

ATTACHMENT B - SPECIFICATIONS

SECTION 11 40 00 FOODSERVICE EQUIPMENT

PART 1 - GENERAL

SCOPE

It is the intent of this section to clarify roles and responsibilities and requirements for the installation of Foodservice Equipment:

- The Owner will purchase all new Foodservice Equipment.
 - New Foodservice Equipment is described in this specification section, and included in the contract documents as information for the General Prime Contractor and MEP subcontractors.
- The General Prime Contractor shall provide:
 - The services listed below in Related Work as by GC
 - Salvage and storage of existing foodservice equipment as described in the contract documents.
 - Coordination of the Owner's supplier and MEP subcontractors.
- MEP subcontractors shall provide the services listed below in Related Work for their respective disciplines.

PART 1 -GENERAL

- Scope
- Description
- Related work
- Quality assurance
- Guarantee
- Submittals
- Product delivery, storage and handling

PART 2-PRODUCTS

- General
- Custom Fabrication
- Refrigeration systems
- Architectural woodwork
- Equipment schedule

PART 3-EXECUTION

- General
- Installation
- Electrical requirements
- Plumbing requirements
- HVAC requirements
- Refrigeration requirements
- Fire systems
- Cleaning

PART 4-UTILIZATION

- Commissioning
- Operation and use

DESCRIPTION

The work shall be in accordance with all Contract Documents and shall include miscellaneous work and material which is reasonably inferred and necessary for completion. Make minor changes in equipment location as directed by the Owner or his representative.

Provide a knowledgeable and competent jobsite foreman to coordinate with applicable trades for all plumbing, electrical and HVAC rough-ins, wall openings, floor depressions, floor pitches, and equipment curbs and pads.

Verify available utility services and provide equipment accordingly. Verify rough-in locations and advise Owner's representative of any discrepancies prior to pouring of floors or closing of walls.

1 Verify all plumbing, electrical and HVAC requirements of new, existing and purveyor-furnished
2 foodservice equipment. Verify all field dimensions and existing equipment dimensions.
3

4 **RELATED WORK BY OTHER CONTRACTORS**

5 **GENERAL CONTRACTOR (GC) Division 1**

6 Place all new and existing Foodservice Equipment into their final locations. Provide all services
7 described in Part 3 - Installation.
8

9
10 Provide core drilling and sleeves in floors, wall sleeves, concrete equipment pads and roof curbs with
11 pitch pockets for refrigeration system components.
12

13 Provide concealed wall backing of size and type and at locations indicated on shop drawings
14 submitted by the Food Service Contractor (FEC).
15

16 Install floor troughs and floor pans furnished by FEC.
17

18 **PLUMBING CONTRACTOR (PC)**

19 Provide rough-in and final connections of all plumbing services. Flush all lines of foreign matter
20 before connecting fixtures.
21

22 Provide all water supply and drain lines, drain fittings, floor drains, valves, traps, tailpieces and
23 pressure reducing valves, back flow prevention valves; looped gas supply lines, gas pressure
24 reducing and regulating valves for pressure above 14" W.C., gas shut-off valves (except for gas
25 fire/fuel shut-off solenoid valves); grease traps; and PVC conduit for refrigeration lines, unless
26 indicated in the Plumbing Schedule as furnished by the FEC.
27

28 Install all faucets, spray units, lever drains, vacuum breakers, check valves, flow control valves, water
29 inlets, traps, filters, strainers, PRV valves, T/P gauges, gas valves, gas hoses, gas pressure
30 regulators, etc., furnished by the FEC. Exposed piping and fixtures shall not show tool marks.
31 Horizontal piping shall be a minimum of 6" AFF.
32

33 Make connections between sections of modular equipment such as exhaust hoods, and
34 warewashing machines.
35

36 **ELECTRICAL CONTRACTOR (EC) Division 26**

37 Provide rough-in and final connections of all electrical services. Install electrical devices furnished
38 by FEC and indicated on Electrical Schedule. Wet areas such as sinks, disposers or dishwashers
39 shall be wired in Sealtite Type EF conduit or equal, thru water-proof boxes.
40

41 Provide receptacles (GFI), conduit, contactors, controllers, switches, disconnects, starters, etc.,
42 unless indicated in the Electrical Schedule as furnished by the FEC. Exposed conduit for walk-in
43 cooler/freezer lighting will not be permitted.
44

45 **HVAC CONTRACTOR (HC) Division 23**

46 Provide rough-in and final connections of all HVAC services.
47

48 Provide ducts, fans, dampers, starters, etc., necessary for operation of grease extracting exhaust
49 hoods, condensate hoods, approved fire barrier material when exhaust hood is located closer than
50 18" to combustible material or structure and ventilator stacks.
51

52 **QUALITY ASSURANCE**

53 Comply with all federal, state and local laws and regulations governing materials, installation, health,
54 safety, fire, HVAC and electrical requirements within the applicable jurisdiction.
55

56 Comply with Standards of ADA, AGA, ASHRAE, ASME, NEMA, NEC, NFPA #17A, 54, 70, and 96,
57 NSF, OSHA and UL.
58

1 All principal items of equipment shall bear the NSF seal.

2
3 Use UL Listed electrical components and include UL labels.

4
5 When the Contract Documents call for higher standards or larger sizes than the regulations, the
6 Contract Documents shall govern. When the regulations require higher standards or larger sizes
7 than the Contract Documents, the regulations shall govern. Rulings and interpretations of the
8 enforcing agencies shall be considered a part of the regulations. No additional amounts shall be
9 paid for such compliance.

10
11 If, because of jurisdictional trade agreements or other conditions, any work specified in the Contract
12 Documents must be done by others, sublet such work only to those who are qualified to do such
13 work or make other arrangements at the expense of the FEC, subject to approval by the Architect.

14 **GUARANTEE**

15
16 Equipment provided under this Contract shall be guaranteed for parts and labor for a period of one
17 (1) calendar year from date of acceptance by the Owner as determined by the Owner and Architect.
18 Any parts requiring replacement due to defective material or workmanship during this period shall be
19 promptly replaced with new parts and installed at no cost to Owner.

20
21 Equipment shall be serviced within a reasonable time by a competent and factory-trained local
22 service agency. When an equipment breakdown occurs, service shall be performed within 24 hours
23 of the request. If the necessary repairs or replacements are not made promptly, the Owner may
24 have the necessary repairs and replacements made and charge the costs to the FEC.

25
26 Condensing units shall be further warranted on a pro rata basis for an additional four years, exclusive
27 of labor. Refrigeration warranties shall include replacement of refrigerant caused by a fault or leak
28 in the system.

29 **SUBMITTALS**

30
31 Submit shop and rough-in drawings, schedules and three buy-out brochure manuals within 30 days
32 of award of contract or as required by the Architect. Submit each page for review in quantities
33 required by the Architect.

34
35 Electronic shop drawings and rough-in drawings, when required by the Architect shall be in AutoCAD
36 or AutoCAD compatible format and buy-out books shall be in Word or PDF format. Architect or GC
37 shall forward to the Foodservice Consultant all buy-out manuals and all drawings for review.
38 Drawings shall be sent rolled up and in a tube. Buy-out manuals shall be assembled in hard-cover
39 three-ring binders with one electronic copy. Corrected brochure manuals and drawings will be
40 returned by the Foodservice Consultant for revisions by the FEC. Repeat until all corrections are
41 satisfactorily made. FEC shall be responsible for any utility costs associated with deviation from
42 Foodservice drawings and specifications.

43
44 When drawings are approved, submit assembled sets of prints in quantity required by the Architect.

45
46 When manuals are approved submit assembled brochures in quantity required by the Architect.
47 Provide a numbered cover sheet for each Item that includes a copy of the Specification for that Item.
48 Manuals are to indicate accessories and components used with each Item. Cross out models or
49 accessories shown on catalog sheets but not required by the Specifications.

50
51 Drawings shall include:

52
53 Itemized plumbing, electrical and HVAC requirement schedules showing quantities, all
54 required services, sizes and all accessories furnished by the FEC for installation by the
55 applicable trades.

56
57 Plumbing, electrical and HVAC rough-in plans in 1/4" scale. Rough-in Drawings included
58 with the Contract Documents may be used only with the written permission of the

1 Foodservice Consultant. When such drawings are used it shall be the responsibility of the
2 FEC to verify all dimensions and plumbing, electrical and HVAC services and prevailing
3 codes as they relate to this Project and to show any required changes on the documents
4 submitted for approval. Rough-in plans may be combined on one sheet only with permission
5 of the Foodservice Consultant. Plans are to show location, elevation, size and type of water
6 supplies, drains, gas lines, floor drains, site drains, electrical supplies, outlets, switches, etc.
7 Rough-in dimensions shall be located from readily identifiable column centers and finished
8 walls as drawn by the Architect. Include on each drawing page a legend of commonly used
9 symbols and abbreviations.

10
11 Floor recesses, trenches, refrigeration lines, refrigeration conduit, concealed wall blocking,
12 pass-thru openings, etc., in 1/4" to 3/4" scale.

13
14 Owner's existing equipment, Owner-furnished equipment, future equipment and
15 purveyor-furnished equipment such as beverage machines, when indicated in the Contract
16 Documents.

17
18 Plans, elevations, sections and details for all custom fabricated items, exhaust hoods,
19 walk-in coolers and freezers, etc.

20
21 Submit shop drawings showing plans, elevations and details for all custom fabricated items
22 in minimum 3/4" scale. Detailed sections shall be 1 1/2" scale or larger. Shop drawing paper
23 size shall be a minimum of 24" x 36".

24
25 When approved drawings and buy-out brochures are received by the Owner and Architect,
26 fabrication may begin. The approvals shall not relieve the FEC of responsibility for conformance with
27 the Contract Documents unless written approval of change is obtained from the Owner or the
28 Owner's representative.

29
30 Prior to demonstration and final inspection submit three copies of operation and maintenance
31 manuals to Architect or GC for approval. Manuals shall be in hard cover three-ring binders, electronic
32 copy in Word or PDF format and shall include replacement parts lists and a typewritten sheet listing
33 names, addresses and phone numbers of all service agencies to be involved, with reference to the
34 names and item numbers of the pieces of equipment each services. Provide a typewritten index
35 sheet showing, in numerical order, the item numbers and corresponding model and serial number
36 for each piece of equipment. Provide a cover sheet listing the name, address and phone number of
37 the Architect, FEC and the Food Service Consultant.

38
39 Should the contract for foodservice equipment be awarded after the plumbing, electrical and HVAC
40 services have been roughed-in, verify the locations of all such services, sleeves, depressions, etc.,
41 and incorporate them in the drawings. If the inspection reveals that the existing conditions seriously
42 interfere with the execution of the Work, report these conditions to the Architect and await instructions
43 before proceeding with that portion of the drawings.

44
45 **PRODUCT STORAGE, DELIVERY AND HANDLING**
46 All shipping, storage and delivery costs for equipment furnished by the FEC shall accrue to the FEC.

47
48 Do not deliver equipment until authorized by the GC. Verify storage areas with the GC prior to
49 delivery. Verify delivery route and building access prior to fabrication or installation.

50
51 Equipment shall be wrapped and crated at the factory and shall be delivered in undamaged condition.
52 FEC shall be responsible for loss or damage to equipment until final inspection and acceptance by
53 the Owner. Store all equipment and materials in such a manner as to prevent damage due to
54 moisture, foreign material and impact.

55
56
57

PART 2 - PRODUCTS

GENERAL

All equipment shall be manufacturer's latest model. An item of equipment specified by model number shall include all accessories the manufacturer includes as standard with the equipment as well as specified optional accessories.

The manufacturing facilities used for custom fabricated equipment shall at all times be accessible for the Architect and Consultant to inspect the materials and general construction and progress of the Work.

CUSTOM FABRICATION

All custom fabricated equipment as described in the Item Specifications shall be of uniform design and finish and shall be fabricated by one manufacturer.

Stainless steel shall be 18-8 Type 304, ASTM Specification A167, #4 finish, ASTM Specification A480. Sheets shall be free of warps, buckles, pits and scratches. Galvanized steel shall meet ASTM Standard A446. All edges, corners and welds shall be ground and polished smooth. Unless specified otherwise the following metal gauges shall be used:

10 gauge:	Gusset plates.
12 gauge:	Hardware reinforcement, channels.
14 gauge:	Table tops, sinks, splash shields, drainboards, slanting rackshelves and shelf brackets.
16 gauge:	Undershelves, overshelves, wall shelves, drawer fronts and access panels, double pan doors.
18 gauge:	Cabinet bodies, drawer pans, skirts, closure panels, trim strips, exhaust hoods.

Standard table top edges shall be turned down square 1 1/4" with 1/4" turn back angled downward 15 degrees.

Reinforce tops with welded galvanized or S/S U-channels, closed welded hat channels or painted angle iron, lengthwise and with crossbraces 30" O.C. minimum and at each pair of legs. Intersections of channels shall be fully welded. Tack welding of channel intersections will not be accepted.

Standard backsplashes shall be 10" high with 2" return to wall on 45 degree and then down 1/2" at rear. Ends shall be closed and welded. Cove the intersections of all back and endsplashes and raised rolled rims on tables, dishtables and drainboards a minimum of 3/4", horizontally and vertically.

Fasten tops to bases with studs welded to underside and capped with locking chrome acorn nuts. No exposed bolt or stud threads will be permitted on fabricated equipment.

Enclosed and semi-enclosed cabinet bases shall have flush fully welded mullion facings. Vertical partition dividers shall have #4 finish on both sides. Concealed partitions to be galvanized. Sections and framework behind cabinet doors shall be S/S.

Pipe stands and frames shall be fabricated of 1 5/8" O.D. 16 ga. Type 304 S/S tubing with continuously fillet welded cross bracing. Welds shall be ground and polished smooth. Legs to have S/S adjustable feet and S/S enclosed gussets welded to galvanized or S/S channel. Gussets shall be Component Hardware #A18-0206 or equal. Adjustable flanged feet are to be S/S, anchored with S/S fasteners.

Doors shall be of welded double pan construction, 3/4" thick, with sound deadening core and channel bracing.

Equip hinged doors with Component Hardware #P63-1012 recessed S/S handles and #M21-2580 mechanical catches with spring action nylon rollers. Hinged doors are to have heavy duty S/S lift-off hinges and are to be mounted flush with cabinet body.

1 Equip sliding doors with Component Hardware #62-1010 recessed handles. Sliding doors shall be
2 hung from 14 ga. S/S overhead tracks and shall have bottom guides and nylon rollers. Provide limit
3 device to prevent sliding doors from telescoping.
4

5 Drawers shall be provided with Component Hardware Series S52 heavy duty slides, 200# load
6 capacity per pair. Install on angle of 1/2" in 12" to provide self-closing operation. Mount slides to an
7 18 ga. S/S channel-type three-sided housing having an open bottom with two welded S/S channel
8 cross braces. Drawer housings are not to be considered as crossbracing for table tops. Drawer
9 front shall be of 16 ga. S/S double pan construction with fiberboard insulation between. Each drawer
10 shall have continuous top pull as shown on the Drawings. Drawer pan holder shall be 16 ga. S/S
11 and shall be tack welded to back of drawer front and sealed with silicone. Drawer pans shall be
12 stamped 18 ga. S/S, 20" x 20" x 5" or other sizes as specified and shall be easily removable without
13 the use of tools. Include drawer stops and Component Hardware #Q20-2081 rubber cushion
14 bumpers.
15

16 Undershelves on open base tables shall be fully welded or removable, as specified. Welded type
17 shall have edges turned down to match table tops. Undershelves of 20" or more in width shall be
18 reinforced with welded S/S or galvanized U-channels or angles, lengthwise and with crossbraces 30"
19 O.C. minimum and at each pair of legs. Intersections of bracing shall be welded as described for
20 table top bracing. Removable shelves shall be sectional with no section larger than 27"x 33" and
21 with edges rolled to conform to the crossbracing and stretchers. Grind and polish all edges and
22 corners of removable shelves.
23

24 Undershelves in cabinet bodies shall be 16 ga. S/S, formed with the back and ends turned up 1 1/2",
25 coved, welded and sealed to the cabinet body, with front edge and reinforcement as described for
26 open base tables.
27

28 Table overshelves shall have edges matching that described for table tops. Supports shall be 1 1/4"
29 diameter S/S tubing with nuts welded in bottom of tube and bolted from below. Provide channel
30 under table surface where bolts penetrate. Table overshelves over 12" wide shall have enclosed
31 S/S longitudinal inverted hat channel bracing. Cantilever supports (flags) shall be 14 ga. S/S,
32 welded. Standards passing through an angled backsplash shall be thru close-fitting oval holes. Bolt
33 cantilevered standards to heavy gauge flanges welded to the underside of the table. Standards for
34 splash-mounted overshelves shall be not more than 60" O.C.
35

36 Wall-mounted shelves shall be similar in construction to table overshelves, supported on 14 ga. S/S
37 brackets.
38

39 Sinks shall be 14 ga. S/S with intersections and corners coved a minimum of 3/4". No soldered
40 filleted corners will be accepted. Sinks with two or more compartments shall have fully welded double
41 wall partitions. No evidence of welding shall appear. Trim bands will not be permitted. Provide an
42 18 ga. S/S apron covering the front of multiple bowl sinks. Crease bottom of sink four ways to
43 recessed drain cup. Backsplash shall be 10" high, of same description as table splashes. Grain of
44 splash shall match grain of rear of bowls. Sink legs, rails, gussets, feet, underbracing and shelves
45 shall be to same specification as tables.
46

47 Provide brackets for rotary drain handles, attached with welded studs and acorn nuts. Brackets for
48 disposer control switches, control panels and mixing valves shall be fully welded to sink or table or
49 shall be welded to a full depth U-channel which is attached to the sink or table by not less than six
50 spot-welded studs.
51

52 Drainboards shall be 14 gauge S/S, integrally welded with straight rolled rim at front. Pitch
53 drainboards toward sinks.
54

55 Hardware and buy-out accessories shall be identified on the shop drawings on a bill of material,
56 subject to approval.
57

1 Prewiring of electrical items to junction boxes or circuit breaker panels shall comply with UL, NEMA,
2 NEC and prevailing codes.

3
4 Where U.L. Listed equipment assemblies with electrical circuit breaker panels are specified for
5 custom fabricated equipment, the equipment shall be fabricated in a U.L. Listed shop.

6
7 Field wiring and U.L. field certification shall not be acceptable. Identify all circuits by typewritten
8 index. Provide all panel spaces with breakers or dummies.

9
10 Internal wiring specified for custom fabricated equipment shall be identified with tags indicating item
11 number and electrical characteristics. Furnish wiring diagrams. Wiring shall run in rigid conduit, zinc
12 coated where concealed and chrome or S/S where exposed. Wire wet areas in Sealtite Type EF
13 conduit or equal. Provide conduit raceways where possible. NEMA #4 standards shall apply to all
14 splash areas. Final connections by EC.

15
16 Exposed junction boxes for switches and receptacles shall be S/S or cast aluminum Bell boxes and
17 shall be furnished with S/S cover plates. Provide NEMA #4 water-proof boxes for wet areas.

18 19 **ARCHITECTURAL WOODWORK**

20 Perform architectural woodwork in accordance with "Architectural Woodwork Quality Standards"
21 published by the Architectural Woodwork Institute (AWI). Fabricator shall have a minimum of 5 years
22 experience in fabricating architectural woodwork items similar in type and quality to those required
23 for this project.

24
25 Plastic laminate to be PF grade .042 TUF SURF 2 WilsonArt, Formica or approved equal
26 high pressure laminate. Laminate to be selected by Architect. Use Urac 185 adhesive or
27 equal, applied under heated pressure over close grained 3/4" exterior grade birch plywood.
28 In accordance with AWI 1600A-G-1, use horizontal grade on all exposed surfaces and
29 vertical grade on semi-exposed surfaces and interior cabinet walls. Provide backer sheet
30 on concealed surfaces, including underside of top. Paint all cut-outs.

31
32 Top sheet shall be placed on and over finished edge. Ease exposed edge or overlap sheet.
33 Use largest sheets possible in order to hold seams to a minimum.

34
35 Drawer sides, back and front shall be assembled with dado joints, glued and screwed.
36 Drawer bottoms shall be dadoed into sides, back and front and glued in place. Doors are to
37 be flush or flush overlay type as specified, with self-closing Grass #3803 hinges and S/S
38 wire pulls.

39
40 Drawer slides are to be Knappe & Vogt, or approved equal, full extension ball bearing type.

41
42 Seams and field joints shall be machined and installed for close fit and complete evenness.
43 Field joints shall use splines.

44
45 Cove backsplashes a minimum of 1/4". Endsplashes may have square intersections with
46 table tops unless otherwise specified.

47
48 Adjustable shelves shall be laminated with horizontal grade laminate on six sides and shall
49 be provided with heavy duty metal pilasters with snap-in shelf supports.

50
51 Locks are to be 5-pin tumbler locks, keyed alike.

52
53 All condensing units mounted in cabinet bases shall be provided with adequate space for
54 service, clear access for condensing unit removal and adequate ventilation to ensure that
55 the unit does not operate at temperatures above the manufacturer's requirements.

56
57

1 **EQUIPMENT SCHEDULE**

2

3 **UW OSHKOSH – SCOTT HALL**

4 **OSHKOSH, WISCONSIN**

5 **DSF Project No. 22E1C**

6

7 NOTE 1: Rough-in drawings for this project have been prepared by Stewart Design Associates, Inc.
8 It shall be the responsibility of the Food Service Contractor (FEC) to verify all dimensions, plumbing
9 and electrical services and prevailing codes as they relate to this Project and to show any required
10 changes on the documents submitted for approval.

11

12 NOTE 2: Where model numbers or multiple names of equipment manufacturers are given in this
13 Specification the equipment manufactured by the first-named manufacturer shall provide the design,
14 material and performance standards upon which acceptance of the equipment shall be based. The
15 base bid shall include the prime equipment specified with listed manufacturer, model, size and utility
16 requirements, capabilities as well as options and accessories. FEC must submit base bid based
17 solely on these specified items as to establish an accurate comparison amongst bidders. Complete
18 itemized pricing with manufacturer and model number as a part of bid proposal submission.

19

20 Upon approval of the Architect/Owner, supplemental to the bid, based upon the prime equipment as
21 specified, the FEC may separately propose substitutions (alternate equipment other than specified).
22 The FEC shall submit complete illustrations, specifications, capacities and utilities as well as
23 operational data for all proposed alternates along with the cost savings that the proposed substitution
24 will provide. It is the FEC's responsibility to prove that the item or items submitted as substitutions
25 provide the same level of performance and provides equal or greater value than the prime specified
26 item/s.

27

28 Approved alternate manufactures are listed when available. Please add SYS ID #S115 to each
29 model number as consultant contact reference for manufacturerer.

30

31 NOTE 3: Approved fabricators of custom fabricated S/S equipment for this Project are:

32

33 **BEST-WAY FABRICATING, INC.**

34 603 19th Avenue NE

35 P.O. Box 187

36 St. Joseph, MN 56374

37 320-363-4600 (Phone)

38 1-800-896-5564

39

40 **NATIONWIDE FABRICATION, INC.**

41 5311 Niagara St.

42 Commerce City, CO 80022

43 303-853-0107 (Phone)

44 303-853-0114 (Fax)

45

46 **INSTITUTIONAL EQUIPMENT, INC.**

47 704 Veterans Parkway, Unit B

48 Bolingbrook, IL 60440-5094

49 630-771-0990 (Phone)

50 630-771-0994 (Fax)

51

52 **TWO RIVERS ENTERPRISES**

53 490 River Street West

54 Holding, MN 56340

55 (320) 746-3156 (phone)

56 (320) 746-3158 (fax)

57

58

1 SAVANNAH
2 735 Florence Road
3 Savannah, TN 38372
4 (800) 447-4693 (Phone)
5 (731) 925-2840 (fax)

6
7 EAGLE SPECFAB
8 100 Industrial Boulevard
9 Clayton, DE 19938
10 (800) 441-8440 (Phone)

11
12 ITEM 1 REACH-IN REFRIGERATORS
13 Existing items. GPC to relocate as shown in the Drawings.

14
15 ITEM 2 REACH-IN FREEZERS
16 Existing item. GPC to relocate as shown in the Drawings.

17
18 ITEM 3 DRY STORAGE SHELVING
19 Existing item. GPC to relocate as shown in the Drawings.

20
21 ITEM 4 OPEN NUMBER

22
23 ITEM 5 OPEN NUMBER

24
25 **ITEM 6 UV CONTROL PANEL**
26 Specified as part of Item 7.

27
28 **ITEM 7 EXHAUST HOOD**

29 One required

30 Halton

31 One model KVE-UV-PSP

32 Dimensions: As shown on plans with a typical hanging height of 6'-8" above finished floor.

33 Furnish and install a complete kitchen exhaust canopy. The hood shall be the "Capture Jet" system,
34 Model KVE – Wall mounted style hood with Ultraviolet Lamp cassettes installed, as manufactured
35 by the HALTON Company of Scottsville, Kentucky. The canopy shall bear either the ETL or
36 Underwriters Laboratories U.L. label, for listed range hood without exhaust fire damper per standard
37 710 and be fabricated in compliance with NFPA-96-2001, and shall bear the National Sanitation
38 Foundation seal of approval. Hood shall be double-wall construction. Single wall construction will not
39 be acceptable.

40 The installation shall be in accordance with the manufacturer's recommendations and conform to
41 NFPA-96 guidelines and all applicable local codes. The size shall be as indicated on drawings and/or
42 equipment schedule.

43 The canopy exposed areas and inner liner shall be 18-gauge stainless steel with a #4 finish. Each
44 canopy shall have a filter housing of the same material as the canopy liner. The filter housing shall
45 be equipped with a concealed drip tray the full length of the canopy and with a grease cup for easy
46 removal and daily cleaning.

47 The exhaust canopy shall have "Capture Ray", ultraviolet light source technology located within the
48 exhaust chamber. The exhaust plenum is to be provided with Capture-Ray Ultra-Violet Light
49 Technology for chemical grease conversion. System cassettes include 6-light bulbs with an average
50 life expectancy of 10,000 hours. The cassette access plate includes a hinged door for ease of
51 maintenance and replacement of the UV bulbs. The door comes with safety switch. If the door is not
52 secured in a closed position, the system will not operate. Plenum shall be provided with a secondary
53 stainless steel grease particle separator medium behind the KSA filter.

54 Supplier shall include a one-year UV maintenance contract transferable to the owner/operator after
55 commissioning. Maintenance will include all labor and materials necessary to keep the UV
56 components of the system fully operational and include but not limited to the following:

1 -The UV bulbs shall be cleaned on the appropriate schedules to prevent grease buildup inside the
2 hood exhaust plenum and the building exhaust duct work. This schedule is determined by the type
3 of cooking equipment used and the operational hours per day.
4 -To ensure that all safety switches are functioning properly and the UV bulbs are operational, the
5 electrical system shall be checked quarterly by a Certified technician.
6 The Halton KVE-UV canopy shall be complete with a combination control panel that contains:
7 Kitchen exhaust fan On/Off switch, alarm reset push-button, alarm buzzer and lamps to indicate
8 Power On, Maintenance, Access Open, No Airflow, and Fire. Hours of operation shall also be
9 provided within the panel.
10 "Touch screen" UV hood control panel also coordinates operation of the Halton EcoloAir air scrubber.
11 A logic board interlock will be provided. Electrical supply: 120/1/60.
12 The installation shall be in accordance with the manufacturer's recommendations and conform to
13 NFPA-96 guidelines and all applicable local codes.
14 The size shall be as indicated on drawings and/or equipment schedule.
15 LED light fixture with the following certifications U.L., CSA, NSF and CE for use in grease exhaust
16 hoods in quantity sufficient to provide 50 foot candles at the cooking surface when hood is mounted
17 84" A.F.F. LED light fixture is complete with die cast aluminum junction box with integral fins for
18 natural heat dissipation. Input voltage of 24V DC with a power consumption not to exceed 20 watts.
19 The housing encases 24 LED light emitters with a brightness of 1000 lumens. Lamp body is stainless
20 steel ring with a high temperature silicone seal. Junction box to accept standard 1/2" NPT fitting.
21 Fixture shall come complete with integral power supply with an input voltage of 108VAC – 305VAC
22 and input frequency of 50/60 Hz. Input current rating shall be 0.57A @ 120VAC. Fixture shall contain
23 no mercury or lead. It shall be grease, heat and water proof and UL certified for kitchen grease hood
24 application.
25 The exhaust airflow will be based on the convective heat generated by the appliances underneath
26 each canopy. Submittal shall include convective heat calculations based on the input power of the
27 appliance served and efficiency of hood system consistent with results of independent test based on
28 ASTM Standards F-1704-05 Capture & Containment and F-2474-05 Heat Gain to Space. Final air
29 volume calculations shall comply with the hood listing. The use of end panels or rear seals to achieve
30 required airflows, are not acceptable.
31 Hood will include an active internal "Capture-Jet" System on all open sides of the hood that will allow
32 for Capture and Containment of thermal plume at specified air volumes. The Capture Jet air shall
33 be pulled into a 1" air plenum with the Capture-Jet fan and discharged through Capture-Jet ports that
34 are located along the inside front, side and bottom edge of the hood at discharge velocity of 1800
35 FPM. Slot type, passive devices or "Short-Cycle" discharge is not acceptable. The hood shall be
36 equipped with model KSA multi-cyclone stainless steel grease extractors. The grease extraction
37 efficiency is 93% on particles with a diameter of 5 microns and 98% on particles with a diameter of
38 15 microns or larger, based upon ASTM F-2519-05 method of test. Sound levels shall be between
39 40 and 55 NC.
40 The air flows through the KSA extractors and the Capture Jet air chamber are to be determined
41 through the integral T.A.B. (Testing and Balancing) ports located on the outside end of the exhaust
42 plenum inside each hood section. It is the responsibility of the air balancer to adjust the exhaust
43 volumes after installation with a Magnahelic Gauge or Shortridge Digital Anemometer and the hood
44 TAB ports to match the Pressure vs Air Flow Curves card provided in each hood section.

45 **ITEM 8 FIRE SUPPRESSION SYSTEM**

46 One required

47 Ansul or approved equal Kidde or Range Guard model;

48 One Model R-102 wet chemical fire suppression system with overlapping coverage and a stainless
49 steel mounting enclosure, UL 300 approval rating. Include the following:

50 A. Provide hood, duct and surface protection for Items 7, 12 and 13.

51 B. GPC to locate and verify pull station locations with authorized agency.

52 C. Provide mechanical gas shut-off valve. Furnish to PC for installation.

53 D. EC to provide shunt trip relays for all electrical connections below Item 7.

54 E. Provide flexible 5' hose when mobile equipment requires anchored nozzle protection fixed to
55 the equipment. Hose shall provide the ability to roll out the equipment for cleaning.
56
57
58

- 1 **ITEM 9 STAINLESS STEEL WALL COVERING**
2 Lot required
3 Fabricate
4 Provide 18 ga. #4 finish S/S behind the hood. The paneling shall extend from the top of the flooring
5 base material to 18" above the top of the hood and the full length of the depth of the hood.
6 Joints between the panels shall be covered with Component Hardware Model J64-1450 H strips.
7 Edges shall be capped with Component Hardware S/S continuous U-clips. Seal the panels with
8 clear silicone. All panels shall be securely attached with a generous amount of clear silicone on the
9 full perimeter of each panel (blind caulking) and on the rear surfaces in order to achieve a tight, flat,
10 bonding of the panels to the walls. Make close-fitting cut-outs for all utilities.
11
12 **ITEM 10 BREADING AND BATTER STATION**
13 One required
14 Giles
15 One Model BBT-O on casters.
16
17 **ITEM 11 TURBOCHEF OVEN**
18 One required
19 TurboChef
20 One Model PLM-9900-1-RR, Plexor M2 - PLE-99001-RR combination oven, two decks, Include:
21 cleaner starter kit, guard bottle, two foam trigger, installation program, 105703 turboChef Guard kit
22 and 105704 TurboChef Powder Cleaner kit with 16 packets and one foam trigger.
23
24 **ITEM 12 GRIDDLE**
25 Existing item. FEC to relocate as shown in the Drawings.
26
27 **ITEM 13 FRYERS WITH FILTRATION**
28 One unit required
29 Frymaster
30 One Model FPPH355 complete with 1" x 4' quick disconnect gas hose, filtration system, dump
31 station, FWH-1 food warmer and holding station and heavy duty locking casters. Include start-up
32 program for the entire unit.
33
34 **ITEM 14 REFRIGERATED EQUIPMENT STAND**
35 One required
36 Avantco
37 One Model CBE-36-HC refrigerated equipment stand complete with casters, cord and plug with
38 provisions for Item 12.
39
40 **ITEM 15 EQUIPMENT STAND**
41 Existing item. GPC to relocate as shown in the Drawings.
42
43 **ITEM 16 REACH-IN FREEZER**
44 One required
45 Beverage Air FB23HC-1S-18 27
46 One Model G12010 one door reach-in freezer with six adjustable shelves and casters.
47
48 **ITEM 17 REFRIGERATED PREPARATION TABLE**
49 Existing item. GPC to relocate as shown in the Drawings.
50
51 **ITEM 18 REFRIGERATED PREPARATION TABLE**
52 Existing item. GPC to relocate as shown in the Drawings.
53
54 **ITEM 19 OPEN NUMBER**
55
56 **ITEM 20 OPEN NUMBER**
57
58 **ITEM 21 OPEN NUMBER**

- 1 ITEM 22 SODA SYSTEM
2 Provided by beverage supplier.
3
- 4 ITEM 23 ICE MAKER WITH BIN
5 Existing as currently located.
6
- 7 ITEM 24 DISHTABLE
8 Existing as currently located.
9
- 10 ITEM 25 UNDERCOUNTER DISHWASHER
11 Existing as currently located.
12
- 13 **ITEM 26 HAND SINK**
14 One required
15 Fabricated or approved equal;
16 One stainless steel wall-mounted hand sink, 16 ga. S/S, with 14" x 12" x 8" deep bowl with integral
17 side splashes, Z-bracket, 2.2GPM, S/S three-sided apron and the following accessories:
18 A. T&S Model EC3101-HG, hydro-generator splash-mounted hands free faucet with gooseneck
19 swivel spout and aerator. Provide a single hole in the backsplash for the faucet mounting.
20 B. Chrome P-trap.
21 C. 1 1/2" S/S basket strainer.
22
- 23 **ITEM 27 SERVING COUNTER**
24 One required
25 Fabricated
26 One semi-enclosed base S/S serving counter as shown on the Drawings, with the following
27 accessories:
28 A. Undershelf as shown in the elevations.
29 B. Adjustable mid-shelves.
30 C. Laminate on guest side shall be in Architect/Owner's choice of color WilsonArt or Formica
31 products.
32
- 33 ITEM 28 POS SYSTEM
34 Provided by Owner.
35
- 36 ITEM 29 OPEN NUMBER
37
- 38 ITEM 30 OPEN NUMBER
39
- 40 ITEM 31 OPEN NUMBER
41
- 42 ITEM 32 OPEN NUMBER
43
- 44 ITEM 33 OPEN NUMBER
45
- 46 **ITEM 34 ICE DISPENSER**
47 One required
48 Cornelius
49 One Model 621022460 Enduro ice dispenser with Enduro 150 ice bin adapter.
50
- 51 ITEM 35 DRY STORAGE SHELVING
52 Existing item. GPC to relocate as shown in the Drawings.
53
54

- 1 **ITEM 36 BEVERAGE COUNTER**
2 One required
3 Fabricated
4 One enclosed base S/S serving counter as shown on the Drawings, with the following accessories:
5 A. Underself with open area at rear for utilities.
6 B. S/S doors with recessed door pulls, cylinder door lock and laminate. Laminate shall be in
7 Architect/Owner's choice of color WilsonArt or Formica products.
8 C. 4" splash and end splashes.
9 D. Provisions for Item 37.
- 10
11 **ITEM 37 SODA AND ICE DISPENSER**
12 Provided by beverage supplier.
- 13
14 **ITEM 38 REACH-IN REFRIGERATOR**
15 Provided by beverage supplier.
- 16
17 **ITEM 39 OPEN NUMBER**
- 18
19 **ITEM 40 FREEZER MERCHANDISER**
20 Existing item.
- 21
22 **ITEM 41 ESPRESSO CAPPUCCINO MACHINE**
23 One required
24 Concordia
25 One Model XPRESSTOUCH6 with installation/calibration/training, 97 48 xpress touch 6 with side
26 mount flavor station and cleaning kit.
- 27
28 **ITEM 42 REFRIGERATED MERCHANDISER**
29 Existing item.
- 30
31 **ITEM 43 MULTIPLEX FRESH BLENDER**
32 One Required
33 Multiplex Model FB08ETF-R-Gen1
- 34
35 **ITEM 44 JUST BAKED KIOSK**
36 Provided by Owner.
- 37
38 **ITEM 45 DESK**
39 Provided by Owner.

40 **PART 3 - EXECUTION**

41 **GENERAL**

- 42
43
44 Furnish to appropriate trades at a sufficiently early date all floor troughs or other equipment and
45 accessories to be installed by that trade.
- 46
47 All plumbing and electrical and HVAC components scheduled to be installed by separate trades shall
48 be tagged with item numbers and given to those trades. Obtain a receipt for same.
- 49
50 Any existing equipment scheduled to be re-used or disposed of shall be disconnected by the
51 appropriate trade. GPC shall relocate and install those items according to instructions given for new
52 equipment and in accordance with instructions given in the Equipment Schedule.
- 53
54 Remove crating and rubbish. Verify with GPC on availability of on-site trash disposal area.
- 55
56 GPC to protect all new and relocated foodservice equipment from damage until final acceptance by
57 the Owner.
- 58

1 **INSTALLATION**

2 Provide a competent foreman to direct the Work and to advise counsel other trades regarding proper
3 installation and connection of the equipment, per manufacturer's instructions. Assist trades in
4 temporary relocation of equipment as required to make connections. Instruct trades on equipment
5 manufacturer's connection details. Align and level equipment as connections are completed.

6
7 Set and level all non-mobile equipment to the correct height and anchor where indicated and/or
8 required for secure installation. Use concealed anchors wherever possible. Anchors are to be
9 noncorrosive and of adequate size for the Work. Align adjoining pieces of equipment for flush fit
10 wherever applicable.

11
12 Cut holes in foodservice equipment for fixtures, conduit, receptacles, cords, pipes and ducts. Provide
13 sleeves or ferrules, etc.

14
15 All permanent equipment installed against walls, floors, ceilings or other equipment shall be sealed
16 to same with clear food-grade silicone sealant. Sealant is to be applied smoothly and in a concave
17 shape, forming an air-tight and waterproof barrier.

18
19 Install trim strips with mastic. Use S/S machine screws or other noncorrosive fasteners when the
20 use of mastic is not adequate. Trim strips at the top of backsplashes will not be permitted. Equipment
21 must fit walls to within 1/4". Equipment installed in or through walls shall be trimmed to same with
22 trim of same material and finish as the equipment. Rivets may not be used as fasteners on custom
23 fabricated equipment.

24
25 Field joints in S/S shall be made by welding. Welding shall be by electric method and shall be made
26 with a welding rod of the same composition as the sheets or parts being welded. Welds shall be
27 complete welds, strong and ductile, with excess metal ground off and joints finished smooth to match
28 adjoining surfaces. Welds shall be free of mechanical imperfections, such as gas holes, depressions,
29 pits, runs and cracks, and shall have the same color as adjoining sheet surfaces. Joints shall be
30 continuously welded so that the fixtures appear as one-piece construction. Butt welds made by spot
31 welding straps under seams, filling in the void with solder and finishing by grinding are not acceptable.

32
33 Spot welds shall have a maximum spacing between welds of 3". Tack welds shall have at least 1/4"
34 length of welding material at a maximum spacing of 4". Welds at the ends of channel battens shall
35 not exceed 2" centers. Recoat galvanized members that have been cut, welded or damaged.

36
37 Wherever break bends occur, they shall be free of undue extrudence and any marks shall be
38 removed by grinding and polishing. Sheared edges shall be free of burrs or irregular projections and
39 shall be finished to eliminate danger of cutting or laceration.

40
41 Grain of polishing shall run in the same direction on all horizontal and on all vertical surfaces of each
42 item of fabricated equipment. Where table or sink tops join at right angles, the finish shall terminate
43 in a mitered edge.

44
45 **ELECTRICAL REQUIREMENTS**

46 Comply with standards of NEC, UL and NEMA and with the requirements of the prevailing code
47 authority.

48
49 Provide attached cordsets where cords are indicated on the foodservice Electrical Schedule.
50 Cordsets are to be neoprene, of adequate length. EC to match receptacle to cap.

51
52

1 **PLUMBING REQUIREMENTS**

2 All plumbing work shall be in accordance with prevailing codes and regulations.

3

4 Furnish to the PC for installation all control valves, valve-type wastes, vacuum breakers, pressure
5 reducing valves, check valves, solenoid valves, water filters, etc., as indicated in the Section 11 40
6 00 Contract Documents. Furnish gas pressure regulators for all foodservice equipment requiring
7 pressures below 14" W.C.

8

9 Furnish chrome piping and chrome angled flanged fittings where vacuum breakers extend above
10 backsplash. Installation by PC.

11

12 Flexible gas lines shall have a detachable S/S restraining cable, securely attached to the wall or floor
13 and the equipment, of such length as to prevent undue stress on the flexible gas line or connection.

14

15 **HVAC REQUIREMENTS**

16 All HVAC work shall be in accordance with prevailing codes and regulations.

17

18 Cut exhaust duct openings in ventilators in coordination with the HC.

19

20 **REFRIGERATION REQUIREMENTS**

21 Refrigeration systems shall be installed by a knowledgeable, skilled, and licensed refrigeration
22 contractor, who shall perform the work according to ASHRAE standards and the conditions of the
23 Contract Documents. Systems shall be installed, charged, started, tested and fully operational.

24

25 Condensing units shall be securely mounted with adequate clearance for service.

26

27 Systems shall be designed to operate not more than 18 hours per day in a 100 degree F. ambient
28 condensing temperature. Walk-in refrigerator compartments shall operate at 35 degree F. with
29 evaporator at 10 degree T.D. Walk-in freezer compartments shall operate at -10 degree F. with a
30 10 degree F T.D. at -20 degree suction temperature. Suction lines shall be sized for maximum
31 pressure drop of 2# on medium temperature and 1# on low temperature systems. Liquid lines shall
32 be sized for a maximum pressure drop of 3#.

33

34 All systems shall be designed for thermostatic expansion valves and pressure switches and shall
35 operate on specified refrigerant.

36

37 Refrigeration lines shall conform to ASHRAE or National Board of Fire Underwriters standards,
38 whichever is greater. Piping shall be Type "L" copper, cut with a tube cutter and sized. Use braising
39 rod of no less than 15% silver. Fittings shall be wrought copper.

40

41 Piping shall be installed with hangers at no more than 10 foot intervals horizontally and 6 foot intervals
42 vertically. Provide an oil trap at outlet of evaporator coils.

43

44 Insulate medium suction and condensate lines with 3/4" Armaflex, or Rubatex and insulate all low
45 suction and condensate lines with 1" Armaflex or Rubatex. For all ultra low suction lines (below -20
46 degrees) use manufacturer recommendations. Condensate lines are to be provided by the PC.
47 Cooler condensate lines shall not pass through freezer compartments. Provide walk-in freezer
48 condensate lines with self-regulating heat tape applied under the insulation. EC shall connect the
49 tape.

50

51 Provide sleeves for refrigerant piping and condensate piping wherever it passes through a walk-in
52 cooler or freezer wall, floor or ceiling. Pack sleeve with fiberglass and Perma-gum after installation.
53 Sleeves through walls shall be flush with walls.

54

55 Thermometers shall be installed on the exterior of each walk-in box near the door. Calibrate
56 thermometers after three days operation. Extend sensor capillaries away from doors and secure to
57 the walls.

58

1 Mount all specified lights in walk-in boxes for connection by the EC. Provide bulbs suitable for the
2 specified ambient temperature. Fluorescent light fixtures shall be surface mounted, NSF and UL
3 Listed, suitable for wet and low-temp areas and shall be 48" long with two tubes and removable lens.
4
5 Clean, dehydrate and evacuate the system. Check for leaks over a period of 24 hours at a vacuum
6 of 500 or less microns with no appreciable pressure drop. Liquid lines shall be pressurized according
7 to prevailing refrigeration codes for 24 hours with a maximum decrease of 3 PSI.
8

9 **FIRE SYSTEMS**

10 Fire systems shall conform to NFPA Pamphlets 17A and 96, U.L. 300 and rulings of authorities
11 having local jurisdiction.
12

13 Systems shall provide hood, duct and surface protection. Piping shall be concealed wherever
14 possible. Exposed piping shall be Type 304 18-8 S/S or chrome plated.
15

16 Furnish required size gas fire/fuel shut-off valve to PC for installation. Furnish control head
17 microswitch for electrical equipment requiring surface protection. Shunt trip breakers shall be
18 provided by the EC.
19

20 Include first year semi-annual checkout.
21

22 **CLEANING**

23 When installation is complete, remove all tape from the equipment and all debris from the work areas
24 and leave the facility broom clean. Equipment shall be left with scratches buffed out and any painted
25 surface damage touched-up. Replace work that cannot be properly restored. Equipment is to be left
26 free of dirt and reasonably free of dust. Final cleaning and sanitizing is to be done by Owner.
27
28

29 **PART 4 - UTILIZATION**

30 **COMMISSIONING**

31 Equipment shall be started and tested by factory-authorized service agencies.
32
33

34 Lubricate, start-up, test and adjust equipment prior to Owner's inspection and demonstration. Repair
35 or replace equipment that is not fully operational or is noisy or vibrating. When cleaning and testing
36 and adjusting is complete, notify Architect in writing.
37

38 **OPERATION AND USE**

39 When cleaning, testing and adjusting have been completed and operation and maintenance manuals
40 approved, arrange for demonstration times at Owner's convenience but during normal working hours.
41 Demonstrations shall be done by competent, trained personnel, thoroughly familiar with the
42 operation, techniques of usage, capacities and maintenance of the equipment.
43

44 The FEC contract representative for this Project shall be present at all equipment demonstrations.
45

46 Furnish all warranty cards and advise Owner to complete and file the registrations. Demonstration
47 and instruction may take up to two full days.
48

49 **END OF SECTION 11 40 00**