for a period of three days making required adjustments.*

## **PART 3 EXECUTION**

### **3.01 PREPARATION**

- A. *Fit equipment accurately in space provided. Notify the Architect in writing of modifications required to receive equipment.*
- B. *Verify electrical and mechanical services at job site prior to ordering equipment. Information shown on drawings does not relieve the Contractor of this responsibility.*

### **3.02 INSTALLATION**

- A. *Assist in moving equipment so other trades can make connections and be on the job to level and adjust equipment as the last connection is made. During installation instruct the trades on hook up of the various items of equipment.*
- B. *Equipment fit adjacent to walls, ceilings, floors, and corners shall be tight. Allow selvage for a perfect fit.*

### **3.03 SEALING AND TRIMMING**

- A. *Caulk joints with GE Silastic, Component Hardware, or Dow Corning 732 RTV sealant. Joints exceeding  $\frac{3}{8}$ " in width shall be trimmed with a stainless steel channel and caulked with sealant.*

### **3.04 START-UP AND TESTING**

- A. *Coordinate installation and connection requirements with the trades.*
- B. *Start-up, test and inspect equipment after installation under operating conditions. If inspection or test shows defects, correct the defects, and repeat inspection and test.*
- C. *Equipment must be operable prior to the demonstration of equipment by the manufacturer.*

### **3.05 ADJUSTING**

- A. *Adjust service equipment to be in perfect operating condition when turned over to the Owner at completion of work.*

### **3.06 CLEANING**

- A. *Keep premises free from accumulation of waste material during progress of work and, at completion, leave the premises clean and the equipment washed down, polished, and ready for use.*

### **3.07 TOUCH-UP**

- A. *Polish out scratches in stainless steel and touch up scratches on painted surfaces.*

### **3.08 DEMONSTRATION OF EQUIPMENT**

- A. *Schedule the equipment manufacturer's representatives to appear and teach the Owner's Staff on the correct operation, maintenance, and safety features of all the equipment.*
- B. *After instruction, prepare a letter stating that equipment was demonstrated, and personally checked by the manufacturer's representative, and found to be operating properly. Acceptance of the installation will not be contemplated until the letter, signed by the Owner, is received.*
- C. *A representative of the supplier of the kitchen equipment must be present in the kitchen during the demonstration by the appropriate equipment manufacturer.*

### **3.09 INSPECTION AND PUNCH LIST**

- A. *When it has been concluded that work is installed, operating and substantially complete, prepare a "punch list" of items yet to be completed and forward a copy to the Architect and the Consultant. Reference specifications for additional punchlist requirements.*
- B. *The Architect will request the Consultant to inspect the equipment after receipt of the punch list. If inspection reveals that the installation is not substantially complete or the punch list is not of a minor nature, and another inspection is required, then a Certificate of Substantial Completion will not be issued.*
- C. *Reimburse the Consultant for subsequent inspections (including long distance telephone calls) and time of the Consultant. If the costs have not been paid before final payment, the costs will be deducted from the Contractor's final payment.*
- D. *Immediately upon completion of the Consultant's inspection, correct punch list items. When items have been corrected, the Contractor shall notify the Architect in writing that the installation is ready for inspection.*

### **3.10 EQUIPMENT SCHEDULE / SPECIFICATIONS**

*The following equipment schedule/specifications refers to various items of food service equipment shown on the Contract Drawings. The Contract Drawings and notes form a part of these specifications and shall be as binding as if written herein.*

**ITEM # 1                      TRAY RACK DISPENSER**

Quantity:                      One (1)

Basis of Design:            Caddy

Model:                        CM-1814-2C

*One (1) Model CM-1814-2C Caddy Magic Tray Dispenser, cantilever style, unheated, double stack, for 14" x 18" trays, capacity up to (75) trays per stack, self-leveling platform, 4" swivel casters, NSF*

*One (1) Model ACC-41 Caster brakes 4" & 5" (pair)*

*One (1) Model ACC-50 Full perimeter bumper*

**ITEM # 2                      MOBILE PLATE AND DISH DISPENSER**

Quantity:                      One (1)

Basis of Design:            Lakeside Manufacturing

Model:                        5210

Electrical:                   120-1

*One (1) Model 5210 Dish Dispenser, non-heated, cabinet style, enclosed base, mobile, (2) self-leveling dish dispensing tubes, Easy-Glide™ design, maximum dish size 10-1/8" diameter, stainless steel construction, 4" Lake-Glide® swivel casters (2) with brakes, corner bumpers, NSF, Made in USA*

*One (1) Bottom perimeter bumper*

**ITEM # 3                      HOT FOOD SERVING COUNTER / TABLE**

Quantity:                      One (1)

Basis of Design:            Vollrath

Model:                        36140

Electrical:                   120/208-1

*One (1) Model 36140 4-Series Signature Server® Hot Food Serving Counter, 60"W x 28"D x 30"H, 18/300 stainless steel top with 1" turndown on all sides, (4) 12" x 20" x 6-3/8" deep wells with elements, individual Touch-Temp® programmable controls, enclosed stainless steel base, 2" stainless steel corner guards, 18/400 series stainless steel unibody construction, pull-out ball valve drain, stainless steel kickplate, cord, plug, cULus, NSF, heat strip with incandescent lights, Made in USA*

*One (1) Model DMI CP75 custom corrugated metal frontage as selected by the Architect. Mounting fasteners to be hidden*

*One (1) Model 37312 Single Deck Classic Cafeteria Breath Guard for 60" ADA Signature units*

*One (1) Model 3751350-2-O Operator Side- Plate Rest - with lift-off bracket, ADA 4-Series Signature Server® with Stainless Steel Countertops, 60"W x 7"D*

*One (1) Model 3751350-2-C Customer Side- Plate Rest - with lift-off bracket, ADA 4-Series Signature Server® with Stainless Steel Countertops, 60"W x 7"D*

*One (1) Model SS6CASTERS 4-Series Signature Server® Swivel Casters, 6"H, (2) braked, standard*

*Four (4) Vollrath model 90022 2.5" deep steam table pans with model 94100 slotted covers*

*Two (2) Vollrath model 19186 sheet pan adapter plate*

**ITEM # 4                      SERVING COUNTER, UTILITY**

**Quantity:**                      One (1)  
**Basis of Design:**            Vollrath  
**Model:**                        36121  
**Electrical:**                   120-1

*One (1) Model 36121 4-Series Signature Server® Utility Serving Counter, 46"W x 28"D x 32"H, 16/300 series stainless steel top with 1" turndown on all sides, enclosed stainless steel base, 2" stainless steel corner guards, 18/400 series stainless steel unibody construction, stainless steel kickplate, cord, plug, cULus, NSF, Made in USA*

*One (1) Model DMI CP75 custom corrugated metal frontage as selected by the Architect. Mounting fasteners to be hidden*

*One (1) Model SS6CASTERS 4-Series Signature Server® Swivel Casters, 6"H, (2) braked, standard*

*One (1) Model 36301 Classic Economy Buffet Breath Guard, for 46"W 4-Series Signature Server®, stainless steel uprights, clear acrylic with clear acrylic end panels*

*One (1) 18 gauge stainless steel, standard*

*One (1) smooth stainless counter, standard*

*One (1) Model 36421 Fluorescent lights - 46" for 4-Series Signature Server® with Stainless Steel Countertops units, bulbs & lamps not included, Made in USA*

*One (1) Model VOLT120-01 Electrical (01)*



**ITEM # 5                      SERVING COUNTER, COLD FOOD**

Quantity:                      One (1)  
Basis of Design:            Vollrath  
Model:                        36146  
Electrical:                   120-1

*One (1) Model 36146 4-Series Signature Server® Stainless Steel Countertop with NSF7 Cold Station, self-contained refrigeration, 46"W x 28"D x 32"H, Bloomington-style recessed well displays pans 3" below work surface, coils surround sidewalls, accommodates 6" deep pans, polyurethane foam insulation, standard well drains, seamless display pan well opening 19-7/8" x 37-1/2" x 6-5/8" deep, 1/5 HP, enclosed stainless steel base, 2" stainless steel corner guards, stainless steel kickplate, cord, plug, cULus, NSF cULus, Made in USA*

*One (1) Model SS6CASTERS 4-Series Signature Server® Swivel Casters, 6"H, (2) braked, standard*

*One (1) Model DMI CP75 custom corrugated metal frontage as selected by the Architect. Mounting fasteners to be hidden*

*One (1) Model 36301 Classic Economy Buffet Breath Guard, for 46"W 4-Series Signature Server®, stainless steel uprights, clear acrylic with clear acrylic end panels*

*One (1) Model 36421 Fluorescent lights - 46" for 4-Series Signature Server® with Stainless Steel Countertops units, bulbs & lamps not included, Made in USA*

*One (1) Model 37512-2-O 4-Series Signature Server® Stainless Steel Countertop Plate Rest, operator side, 46" 7" Overall Width*

*One (1) Model 37512-2-C 4-Series Signature Server® Stainless Steel Countertop Plate Rest, customer side, 46"W x 7"D*

*Four (4) Vollrath model 90012 1.25" deep steam table pans with model 94100 slotted covers*

**ITEM # 6                      SERVING COUNTER, UTILITY**

Quantity:                      One (1)  
Basis of Design:            Vollrath  
Model:                        36185

*One (1) Model 36185 4-Series Signature Server® Stainless Steel Countertop Corner Station, 32" high, 19-5/16" x 28" x 28"W, modular, enclosed stainless steel base, 2" stainless steel corner guards, stainless steel top, stainless steel kickplate, NSF*

*One (1) Model SS6CASTERS 4-Series Signature Server® Swivel Casters, 6"H, (2) braked, standard*

*One (1) Model DMI CP75 custom corrugated metal frontage as selected by the Architect.  
Mounting fasteners to be hidden*

*One (1) Model 37509-2 4-Series Signature Server® Stainless Steel Countertop Plate  
Rest, ADA, inside corner station, 19" x 9-1/4" x 6-7/8"*

**ITEM # 7                      CASH REGISTER STAND**

**Quantity:**                      One (1)  
**Basis of Design:**            Vollrath  
**Model:**                        37015  
**Electrical:**                    120-1

*One (1) Model 37015 4-Series Signature Server® with Stainless Steel Countertops, 32"  
high Cashier Station, 28"W, 28"D, modular, enclosed stainless steel base, 2" stainless  
steel corner guards, with cashier drawer, operator side open with stainless steel floor,  
stainless steel kickplate, cord, plug, NSF*

*One (1) Model SS5CASTERS 4-Series Signature Server® Swivel Casters, 6"H, (2)  
braked, standard*

*One (1) Model DMI CP75 custom corrugated metal frontage as selected by the Architect.  
Mounting fasteners to be hidden*

*One (1) Model 37511-2-C 4-Series Signature Server® Stainless Steel Countertop Plate  
Rest, customer side, 28"W x 7"D*

*One (1) Model 36945 4-Series Signature Server® Cash Drawer, locking, drawer bell, steel  
construction, black powder coated finish, includes: ABS plastic removable money tray,  
with (5) coins & (5) bills capacity, stainless steel bill clips/hold downs, aluminum coin  
breaking plate*

*One (1) Model 36946 Internal Duplex Receptacle, with countertop cutout & grommet*

*One (1) with cord cutouts*

**ITEM # 8                      SERVING COUNTER, COLD FOOD**

Quantity:                      One (1)  
Basis of Design:            Vollrath  
Model:                        36176  
Electrical:                   120-1

*One (1) Model 36176 4-Series Signature Server® Stainless Steel Countertop with NSF7 Cold Station, self-contained refrigeration, 74"W x 28"D x 32"H, Bloomington-style recessed well displays pans 3" below work surface, coils surround sidewalls, accommodates 6" deep pans, polyurethane foam insulation, standard well drains, seamless display pan well opening 63"W x 19-7/8"D x 6-5/8" deep, 1/3 HP, enclosed stainless steel base, 2" stainless steel corner guards, stainless steel kickplate, cord, plug, cULus, NSF, Made in USA*

*One (1) Model SS6CASTERS 4-Series Signature Server® Swivel Casters, 6"H, (2) braked, standard*

*One (1) Model DMI CP75 custom corrugated metal frontage as selected by the Architect. Mounting fasteners to be hidden*

*One (1) Model 36303 Classic Economy Buffet Breath Guard, for 74"W 4-Series Signature Server®, stainless steel uprights, clear acrylic with clear acrylic end panels*

*One (1) Model 36421 Fluorescent lights - 46" for 4-Series Signature Server® with Stainless Steel Countertops units, bulbs & lamps not included, Made in USA*

*One (1) Model 37514-2-O 4-Series Signature Server® Stainless Steel Countertop Plate Rest, operator side, 74"W x 7"D*

*One (1) Model 37514-2-C 4-Series Signature Server® Stainless Steel Countertop Plate Rest, customer side, 74"W x 7"D*

*Six (6) Vollrath model 90012 1.25" deep steam table pans with model 94100 slotted covers*

**ITEM # 9                      DISPENSER, PLATE DISH, PARTS & ACCESSORIES**

Quantity:                      One (1)  
Basis of Design:            Atlas Metal  
Model:                        SD-6

*One (1) Model SD-6 Silverware cylinder holders, 6 hole, stainless steel construction*

**ITEM # 10**                      **CONDIMENT ORGANIZER BIN RACK**

Quantity:                      One (1)  
Basis of Design:            Cambro  
Model:                         8RS8110

*One (1) Model 8RS8110 Versa Organizer Rack, with (8) bins, 25-1/8"L x 17-1/4"D x 9-1/4"H, can be wall-mounted (each bin can hold up to 10 lbs.) or placed on flat surface, polyethylene, black*

**ITEM # 11**                      **POINT OF SALE**

Quantity:                      One (1)  
Basis of Design:            OWNER  
Model:                         CASH REGISTER

*One (1) Model CASH REGISTER*

**ITEM # 12**                      **SPARE NO.**

**ITEM # 13**                      **SPARE NO.**

**ITEM # 14**                      **SPARE NO.**

**ITEM # 15**                      **SPARE NO.**

**ITEM # 16**                      **VEGETABLE PREP SINK**

Quantity:                      One (1)  
Basis of Design:            John Boos  
Model:                         2PB1824-2D18

*One (1) Model 2PB1824-2D18 Pro-Bowl Sink, 2-compartment, 99-1/4"W x 29-1/2"D x 44-1/16"H overall size, (2) 18"W x 24" front-to-back x 14" deep compartments, (2) 30" left & right drainboards, 10"H boxed backsplash with 45° top & 2" return, (1) set of splash mount faucet holes with 8" centers, 3-1/2" die-stamped drain openings, 16/300 stainless steel construction, stainless steel legs, adjustable front & side bracing, adjustable bullet feet, NSF, CSA-Sanitation, KD*

*One (1) Model X-0440B Disposal cut-out with collar (collar supplied by KEC) (modification)*

*One (1) Model CSPA - FACTORY INSTALLED Customer Supplied Accessories to be Factory Installed*

*Two (2) Model PB-SCS1824-16/3 Sink Cover, 18" x 24", 16 ga. stainless steel*

One (1) T & S Brass model B-5125-12-CRBJ pre-rinse assembly equipped with an 8" wall mount workboard faucet, polished chrome plated brass body and escutcheon, add-on faucet with compression cartridge with spring check and lever handle, 12" swing nozzle with stream regulator outlet, lever handles, in-line vacuum breaker, EB-0107 spray valve, ½" NPT male inlets, 6" adjustable wall bracket, spray valve holder, wall bracket, and an overhead spring. Unit shall be certified to ASME, NSF, and DOE 2019 compliant

One (1) CHG DSS-8000 lever waste assembly

<b>ITEM # 17</b>	<b>DISPOSER</b>
Quantity:	Two (2)
Basis of Design:	InSinkErator
Model:	SS-200-7
Electrical:	208-3

One (1) Disposer Package, sink mount system, with #7 adaptor for sink opening, 2 HP motor, stainless steel construction, includes syphon breaker, solenoid valve, flow control valve, manual reverse switch, 208V-3PH, T&S B-0455 vacuum breaker, 1/2" (11477)

One (1) CC-101 control assembly for dishroom disposer. Unit shall consist of a NEMA 4 stainless steel watertight control box, automatic reversing magnetic contactors, 24 volt solid state control circuit with transformer, optional timed run or continuous run, post water flush with adjustable timer set for 30 seconds, water tight start-stop buttons, solenoid valve, and a line disconnect switch interlocked with cover. Division 22 to install module as shown in the manufacturer's piping diagram

One (1) MRS control assembly for the vegetable prep sink disposer

<b>ITEM # 18</b>	<b>HOSE REEL</b>
Quantity:	One (1)
Basis of Design:	T&S Brass
Model:	B-7122-C01M

One (1) Model B-7122-C01M Hose Reel, enclosed, 3/8" x 30' hose with 1.15 GPM spray valve, with ratcheting system & adjustable hose bumper, includes mounting hardware, stainless steel

One (1) pivoting mounting bracket

One (1) EB-0107 squeeze valve with locking ring

One (1) heatproof handle and quick-connect socket assembly

One (1) 019652-40 3/8" live swivel, B-1421 spray face nozzle

One (1) B-1422 jet spray nozzle

*One (1) B-1423 fan spray nozzle*

*One (1) B-1428 fan-jet spray nozzle*

*One (1) BR10 brush attachment*

*Two (2) B-CVH1-2 ½" check valves*

*One (1) HW-2B-36 flexible connector hose with close nipple*

*One (1) 3/8" NPT quick disconnect*

*One (1) stainless steel braid and extruded coating*

*One (1) B-0963 chrome plated vacuum breaker w/ integral check valve*

*One (1) B-0109-01 wall bracket*

*One (1) B-0512 chrome plated mixing valve*

**ITEM # 19                      SPARE NO.**

**ITEM # 20                      HAND SINK**

**Quantity:**                      Three (3)  
**Basis of Design:**              John Boos  
**Model:**                          PBHS-W-1410-P-SSLR

*One (1) Model PBHS-W-1410-P-SSLR Pro-Bowl Hand Sink, wall mount, 14"W x 10" front-to-back x 5" deep bowl, splash mount faucet holes with 4" centers, 1-7/8" drain opening with basket drain, with left & right side splashes, includes mounting bracket, all stainless steel construction, NSF, CSA-Sanitation (splash mount faucet included)*

*One (1) Model PB-SMMK-90 Splash Mount Faucet Mounting Kit, includes (2) 1/2" supply nipples, (2) retainer nuts, (2) lock washers, (2) rubber washers and (2) male & female short 90° elbows*

*One (1) Model PB-PT1.5 P-Trap, 1-1/2" & tail pipe*

**ITEM # 21                      SPARE NO.**

**ITEM # 22                      SPARE NO.**

**ITEM # 23                      WORK TABLE, 72", STAINLESS STEEL TOP**

Quantity:                      Four (4)  
Basis of Design:            John Boos  
Model:                        ST6-3072SSK

*Four (4) Model ST6-3072SSK Work Table, 72"W x 30"D, 16/300 stainless steel flat top, with Stallion Safety Edge front & back, 90° turndown on sides, stainless steel legs & adjustable undershelf, adjustable bullet feet, NSF, CSA-Sanitation, KD*

*Four (4) Model DR2015-S30 Drawer, for 30"D work tables, 15"W x 20" front-to-back x 5" deep, stainless steel front & drawer pan, roller bearing slides, NSF, for stainless steel table tops only*

*Four (4) Model CAS01-R Casters, 5", heavy duty, locking, for 1-5/8" diameter legs (set of 4)*

**ITEM # 24                      SPARE NO.**

**ITEM # 25                      SPARE NO.**

**ITEM # 26                      SPARE NO.**

**ITEM # 27                      SOILED DISHTABLE**

Quantity:                      One (1)  
Basis of Design:            Conover Custom Stainless  
Model:                        Custom

*Top shall be the size and shape as shown on the drawings, constructed of 14 gauge stainless steel, and reinforced on the underside with 12 gauge steel channels. Sound deaden the underside of top. Openings in the top shall be die stamped and completely finished. Field joints shall be welded, ground and polished smooth. Backsplash to be provided along wall sides and sealed thereto. Turn top down into the washer as per manufacturer's instructions. Extend top through wall and construct as detailed.*

*Disposer sink shall be constructed of 14 gauge stainless steel and made as an integral part of the top. Sink shall be 6" deep with bottom creased and pitched to the disposer throat opening. Provide Fisher 2906, Chicago, or T&S water inlets in the side wall of the disposer sink. Water supplying the inlets shall be controlled thru the disposer control panel. Above the disposer sink provide both a perforated polyboard sink cover, and a full-size stainless steel cover with finger hole pull.*

*Where shown in the drawings, provide a "U" shaped stainless steel channel type enclosure extending from the top of the backsplash to a point 2" above the finished ceiling. Chase to house the water lines for the hose reel.*

*Below table top provide stainless steel support brackets for mounting the disposer control panel and the trough throttling valve. Bracket for disposer panel shall be mounted so the front face of the disposer control panel will not extend out beyond the face of the table.*

*The piping of the disposer and water flushing system shall be the responsibility of Plumbing Contractor. Lend all assistance or information required to properly install the system. Refer to piping diagram for additional requirements.*

*Stationary undershelf shall be constructed of 16 gauge stainless steel. Shelf shall be fully welded to legs with weld ground and polished to blend with the adjacent surfaces.*

*Crossrails shall be 1" diameter × 16 gauge stainless steel tubing. Crossrails shall be fully welded to legs and ground and polished to blend with adjacent surfaces. Omit the crossrails where shown.*

*Legs shall be constructed of 1½" diameter × 16 gauge stainless steel tubing equipped with stainless steel gussets and stainless steel adjustable bullet type feet.*

**ITEM # 28                      TRASH / RECYCLING CABINET**

Quantity:                      One (1)  
Basis of Design:            Conover Custom Stainless  
Model:                         Custom

*Top shall be the size and shape as shown on the drawings, constructed of 14 gauge stainless steel, and reinforced on the underside with 12 gauge steel channels. Sound deaden the underside of top. Openings in the top shall be die stamped and completely finished. 2" backsplash to be provided along wall sides and sealed thereto.*

*Hinged doors enclosing cabinet base shall be provided where shown. Doors shall be the same finish as the face of the cabinet body. Provide door with CHG M27-2490, FMP, or Kason spring catch, door locks, and CHG P63-1012, FMP, or Kason die-stamped pull.*

*Mobile trash containers to be furnished by the Owner.*

**ITEM # 29                      CLEAN DISHTABLE**

Quantity:                      One (1)  
Basis of Design:            Conover Custom Stainless  
Model:                         Custom

*Top shall be the size and shape as shown on the drawings, constructed of 14 gauge stainless steel, and reinforced on the underside with 12 gauge steel channels. Sound deaden the underside of top. Field joints shall be welded, ground and polished smooth. Turn top down into the washer as per manufacturer's instructions. Backsplash to be provided along wall sides and sealed thereto.*



*Below table top provide one (1) stainless steel bracket for mounting the Dishwasher fused disconnect panel. Bracket shall be mounted so the front face of the control panel will not extend out beyond the face of the table. Verify bracket size with The Electrical Contractor.*

*Sink compartments shall be the size and shape as shown, constructed of 14 gauge stainless steel, and made as an integral part of the top. Crease bottom of sink bowl and pitch to the drain.*

*Above center partitions of sink bowls and mounted to backsplash, provide T & S Brass model B-0290, Fisher, or Chicago fast flow faucets. Faucet to be equipped with street EL inlets and locknuts. Provide bottom of soak and wash sink bowls with a CHG DSS-8000 lever waste assembly.*

*Stationary undershelf shall be constructed of 16 gauge stainless steel. Shelf shall be fully welded to legs with weld ground and polished to blend with the adjacent surfaces.*

*Crossrails shall be 1" diameter × 16 gauge stainless steel tubing. Crossrails shall be fully welded to legs and ground and polished to blend with adjacent surfaces. Omit the crossrails where shown.*

*Legs shall be constructed of 1½" diameter × 16 gauge stainless steel tubing equipped with stainless steel gussets and stainless steel adjustable bullet type feet. Leg gussets shall be fully welded to the top reinforcing channels.*

*Where shown in the drawings, provide a "U" shaped stainless steel channel type enclosure extending from the top of the backsplash to a point 2" above the finished ceiling. Chase to house the water lines for the hose reel.*

<b>ITEM # 30</b>	<b>DISHWASHER, DOOR TYPE, VENTLESS</b>
Quantity:	One (1)
Basis of Design:	Champion
Model:	DH-6000T-VHR
Electrical:	480-3

*One (1) Model DH-6000T-VHR Genesis Dishwasher, door type, extended hood (27" opening for trays), ventless heat recovery, high temperature sanitizing with built-in stainless steel electric booster for (40°-70° rise), (40) racks/hour capacity, auto start, single point electrical connection, door interlock switch, on-board service diagnostics, Rinse Sentry feature, auto-fill, detergent & chemical connections, interchangeable upper & lower spray arms, automatic drain valve, vent fan control, bottom mounted HMI controls, mounted water PRV, stainless steel construction, electric tank heat, peg rack, flat rack, 2 HP self-draining pump, NSF, cULus, ENERGY STAR®*

*One (1) Complimentary factory authorized performance test included, upon equipment start-up. Consult local Champion sales representative for coordination of the start-up. If customer is beyond 60 miles from Champion authorized service agent, consult factory.*

*One (1) Single-point electrical connection, standard 480V/3*

*One (1) Straight-through design application*

*One (1) Model 117084 Drain water tempering kit, shipped loose (unmounted)*

*One (1) Model CHEMICAL PUMPS Detergent & Rinse Aid Pumps (factory mounted)*

*One (1) Shock arrestor (unmounted)*

*Three (3) Model 101273 Flat Bottom Dishrack, 20" x 20", additional*

*Three (3) Model 101285 Peg Dishrack, 20" x 20", additional*

*Three (3) Model 114356 Sheet pan rack*

*One (1) Everpure Model HFC-10 water filter system with wall mounting hardware, six (6) packages of EV9796-01 scale remover, hardness test strip, and dip tube.*

**ITEM # 31                      SPARE NO.**

**ITEM # 32                      MOP SINK**

**Quantity:**                      One (1)  
**Basis of Design:**           Advance Tabco  
**Model:**                        9-OP-40

*One (1) Model 9-OP-40 Mop Sink, floor mounted, 25"W x 21"D x 16"H (overall), 20"W x 16" front-to-back x 12" deep (bowl size), free flow drain with 2" IPS outlet, stainless steel construction, NSF*

*One (1) Model K-240 Service Sink Faucet, wall mount, 8" OC, 6-1/2" spout, with hose thread & pail hook, vacuum breaker spout, wall braced, chrome-plated brass*

**ITEM # 33                      SHELVING, MOBILE**

**Quantity:**                      Twelve (12)  
**Basis of Design:**           InterMetro  
**Model:**                        SE Pro

*Twelve (12) Shelf, wire, 60"W x 24"D, epoxy finish, casters, NSF*

*Twelve (12) Model 63 Post, 63"H, adjusts on 1" increments, for use with standard wire shelves, epoxy finish*

**ITEM # 34**                      **WIRE SHELVING**  
Quantity:                      Six (6)  
Basis of Design:              InterMetro  
Model:                          SuperErecta Super Adjustable

*Four (4) Model 2460 Shelf, wire, 60"W x 24"D, chrome-plated finish, NSF*

*Two (2) Model 2472 Shelf, wire, 72"W x 24"D, chrome-plated finish, NSF*

*Six (6) Model CP-74 Post, 74"H, adjusts on 1" increments, for use with standard wire shelves, chrome-plated finish*

**ITEM # 35**                      **WALK IN COOLER - FREEZER**  
Quantity:                      One (1)  
Basis of Design:              Kolpak  
Model:                          CUSTOM  
Electrical:                      480-3, 277-1, 120-1

*Walk-in shall be the size and shape as shown on the plans, approved, and listed in accordance with UL, NSF and constructed in accordance with all state and local codes and meet OBC 2603.4 and all Energy Independence and Security Act of 2007 requirements. Refer to the last page of this section for additional information to be submitted prior to installation.*

*Provide sectional pre-fabricated wall and ceiling panels constructed and joined together per manufacturer's standard. Panels to be equipped with compression gaskets. Seal all wall and floor sections to building floor with silicone. Where the span of the ceiling is too great to support itself, provide hanger rods attached to the building structural system. Provide all steel, hanger rods, and turnbuckles required. Installation of complete assembly shall be by factory authorized personnel. K.E.C. to submit installer's name and record prior to installation. Refrigeration system shall be installed by, and serviced by, a local refrigeration specialist approved by the Owner and/or Owner's representative. Refer to standard form at the end of this section.*

*Floor shall be built up on the site and installed in a floor recess, the depth as shown on the drawings. Install a 15" high, metal clad, insulated pre-fabricated curb around perimeter of exterior walls and below all party walls. Curb shall be anchored in the floor recess by clip angles attached to pit floor with nylon tap its. Furnish and install 4" thick urethane insulation and .004" thick polyethylene vapor barrier in the floor recess. Division 03 shall furnish and install a concrete pad in the size shown in the drawings. Division 09 to provide the floor covering over the floor insulation, along with compacted back-fill between the walk-in panels and building walls. Refer to details for construction and room finish schedule for type of floor covering.*

*Insulation for wall and ceiling panels shall be reaction injection molded urethane (no CFC's used) and contain wall, ceiling, and door insulation of at least R-25 for coolers and R-32 for freezers. Insulation for wall panels shall be 4" thick. Ceiling panels shall be 4" thick, single piece, and self-supporting. Interior height of unit shall be a minimum of 8'-0".*

*Exposed exterior finish of wall panels shall be 20 gauge type 302 or 304 stainless steel with a No. 4 finish. Interior finish of wall panels and ceiling panels shall be .032" smooth aluminum with white baked on acrylic finish.*

*Doors shall be off-set type construction insulated with urethane insulation. Interior surface of door shall be the same finish as adjacent wall panels. Exterior finish shall be 20 gauge type 302 or 304 stainless steel with a No. 4 finish.*

*Door frames shall be equipped with heating elements at jamb, sill and head. Elements shall be factory wired to a junction box mounted on top of the ceiling panels. Equip each door with magnetic gasket, adjustable bottom sweep gasket, International 850 series hydraulic door closer with hold open device, heated vision panel in freezer door, unheated vision panel in cooler door, three (3) Kason 1346 chrome plated cam-action hinges, Kason 27C polished chrome handle with two (2) keys for each door, heated cylinder locks for freezer, and 36" high stainless steel kickplates on the interior and exterior.*

*Provide all exterior doors with a Curtron, Polar-Flex, or Ardco two-piece strip door, constructed of clear vinyl strips in accordance with the manufacturer's instructions. Strip door to meet all Energy Independence and Security Act of 2007 requirements.*

*Provide Kason model 1810LX LED series compact light fixtures with high impact Lexan lens. Lights shall be controlled by an automatic motion sensor with indicator light mounted in the interior of the wall panel adjacent to the door. The Electrical Contractor to mount fixtures on ceiling panels and shall punch all holes through cooler/freezer ceilings for final wiring. The Electrical Contractor to seal all conduit access holes with cold temperature polyurethane expanding foam. Mount fixtures in locations shown in the manufacturer's shop drawings. All conduit shall be installed within the interior of the compartment and fully sealed by The Electrical Contractor. Provide a Kason model 1807LW light fixture above each door on the interior.*

*Air pressure relief ports shall be provided for each compartment through the walls or ceiling. Ports shall be the design as standard with the cooler manufacturer. The Electrical Contractor to wire all electrically heated air pressure relief ports.*

*Thermometers shall be located and mounted on the exterior walls near the entrance doors and in full view of the kitchen. Thermometers shall be of the electronic digital type.*

*Provide vertical air curtain mounted adjacent to the hinged side of the cooler and freezer door on the interior wall surface. Air shield to be automatically activated when door is opened and to be shut off when door is closed. Unit to be wired in the field by The Electrical Contractor.*

*Provide the Arctic Fox™ Controller electronic refrigeration control, system monitor and alarm, with display and user interface installed on door jamb of cooler compartment. User interface shall display current compartment temperatures and conditions, lights on/off, door open, set point, system status, alarm status, etc. All variables shall be accessible and settable through user interface. System to include electronic refrigeration control with electronic expansion valve with on-demand defrost that initiates and terminates defrost cycle as determined by controller. Control shall activate walk-in compartment light when door opens and turns lights off when door closed or by pre-set time delay and include*

*high/low temperature alarm and door ajar alarm. All components shall be factory installed on condensing unit and evaporator coils and installer interconnected by CAT 5 cable. Controller to include diagnostic functionality, USB port for data tracking, diagnostic functionality, and downloading.*

*Trim at side walls and closure panels to finished ceiling shall be the same finish as the exterior wall panels. Refer to drawings for details.*

*Coil supports to be provided in a ceiling panel of each compartment to support the cooling coils. Mounting nuts and bolts shall be non-corrosive. Sleeves through walls for refrigeration lines, electrical lines and drains shall be of extruded vinyl.*

*Unit cooler coils shall be equipped with fan blade guards, aluminum housing, disconnect switch and all controls required for operation. The Electrical Contractor wire from the junction box on coil to the remote temperature thermostat and the solenoid valve with Sealtite conduit. Evaporator fan motors less than 1 horsepower require electronically commutated (EC) or 3 phase design.*

*Unit freezer coil shall be equipped with fan blade guards, aluminum housing, electric defrost, drain pan heater, timers, thermostats, and all components required for proper operation. Provide unit with the following special components and controls: Built-in thermostats and timer to return system to freezing cycle and to delay the start of fan motors after the completion of the defrost cycle, a timer with a stop defrost cycle in the event of thermostat failure. K.E.C. to provide a thermostatically controlled heater tape or internal drain pipe heater for the condensate drain line. Heater to be wired by the Electrical Contractor to the freezer coil "hot" terminal (see the mfr's wiring diagram). The Electrical Contractor shall wire from the remote timer located at compressor to the junction box on the freezer coil and from the junction box on the coil to the room temperature thermostat with Sealtite conduit. Evaporator fan motors less than 1 horsepower require electronically commutated (EC) or 3 phase design.*

*Condensate drain lines shall be extended from all coils to the open sight wastes by the Plumbing Contractor. All lines shall be type "L" hard copper using sweat fittings. The Plumbing Contractor to provide a union fitting directly below the coils to all easy removal of the bottom pan of the coils. Drain lines to be secured to the cooler - freezer walls with 1" corrosion-resistant stand-offs and shall be concealed where possible. The walk-in installer shall punch all holes through cooler / freezer walls and assist The Plumbing Contractor as to the proper installation of the drain lines. The Plumbing Contractor to insulate total length of drain piping in both the cooler and freezer with 1" thick closed-cell insulation equal to Rubatex model R-180-FS, RBX, or Owens Corning pipe insulation.*

*Compressors shall be completely pre-wired to the defrost cycle timers, starters, disconnect switch and other related components which are mounted on the compressor frame. Compressor fan motors less than 1 horsepower shall be required to be electronically commutated (EC), permanent split capacitor (PSC), or 3 phase design. Provide anti-vibration devices and a plastic sign with ¾" high letters stating the refrigerant type and the name of the walk-in which the compressor is refrigerating. Refrigerant to be R448A or similar HFC type. Provide with crank case heaters and reverse acting pressure controls.*

*Compressor shall be enclosed in an RDM Products PSE Series, Kool-Star, or Heatcraft all-weather outdoor housing, constructed of a galvanized steel frame and an exterior skin of anodized aluminum. Provide hinged and lockable louvered access doors with padlock and a removable top. Housing shall be painted in a custom color as selected by the Architect.*

*Compressors shall be mounted on a painted steel floor mounted angle iron rack located in the Mechanical Yard. Verify with Architect the exact location for placement of the compressors.*

*Provide the following coils and compressors:*

<i>Room</i>	<i>Coil</i>	<i>Compressor</i>	<i>Evap. Temp.</i>
<i>COOLER</i>	<i>AM26-094-1EC-PR-8</i>	<i>KPC68MZOP-4E</i>	<i>+25</i>
<i>FREEZER</i>	<i>EL36-121-2EC-PR-8</i>	<i>KPC348LZOP-4E</i>	<i>-10</i>

**ITEM # 36                      SPARE NO.**

**ITEM # 37                      SPARE NO.**

**ITEM # 38                      SPARE NO.**

**ITEM # 39                      SPARE NO.**

**ITEM # 40                      SPARE NO.**

**ITEM # 41                      SPARE NO.**

**ITEM # 42                      SPARE NO.**

**ITEM # 43                      MILK COOLER**

Quantity:                      One (1)  
Basis of Design:            Beverage Air  
Model:                        SM49N-W  
Electrical:                   120-1

*One (1) Model SM49HC-W School Milk Cooler, cold wall, normal temperature, 49"W x 30-5/8"D x 41-1/8"H, 20.32 cu. ft., single access, flat top carton capacities, (12) 13" x 13" x 11" or (8) 19" x 13" x 11" case capacity, self-latching doors/lids with safety bumpers, cylinder lock, wire floor racks, floor drain, electronic control, auto defrost, galvanized steel interior with stainless steel floor, white exterior, R290 Hydrocarbon refrigerant, 1/3 HP, cULus, UL EPH Classified, UL-Sanitation, Made in USA*

*One (1) Self-Contained refrigeration*

*One (1) cord with plug, 120V*

*One (1) Model 00C01-012A-01 Corner Bumper Kit, set of 4, for milk cooler units (field installation required)*

*One (1) 4" Heavy duty casters, (2) with brakes, standard*

**ITEM # 44                      PASS-THRU REFRIGERATOR**

Quantity:                      Two (2)  
Basis of Design:            Beverage Air  
Model:                        PRD2-1BHG  
Electrical:                   120-1

*Two (2) Model PRD2-1BHG P-Series Refrigerator, Pass-Thru, two-section, 48.33 cu. ft., top-mounted self-contained refrigeration, (8) solid half doors, (6) adjustable shelves, LED lighting, aluminum interior, stainless steel exterior, standard depth cabinet, half-height doors, exterior digital thermometer, 6" legs, 1/3 HP, cULus, UL EPH Classified, UL-Sanitation, MADE IN USA*

*Two (2) Self-Contained refrigeration*

*Two (2) 120V w/ cord and plug*

*Two (2) Left door(s) hinged left, right door(s) hinged right, standard*

*Two (2) Stainless steel back*

*Two (2) 6" Casters, in lieu of standard 6" adjustable legs, no charge when specified on order*

*One (1) Model 61C31-251A-03 Tray Slide Kit #4, (1) wire rod tray slide kit, for H series, Tray Slide Kit on top sections, standard adjustable shelves in bottom sections*

**ITEM # 45**                      **PASS-THRU HEATED CABINET**

Quantity:                      Two (2)  
Basis of Design:            Beverage Air  
Model:                        PH2-1S-PT  
Electrical:                   208-1

*Two (2) Model PH2-1S-PTT Warming Cabinet, pass-thru, two-section, 43.3 cu. ft., (8) half height doors, cylinder lock, (6) silver freezer shelves, exterior digital thermometer, top mounted heating system, aluminum interior, stainless steel front & sides, breaker required, UL, UL EPH Classified, UL-Sanitation, MADE IN USA*

*Two (2) cord and plug, NEMA 6-20R*

*Two (2) Stainless steel back*

*Two (2) Model 62B03S003B Thermometer, in door digital, for reach-in models (solid door models only)*

*Two (2) Model 61C01-001A Casters, 6", for DP46/67/93 & CDR Series (set of 4)*

*One (1) Model 61C31-251A-03 Tray Slide Kit #4, (1) wire rod tray slide kit, for H series, Tray Slide Kit on top sections, standard adjustable shelves in bottom sections*

**ITEM # 46**                      **REACH-IN REFRIGERATOR**

Quantity:                      Two (2)  
Basis of Design:            Beverage Air  
Model:                        HFS2-1S  
Electrical:                   120-1

*One (1) Model HFS2-1S Horizon Series Refrigerator, reach-in, three-section, 71.52 cu. ft., (1) center solid door right-hand hinged, (1) right solid door right-hand hinged, (1) left solid door left-hand hinged, door locks, (9) shelves, electronic control, LED interior lighting, digital display, stainless steel front, gray painted sides, stainless steel interior, top-mounted self-contained refrigeration, Variable Speed Technology, cULus, UL EPH Classified, UL-Sanitation, Made in USA*

*One (1) Self-Contained refrigeration*

*One (1) cord with plug, 120V*

*One (1) Left door hinged left, center, and right door hinged right, standard*

*Nine (9) additional shelves*

*One (1) 6" Heavy duty casters (2) locking, standard*



**ITEM # 47                      REACH-IN FREEZER**

Quantity:                      One (1)  
Basis of Design:            Beverage Air  
Model:                         HRS3-1S

*One (1) Model HRS3-1S Horizon Series Freezer, reach-in, three-section, (2) right-hand solid hinged door, (1) left-hand solid hinged door, door locks, (6) adjustable shelves, electronic control, LED interior lighting, digital display, expansion valve technology, automatic defrost, top-mounted self-contained refrigeration, stainless steel front, gray painted sides, stainless steel interior, 3/4 HP, cULus, UL EPH Classified, UL-Sanitation, Made in USA*

*Two (2) Self-Contained refrigeration*

*Two (2) cord with plug, 120V*

*One (1) Left door hinged left, two (2) right door hinged right, standard*

*Six (6) additional adjustable shelves*

*Two (2) 6" Heavy duty casters (2) locking, standard*

**ITEM # 48                      LOCKERS**

*Five (5) lockers by Division 10*

**ITEM # 49                      SPARE NO.**

**ITEM # 50                      SPARE NO.**

**END OF SECTION 11 40 00**