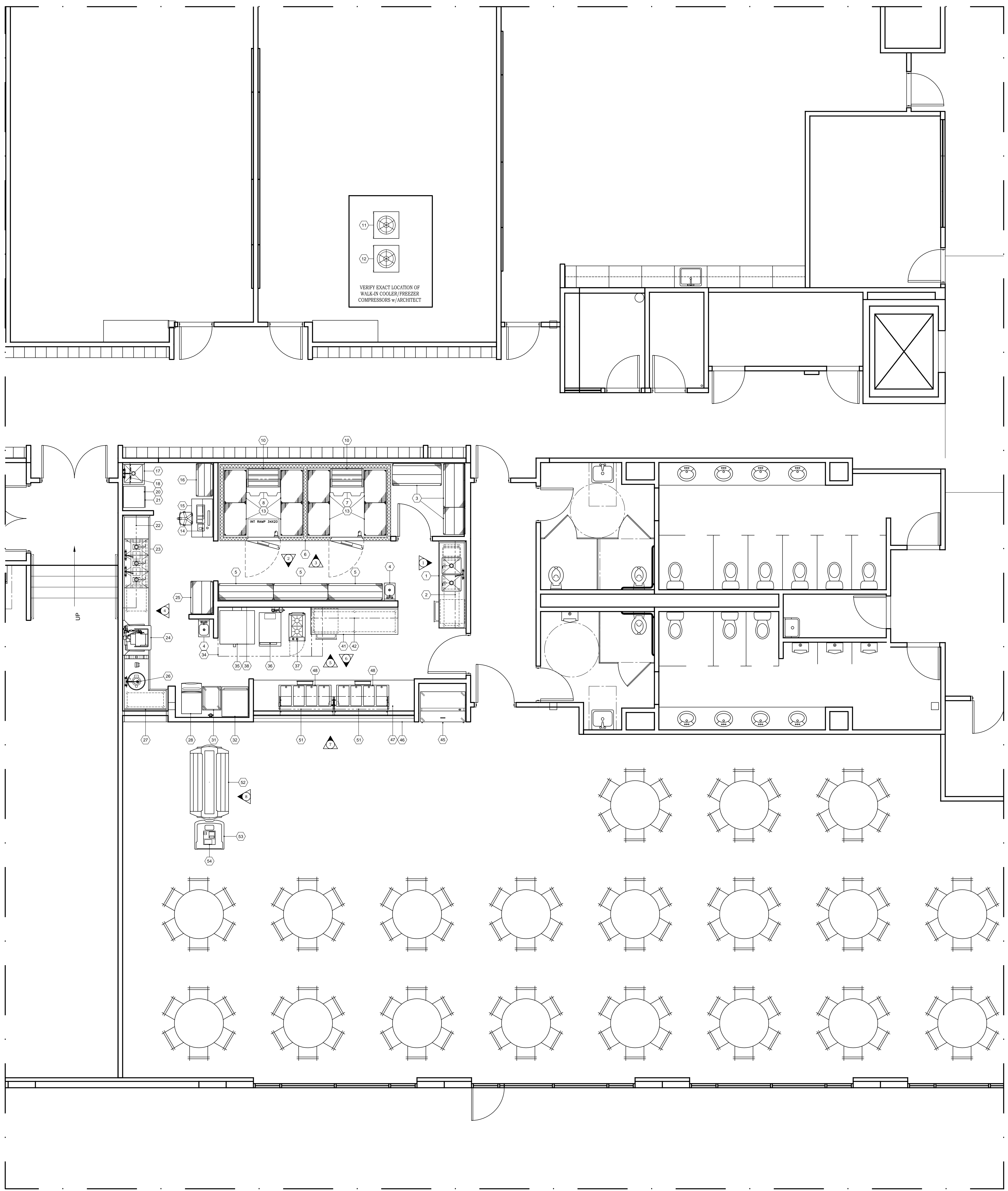


**STEM SCHOOL AND ACADEMY
 BARRONS BUILDING - PHASE 3**
 8878 BARRONS BOULEVARD Highlands Ranch, Colorado 80129



Item No.	Qty	Category	Remarks
1	1	PREP TABLE	w/2 SINKS, UNDERSHELF, & DRAWER
2	2	WALL SHELVING	
3	1	WIRE SHELVING UNIT	DRY STORAGE
4	2	HAND SINK	SOAP & PAPER TOWEL DISPENSER BY OWNER
5	1	WIRE SHELVING	DRY STORAGE
6	1	WALK-IN COOLER/FREEZER BOX	PROVIDE RAMP & INSULATED FLOOR IN FREEZER
7	1	REFRIGERATION COIL	WALK-IN COOLER
8	1	REFRIGERATION COIL	WALK-IN FREEZER
9		SPARE NUMBER	
10	2	DUNNAGE RACK	
11	1	WALK-IN FREEZER COMPRESSOR	
12	1	WALK-IN COOLER COMPRESSOR	
13	1	COOLER/FREEZER SHELVING	
14	1	WALL CABINET	BY G.C.
15	1	DESK	BY G.C.
16	1	WIRE SHELVING	CHEMICAL STORAGE
17	1	MOP SINK & FAUCET	BY P.C.
18	1	WALL SHELF/MOP RACK	
19		SPARE NUMBER	
20	1	DRYER	STACKED ON TOP OF ITEM 21. BY OWNER
21	1	WASHER	BY OWNER
22	1	WALL SHELF/POT RACK	
23	1	3-COMPARTMENT SINK/CLEAN DISHTABLE	
24	1	DISHWASHER, DOOR TYPE, VENTLESS	
25	1	WIRE SHELVING UNIT	DISH STORAGE
26	1	DISPOSER	w/CONTROL PANEL
27	1	DISH TABLE, SOILED	w/QUICK DRAIN
28	1	ICE MACHINE & BIN	
29		SPARE NUMBER	
30		SPARE NUMBER	
31	1	BUN PAN RACK	
32	1	HEATED MOBILE CABINET	
33		SPARE NUMBER	
34	1	EXHAUST HOOD	w/BUILT-IN FIRE PROTECTION SYSTEM
35	1	CONVECTION OVEN - DOUBLE	w/CASTERS
36	1	TWO COMPARTMENT CONVECTION STEAMER	
37	1	STOCK POT RANGE	w/CASTERS
38	1	STAINLESS STEEL WALL FLASHING	COOKLINE
39		SPARE NUMBER	
40		SPARE NUMBER	
41	1	WORKTABLE	w/UNDERSHELF & DRAWER
42	2	WALL SHELVING	
43		SPARE NUMBER	
44		SPARE NUMBER	
45	1	MILK COOLER	w/CASTERS
46	1	TRAY SLIDE	
47	1	SERVING COUNTER	w/FILL FAUCET
48	2	DROP-IN HOT WELL	
49		SPARE NUMBER	
50		SPARE NUMBER	
51	2	SNEEZE GUARD	
52	1	SALAD BAR SERVING COUNTER	MOBILE
53	1	CASH REGISTER STAND	MOBILE
54	1	P.O.S. TERMINAL	BY OWNER

GENERAL CONTRACTOR NOTES

- GENERAL CONTRACTOR TO CUT AND PROVIDE HOLES THROUGH CEILINGS, ROOFS, WALLS AND FLOORS FOR DUCTS, ETC., IN ACCORDANCE WITH LOCAL, FIRE AND BUILDING CODES AND IN ACCORDANCE WITH DUCT SIZES SPECIFIED. GENERAL CONTRACTOR ALSO TO PROVIDE ALL DUCT FIRE SEPARATIONS, ENCLOSURES, WRAPPINGS, ETC., AS MAY BE REQUIRED BY LOCAL BUILDING AND FIRE CODES.
- WHERE NOISE OR VIBRATION PRODUCING EQUIPMENT (DISHWASHER, DISPOSER, ETC.) IS LOCATED ADJACENT TO DINING AREAS AND/OR PUBLIC AREAS, PROVISIONS SHOULD BE MADE BY GENERAL CONTRACTOR TO "DOUBLE STUD" AND SOUND PROOF COMMON WALLS.
- IF CANTILEVER BRACKETS FOR TABLE AND STOOL SEATS OR OTHER EQUIPMENT ARE SPECIFIED, THE BRACKETS SHALL BE PROVIDED BY W.WEST, BUT INSTALLED BY GENERAL CONTRACTOR IN ACCORDANCE WITH SPECIFICATIONS AND DIMENSIONS PROVIDED BY W.WEST.
- W.WEST PLANS ARE PROVIDED FOR THE SOLE PURPOSE OF INDICATING OUTLET LOCATIONS AND EQUIPMENT REQUIREMENTS ONLY AND DO NOT RELIEVE THE GENERAL CONTRACTOR OR SUB-CONTRACTOR OF THE RESPONSIBILITY OF COMPLYING WITH ALL APPLICABLE CODES.
- IT IS THE RESPONSIBILITY OF THE OWNER AND/OR GENERAL CONTRACTOR TO INSURE THAT W.WEST RECEIVES COPIES OF ALL ADDENDUMS AND CHANGES TO BUILDING PLANS WHICH ARE MADE PRIOR TO AND DURING CONSTRUCTION. IN THE EVENT THAT THIS INFORMATION IS NOT DELIVERED TO W.WEST, OWNER WILL BE RESPONSIBLE FOR ALL COSTS INCURRED BY THE FAILURE TO GIVE W.WEST THIS INFORMATION.
- LAST DATED REVISION VOIDS ALL PREVIOUS DRAWINGS.
- GENERAL CONTRACTOR TO PROVIDE ACCESS TO HOODS AT AREA ABOVE HOODS FOR MOUNTING OF HOOD SUPPORTS (IF ACCESS NOT PROVIDED, GENERAL CONTRACTOR TO PROVIDE HOOD SUPPORTS).
- GENERAL CONTRACTOR TO PROVIDE FLOOR RECESSES, PLAY AND LEVEL, VAPOR BARRIERS AND BUILT-IN INSULATED FLOORS (AS SHOWN ON PLAN).
- WEARING FLOOR FINISH AND INTERIOR FINISH IN WALK-IN BOXES BY GENERAL CONTRACTOR UNLESS OTHERWISE SPECIFIED.
- SLEEVES TO BE PROVIDED BY GENERAL CONTRACTOR IN ALL WALLS, FLOOR AND CEILINGS FOR ALL LINES (DRAIN, REFRIGERATION, ETC.) TO PASS THROUGH AND RESEAL AFTER LINES ARE RUN. PROVIDE ESCUTCHEON PLATES WHERE APPROPRIATE.
- SPRINKLER HEADS IN WALK-IN FREEZER AND COOLER BOXES MUST BE PROVIDED AND ADEQUATELY PROTECTED AGAINST FREEZING, BY GENERAL CONTRACTOR.
- REMOVAL OF WINDOWS, WINDOW FRAMES AND CENTER DOOR POST FOR ENTRY OF EQUIPMENT SHALL BE THE RESPONSIBILITY OF THE GENERAL CONTRACTOR AND AT NO EXPENSE TO W.WEST.

NOTE:
 ANY DIMENSIONS ARCHITECTURAL OR STRUCTURAL ON THESE DRAWINGS THAT ARE IN CONFLICT WITH WHAT ACTUAL JOB SITE CONDITIONS NEED TO BE BROUGHT TO THE ATTENTION OF THE K.E.C.

EQUIPMENT PLAN
 SCALE: 1/4" = 1'-0"

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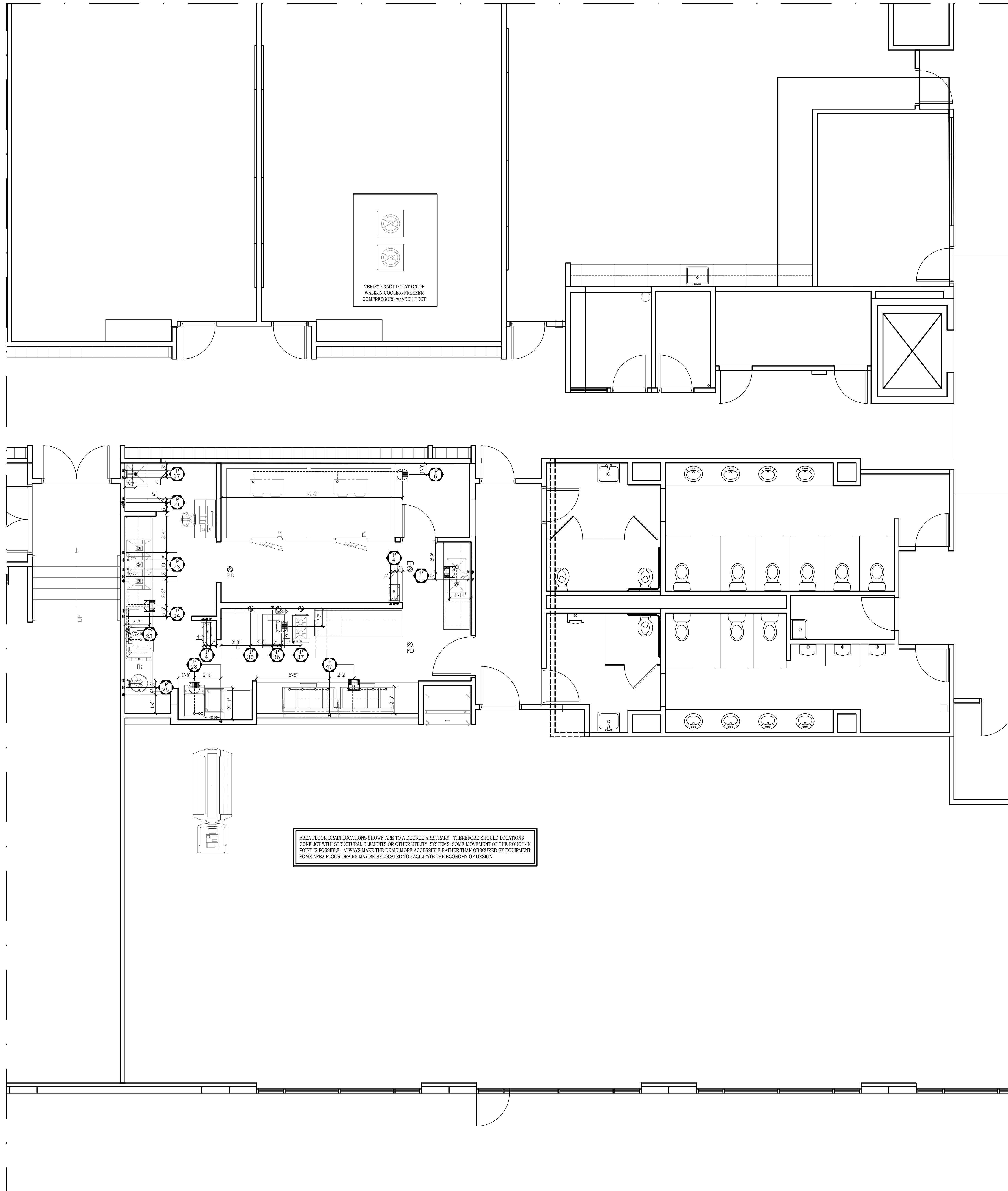
**KITCHEN
 EQUIPMENT
 LAYOUT PLAN**
 Drawn: CR
 Checked: CS

PLUMBING NOTES:

- ALL ROUGH-INS SHOWN RELATE TO FOOD SERVICE EQUIPMENT ONLY. SEE ARCHITECTURAL/ENGINEERING PLANS FOR ADDITIONAL PLUMBING REQUIREMENTS.
- FINAL CONNECTIONS TO ALL EQUIPMENT BY PLUMBING CONTRACTOR, INCLUDING REQUIRED MATERIALS, SUCH AS STOPS, VALVES, FILTERS, TRAPS, CHECK VALVES, PRESSURE REDUCING VALVES, PIPING, ESCUTCHEON PLATES, TUBING, ETC.
- WATER QUALITY REQUIREMENT. THE RECOMMENDED MINIMUM WATER QUALITY STANDARDS WHETHER UNTREATED OR PRE-TREATED, BASED UPON 10 HOURS OF USE PER DAY AND A DAILY FLOW DOWN, ARE AS FOLLOWS:
 - TOTAL DISSOLVED SOLIDS LESS THAN 300 P.P.M.
 - TOTAL ALKALINITY LESS THAN 85 P.P.M.
 - SILICA LESS THAN 13 P.P.M.
 - pH FACTOR GREATER THAN 7.5 P.P.M.
- VERIFY ALL PLUMBING ROUGH-INS & LOCATIONS WITH OWNER, VENDOR, OR G.C. ON EXISTING EQUIPMENT OR OTHER EQUIPMENT NOT PROVIDED BY W.WEST.
- PLUMBING CONTRACTOR TO FURNISH AND INSTALL THE FOLLOWING AS PER CODE:
 - ALL WATER, WASTE, GAS, AND STEAM SERVICE TO POINT OF ROUGH-IN AS SHOWN ON PLAN. ROUGH-IN OUTLETS TO STUB 4" OUT OF WALL AT HEIGHT INDICATED FROM FINISHED FLOOR OR CURB. ALL FLOOR OPENINGS ARE TO BE SEALED WATERTIGHT.
 - PRESSURE REDUCING AND/OR REGULATING VALVES FOR DISHWASHERS, BOOSTER HEATERS, AND AS OTHERWISE NOTED, KITCHEN AREAS.
 - ALL FLOOR SINKS, COMPLETE WITH TOP GRATES INDICATED AND REMOVABLE SEDIMENT BUCKETS SET FLUSH WITH FINISHED FLOOR, UNLESS NOTED OR AS PER LOCAL CODE.
 - ALL WASTE LINES, DIRECT OR INDIRECT, EXCEPT AS NOTED, SHALL BE PITCHED DOWNWARD. ALL WASTE LINES SHALL HAVE ADEQUATE, CLEAN-OUT PROVISIONS.
 - INDIRECT WASTE LINES FOR WALK-IN REFRIGERATOR/FREEZER PITCHED 1/4" TO 1'-0" (MINIMUM) AND WITH A 1" TRAP AT MINIMUM 2' ABOVE FLOOR SINK.
 - HEATER TAPE WITH 35 WATTS PER LINEAL FOOT OF DRAIN LINE AND INSULATION OF ALL DRAIN LINES INSIDE WALL IN FREEZER COMPARTMENTS.
 - INSTALL FIRE CONTROL GAS SHUT-OFF VALVES AS PER SUPPLIED BY FIRE PROTECTION SYSTEM CONTRACTOR. (IF GAS COOKING EQUIPMENT IS USED.)
 - VACUUM BREAKERS AS REQUIRED.
 - INSULATION OF ALL STEAM, HOT WATER AND CONDENSATE LINES IN KITCHEN. ALL SUCH LINES ARE TO BE COLOR CODED ACCORDING TO LOCAL CODES.
 - CLEAN-OUT VALVES FOR STEAM CONDENSATE AND AIR LINES.
 - ALL PIPING TO AND FROM EQUIPMENT SHALL BE KEPT AT A MINIMUM OF SIX INCHES (6") CLEAR ABOVE FINISHED FLOOR TO ALLOW CLEANING, OR PREVAILING LOCAL CODES.
- IN-LINE WATER FILTERS ARE RECOMMENDED FOR THE FOLLOWING EQUIPMENT* (WATER FILTERS TO BE BY P.C. UNLESS OTHERWISE NOTED.)
 - WATER HEATERS
 - BOOSTER HEATERS
 - SINK HEATERS
 - DISHWASHERS
 - GLASSWASHERS
 - SODA SYSTEMS
 - STEAM EQUIPMENT
 - ICE MAKING MACHINES
 - WATER STATIONS
- PLUMBING DIVISION TO INTERCONNECT DISHWASHER WITH BOOSTER HEATER AND WATER TYPE VENTILATORS WITH CONTROL PANELS AS PER MANUFACTURER'S INSTRUCTIONS, WHEN APPLICABLE AND NOTED.
- ALL VENT PIPES ARE TO BE CONCEALED IN WALLS OR COLUMN CHASES.
- ALL LINES ROUTED THROUGH EQUIPMENT SHALL NOT INTERFERE WITH INTENDED USE OF, OR SERVICING OF EQUIPMENT.
- INTERCONNECTION BETWEEN STEAM EQUIPMENT AND STEAM GENERATOR.
- GREASE TRAP TO BE SPECIFIED AND LOCATED BY MECHANICAL ENGINEER AND PROVIDED AND INSTALLED BY MECHANICAL CONTRACTOR OR PLUMBING CONTRACTOR.
- A GAS PRESSURE REGULATOR FOR EACH PIECE OF GAS FIRED EQUIPMENT SHALL BE PROVIDED AND INSTALLED BY P.C. UNLESS OTHERWISE NOTED. IN ADDITION A HIGH PRESSURE GAS REGULATOR (RATED) SHALL BE PROVIDED AND INSTALLED BY P.C. WHEN NECESSARY.
- FLEXIBLE GAS CONNECTIONS WITH OR WITHOUT QUICK DISCONNECT FEATURE SHALL BE PROVIDED WITH SHUT-OFF VALVE BY R.E.C., THIS VALVE SHALL HAVE PERMANENT HANDLE, AND NOT BE LESS THAN THE NOMINAL SIZE OF THE CONNECTOR AND BE INSTALLED AT THE GAS PIPING OUTLET IMMEDIATELY AHEAD OF THE FLEXIBLE GAS CONNECTION, INSTALLED BY P.C.
- PLUMBER SHALL PROVIDE ALL DRAINS FROM FIXTURES, INCLUDING WALK-IN BOX EVAPORATORS.
- IF REQUIRED BY THE BUILDING DEPARTMENT, THE P.C., UNDER HIS PERMIT APPLICATION, SHALL PROVIDE DRAWINGS OR DIAGRAMS OF PIPING LAYOUT, SEWER PIPE SIZES, VENTING CONNECTIONS, ETC.
- PLUMBER SHALL DETERMINE AND BE RESPONSIBLE FOR THE TOTAL PROJECT REQUIREMENTS AND VERIFY SIZE OF SERVICE REQUIRED FOR GAS OR WATER.
- ALL PIPING, EXCEPT AS SHOWN OTHERWISE ON PLANS OR AS INSTRUCTED OTHERWISE BY THE ARCHITECT, SHALL BE RUN CONCEALED IN FURRED WALLS, PARTITIONS, FURRED CEILING, ETC. WHERE PIPING IS EXPOSED, IT SHALL BE RUN ADJACENT TO WALLS OR PARALLEL TO CONSTRUCTION IN NEAT AND ORDERLY FASHION AS DIRECTED BY THE ARCHITECT.
- P.C. RESPONSIBLE FOR MAKING ALL FINAL CONNECTIONS. MODULAR BAR DIE WALL DOES NOT COME FROM FACTORY PRE-PLUMBED.

SYMBOLS & ABBREVIATIONS	
•	HW HOT WATER
•	CW COLD WATER
•	DW DIRECT WASTE
⊙	FD FLOOR DRAIN
⊙	FFD FUNNEL FLOOR DRAIN
⊙	FS FLOOR SINK 3/4 GRATE
⊙	FSHG FLOOR SINK/HALF GRATE
⊙	G GAS
⊙	SS STEAM SUPPLY
⊙	SR STEAM RETURN
⊙	IW INDIRECT WASTE
⊙	RP ROUGH-IN POINT
⊙	APF ABOVE FINISHED FLOOR
⊙	FA FROM ABOVE

CONNECTION TYPES	
1)	CONNECT WATER SUPPLY TO FAUCETS
2)	CONNECT WATER SUPPLY TO WASTE CONNECTION
3)	DIRECT WASTE CONNECTION TO UNIT
4)	INDIRECT WASTE CONNECTION TO UNIT
5)	QUICK DISCONNECT FURNISHED BY KITCHEN EQUIPMENT CONTRACTOR
6)	QUICK DISCONNECT FURNISHED BY MECHANICAL CONTRACTOR
7)	MANIFOLD GAS CONNECTION
8)	DIRECT GAS CONNECTION

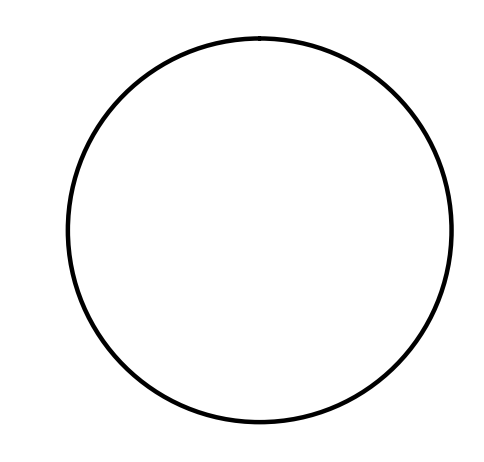


PLUMBING SCHEDULE							
No.	Item	Size	BTU	AFF	RIP LOC.	Conn. Type	Remarks
P1	CW/HW	1/2" EA.		18"	WALL	1	PREP TABLE SINK FAUCET
"	FSHG	12"x12"			FLOOR	4	PREP TABLE SINKS DRAIN TO FLOOR SINK
P4	CW/HW	1/2" EA.		24"	WALL	1	HAND SINK FAUCET (2) RIPS
"	DW	1 1/2" EA.		20"	WALL	3	HAND SINK DRAINS TO DIRECT WASTE (2) RIPS
P6	FSHG	12"x12"			FLOOR	4	WALK-IN COOLER/FREEZER EVAP. COILS DRAIN TO FLOOR SINK
P17	CW/HW	1/2" EA.		36"	WALL	1	MOP SINK FAUCET - VFY. REQUIREMENTS w/P.C.
"	DW	2"			FLOOR	3	MOP SINK DRAINS TO DIRECT WASTE - VFY. REQUIREMENTS w/P.C.
P21	CW/HW	1/2" EA.		48"	WALL	2	WASHER - VFY. REQUIREMENTS w/OWNER
"	SP	1 1/2"		30"	WALL	3	WASHER DRAINS TO STAND PIPE - VFY. REQUIREMENTS w/OWNER
P23	CW/HW	1/2" EA.		14"	WALL	1	3-COMPARTMENT SINK FAUCET
"	DW	2"		12"	WALL	3	3-COMPARTMENT SINK DRAINS TO DIRECT WASTE - VFY w/LOCAL CODE
"	FSHG	12"x12"			FLOOR	4	3-COMPARTMENT SINK, QUICKDRAIN & WAREWASHER DRAIN TO FLOOR SINK
P24	HW	1/2"		50"	WALL	2	WAREWASHER - 110°F INCOMING HW MINIMUM
"	CW	1/2"		78"	WALL	2	WAREWASHER - 90°F INCOMING CW MAXIMUM
P26	CW	3/4"		14"	WALL	1,2	PRE-RINSE - TEE CW TO DISPOSER
"	HW	1/2"		14"	WALL	1	PRE-RINSE
"	DW	2"		12"	WALL	3	DISPOSER DRAINS TO DIRECT WASTE
P28	CW	1/2"		72"	WALL	2	ICE MACHINE WATER FILTER - P.C. INTERPLUMB FROM FILTER TO ICE MACHINE
"	FSHG	12"x12"			FLOOR	4	ICE MACHINE DRAINS TO FLOOR SINK
P35	GAS	3/4"	110,000	24"	WALL	5	DOUBLE CONVECTION OVEN - UNIT MANIFOLDED FOR SINGLE POINT CONNECTION
P36	GAS	3/4"	144,000	24"	WALL	5	STEAMER
"	CW	1/2"		54"	WALL	2	STEAMER - P.C. TEE CONNECTION & INTERPLUMB FROM WATER FILTER TO STEAMER
"	FSHG	12"x12"			FLOOR	4	STEAMER DRAINS TO FLOOR SINK
P37	GAS	3/4"	60,000	24"	WALL	5	STOCK POT RANGE
P47	CW	1/2"		18"	WALL	1	FILL FAUCET
"	FSHG	12"x12"			FLOOR	4	HOT FOOD WELLS DRAIN TO FLOOR SINK

AREA FLOOR DRAIN LOCATIONS SHOWN ARE TO A DEGREE OF ARBITRARINESS. THEREFORE SHOULD LOCATIONS CONFLICT WITH STRUCTURAL ELEMENTS OR OTHER UTILITY SYSTEMS, SOME MOVEMENT OF THE ROUGH-IN POINT IS POSSIBLE. ALWAYS MAKE THE DRAIN MORE ACCESSIBLE RATHER THAN OBTUSCURED BY EQUIPMENT. SOME AREA FLOOR DRAINS MAY BE RELOCATED TO FACILITATE THE ECONOMY OF DESIGN.

GENERAL G.P.H. LOADS		
EQUIPMENT TYPE	G.P.H. HIGH	G.P.H. LOW
PREP SINK	25	15
3-COMP. POT SINK	60	45
PRE-RINSE	45	45
BAR 3-COMP. SINK	25	25
COFFEE BREWER	5	5
MOP SINK	15	15
HAND SINK	5	5

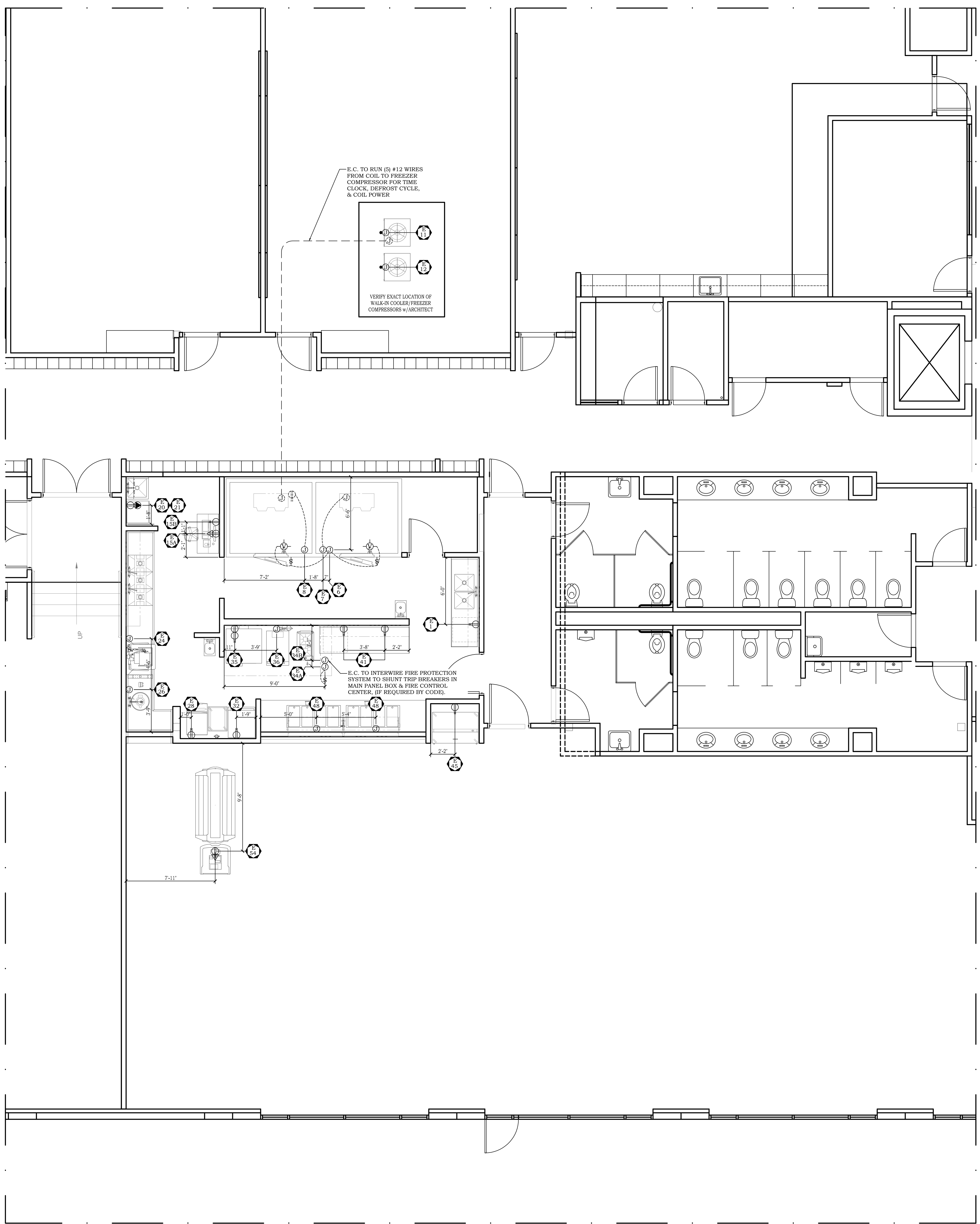
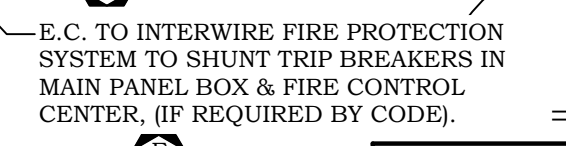
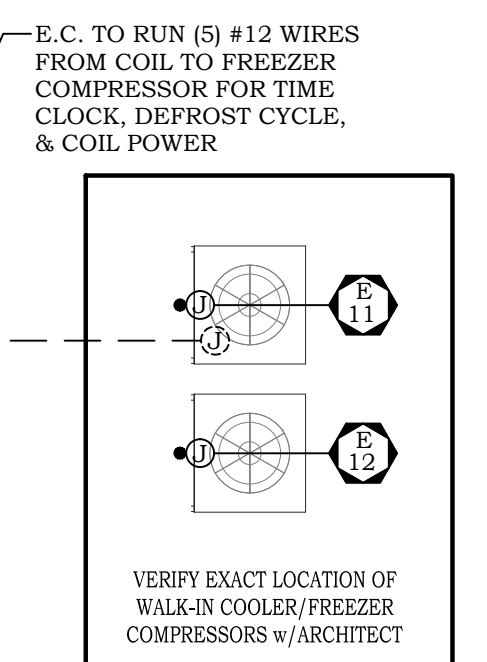
PLUMBING ROUGH-IN PLAN
SCALE: 1/4" = 1'-0"



**STEM SCHOOL AND ACADEMY
BARRONS BUILDING - PHASE 3**
8878 BARRONS BOULEVARD Highlands Ranch, Colorado 80129

ELECTRICAL NOTES:

- ALL ROUGH-INS SHOWN RELATE TO FOOD SERVICE EQUIPMENT ONLY. SEE ARCHITECTURAL/ENGINEERING PLANS FOR ADDITIONAL ELECTRICAL REQUIREMENTS.
- FINAL CONNECTIONS TO ALL EQUIPMENT BY ELECTRICAL CONTRACTOR, INCLUDING MATERIALS.
- ALL LOADS INDICATED ARE ACTUAL AND NOT CIRCUIT BREAKER SIZE UNLESS OTHERWISE NOTED.
- ALL CONVENIENCE OUTLETS TO BE SET HORIZONTALLY.
- ALL ROUGH-IN HEIGHTS INDICATED FROM FLOOR TO THE CENTER LINE OF THE OUTLET. FLOOR ROUGH-INS TO BE STUBBED UP 4" ABOVE FINISHED FLOOR OR CURB. ALL FLOOR OPENINGS ARE TO BE SEALED WATER-TIGHT.
- ELECTRICAL CONTRACTOR TO PROVIDE SHUNT TRIP BREAKERS FOR EQUIPMENT UNDER HOOD AND INTERWIRE TO FIRE PROTECTION SYSTEM. PER LOCAL CODE.
- FINAL CONNECTIONS TO EQUIPMENT JUNCTION BOX OR PULL-BOX AND ALL ELECTRICAL WORK FROM PANEL BOARDS, TO BE BY THE ELECTRICAL CONTRACTOR.
- VERIFY ALL ELECTRICAL ROUGH-INS AND LOCATIONS WITH OWNER, VENDOR OR G.C. ON EXISTING EQUIPMENT OR OTHER EQUIPMENT NOT PROVIDED BY WEST.
- ELECTRICAL CONTRACTOR TO FURNISH AND INSTALL THE FOLLOWING AS PER CODE:
 - ALL JUNCTION BOXES, ELECTRICAL OUTLETS, COVER PLATES, SWITCHES, ETC., NOT BUILT INTO FIXTURES OR EQUIPMENT. ALL OUTLETS, JUNCTION BOXES, COVER PLATES, ETC., IN LAUNDRY AREAS, DISHROOM OR AS INDICATED ON SCHEDULES, MUST BE VAPOR PROOF, OR AS PER LOCAL CODE.
 - ALL PLUGS & CORDS AS NOTED ON SCHEDULE. ALL CORDS SHALL BE N.E.M.A. RATED AND U.L. APPROVED FOR MANUFACTURED AND/OR FABRICATED EQUIPMENT.
 - SHUNT TRIP CIRCUIT BREAKERS OR DISCONNECTS FOR FIRE CONTROL SYSTEM SHUT-OFF OF FOOD SERVICE EQUIPMENT BELOW HOODS/VENTILATORS AS REQUIRED BY N.E.F.A. 99 CODE OR LOCAL CODE.
 - DISCONNECTS OR OTHER DEVICES AS REQUIRED BY CODES.
 - ELECTRO-MAGNETIC OVERLOAD PROTECTION FOR AIR COMPRESSORS AND VACUUM PUMPS IN THE LAUNDRY, AS NOTED.
 - ALL REQUIRED BULBS FOR FIXTURES.
 - PLUG MOLDS SUPPLIED & INSTALLED WHERE INDICATED.
- WHEN APPLICABLE, ELECTRICAL CONTRACTOR TO PROVIDE CONDUIT WIRING, INSTALL ELECTRICAL COMPONENTS AND INTERWIRE BETWEEN THE FOLLOWING:
 - REMOTE REFRIGERATION EQUIPMENT TO EVAPORATOR COILS AND FOR DEFROST CONTROLS.
 - CONTROL PANELS TO VENTILATORS AND EXHAUST/SUPPLY FANS PER MANUFACTURER'S INSTRUCTIONS.
 - KITCHEN EXHAUST HOOD/VENTILATORS TO FIRE CONTROL SYSTEM AND HOOD CONTROLS.
 - CALL LIGHTS AND WATCH CONTROL SYSTEMS.
 - LIGHT FIXTURES, CHANDELIERS, ETC., LAMPS FOR ANY LIGHT FIXTURE ARE TO BE PROVIDED AND INSTALLED BY THE ELECTRICAL CONTRACTOR UNLESS INDICATED ON THE LIGHTING SCHEDULES OR DRAWINGS.
 - MODULE COUNTERS AND COMPONENTS OR EQUIPMENT MOUNTED ON COUNTERS.



SYMBOLS & ABBREVIATIONS

⊙	JB	JUNCTION BOX
⊕	DR	DUPLEX RECEPTACLE
⊕	SPO	SPECIAL PURPOSE OUTLET
⊕	DR/DATA	P.O.S. POWER/DATA PORT
⊕	STUB	STUB UP 4" TO JUNCTION BOX
⊕	STUB	STUB UP 4" TO FLOOR MOUNTED OUTLET
⊕	STUB	STUB UP 4" TO FLOOR MOUNTED SPECIAL PURPOSE OUTLET
⊕	JB	JUNCTION BOX MOUNTED IN EQUIPMENT
⊕	DR	DUPLEX RECEPTACLE MOUNTED IN/ON EQUIPMENT
⊕	JB	DRIP CORD - PROVIDED & INSTALLED BY E.C.
⊕	SW	SWITCH
⊕	FLEX	FLEX
⊕	PH	PHASE
⊕	FO	FLOOR OUTLET
⊕	RI	ROUGH-IN POINT
⊕	AMP	AMP
⊕	KW	KILOWATT
⊕	HP	HORSE POWER
⊕	AFF	ABOVE FINISHED FLOOR
⊕	FA	FROM ABOVE
⊕	CLO	CEILING
⊕	E.C.	ELECTRICAL CONTRACTOR

CONNECTION TYPES

- DIRECT TO JUNCTION BOX ON EQUIPMENT.
- DIRECT TO OUTLETS INCLUDED WITH DISCONNECT.
- DIRECT TO JUNCTION BOX THROUGH DISCONNECT.
- DIRECT SERVICE TO CIRCUIT BREAKER PANEL INCLUDED WITH EQUIPMENT.
- REQUIRES INTERWIRING BETWEEN CONTROLS AND EQUIPMENT.
- CORD & PLUG FURNISHED WITH EQUIPMENT.
- CORD & PLUG FURNISHED AND INSTALLED BY ELECTRICAL CONTRACTOR.
- OUTLET FURNISHED & INSTALLED BY ELECTRICAL CONTRACTOR.
- OUTLET FURNISHED WITH EQUIPMENT & INSTALLED BY ELECTRICAL CONTRACTOR.
- EQUIPMENT INSTALLED IN COUNTER & WIRED BY MANUFACTURER.
- FINAL CONNECTION BY ELECTRICAL CONTRACTOR TO PRE-WIRED JUNCTION BOX OUTLET IN COUNTER.
- FLEX OUT OF WALL @ ROUGH-IN POINT (NO J-BOX REQ'D)

GENERAL WALK-IN NOTES:

- E.C. TO VERIFY EXACT SIZE & LOCATION OF COMPRESSORS FOR WALK-IN BOXES W/MECHANICAL CONTRACTOR.
- E.C. TO MOUNT & INTERWIRE VAPOR-PROOF OR FLUORESCENT LIGHTS, WHICHEVER PROVIDED, PER SPEC. RUN CONDUIT ON EXTERIOR TOP OF WALK-IN BOXES. LIGHTS FOR WALK-INS PER SPEC.
- E.C. TO SUPPLY & MOUNT SERVICE DISCONNECTS @ ALL WALK-IN CONNECTIONS.
- E.C. TO RUN #12 WIRES FROM COIL TO FREEZER COMPRESSOR FOR TIME CLOCK, DEFROST CYCLE & COIL POWER.
- REFRIGERATION CONTRACTOR PROVIDE DRAIN LINE HEATER TAPE. ELECTRICAL CONTRACTOR TO INSTALL IT. E.C. TO PROVIDE & MOUNT A JB AT FREEZER COIL FOR DRAIN LINE HEATER TAPE.

ELECTRICAL SCHEDULE

No.	Item	Volts	Ø	Amp	KW	HP	AFF	RIP LOC.	CONN TYPE	REMARKS
E1	DR	120	1	8.0			50"	WALL	8	CONVENIENCE OUTLET
E6	JB	120	1	15.0			FA	CLG	1.5	WALK-IN COOLER FREEZER - E.C. TO INTERWIRE SWITCH, LIGHTS, PRESSURE RELIEF VALVE, DOOR HEATER & OTHER DISCONNECTS AS NEEDED. LIGHTS TO BE BY E.C.
E7	JB	120	1	4.2			FA	CLG	1	WALK-IN COOLER EVAP. COIL - VFY. REQUIREMENTS w/SHOP DRAWINGS
E8	JB	120	1	10.0			FA	CLG	1	DRAIN LINE HEAT TAPE - E.C. TO SUPPLY & INSTALL OUTLET AT FREEZER COIL FOR HEAT TAPE
E11	JB	208	1	8.4		1.5	ROOF	ROOF	1	WALK-IN FREEZER COMPRESSOR - VFY. REQUIREMENTS w/SHOP DRAWINGS
E12	JB	208	1	12.7		1.0	ROOF	ROOF	1	WALK-IN COOLER COMPRESSOR - VFY. REQUIREMENTS w/SHOP DRAWINGS
E15A	DR	120	1	15.0 CKT			18"	WALL	8	OFFICE COMPUTER - VFY. REQUIREMENTS w/OWNER
E15B	DATA						24"	WALL	8	DATA PORT - VFY. REQUIREMENTS w/OWNER
E20	DR	120	1	8.0			50"	WALL	8	CONVENIENCE OUTLET
E20	SPO	240	1	30.0			54"	WALL	6,8	DRYER - VFY. REQUIREMENTS w/OWNER
E21	DR	120	1	15.0			36"	WALL	6	WASHER - VFY. REQUIREMENTS w/OWNER
E24	JB	208	3	45.4			24"	WALL	1	WAREWASHER - WIRED FOR SINGLE POINT CONNECTION
E26	JB	208	3	3.3		2.0	12"	WALL	1.5	DISPOSER - E.C. TO INTERWIRE CONTROLS TO SOLENOID VALVE
E28	DR	120	1	14.4			66"	WALL	7,8	ICE MACHINE - E.C. TO SUPPLY & INSTALL CORD & PLUG
E32	DR	120	1	12.0		1.5	72"	WALL	6	HEATED HOLDING CABINET
E34A	JB	120	1	10.0			FA	CLG	1.5	EXHAUST HOOD - E.C. INTERWIRE LIGHTS & FANS TO SWITCH (MOUNT SWITCH TO HOOD FACE)
E34B	JB	120	1	15.0 CKT			FA	CLG	1	FIRE SUPPRESSION SYSTEM
E35	DR	120	1	6.0		0.50	18"	WALL	6	DOUBLE CONVECTION OVEN
E36	JB	120	1	2.0			18"	WALL	1	STEAMER
E41	DR	120	1	8.0			50"	WALL	8	CONVENIENCE OUTLET (2) RIPS
E45	DR	120	1	6.8		0.33	18"	WALL	6	MILK COOLER
E48	JB	208	3	15.2		4.96	18"	WALL	1	HOT FOOD WELL (2) RIPS
E54	DR	120	1	15.0 CKT			FLOOR	FLOOR	6,8	P.O.S. UNIT - E.C. TO SUPPLY & INSTALL FLOOR OUTLET - VFY. REQUIREMENTS w/OWNER (3) RIPS
	DATA						FLOOR	FLOOR	8	DATA PORT - E.C. TO SUPPLY & INSTALL FLOOR OUTLET - VFY. REQUIREMENTS w/OWNER (3) RIPS

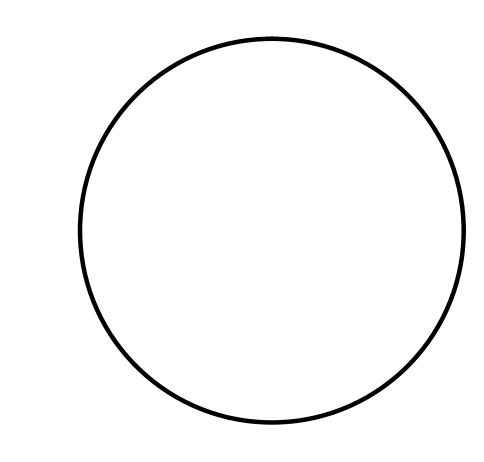
ELECTRICAL ROUGH-IN PLAN
SCALE: 1/4" = 1'-0"

ARCHITECT'S PROJECT NUMBER
2015.002

ISSUE: December 21, 2015
Permit and Computation

ELECTRICAL ROUGH-IN PLAN & SCHEDULE

Drawn: CR
Checked: CS



**STEM SCHOOL AND ACADEMY
BARRONS BUILDING - PHASE 3**
8878 BARRONS BOULEVARD Highlands Ranch, Colorado 80129

ARCHITECT'S PROJECT NUMBER
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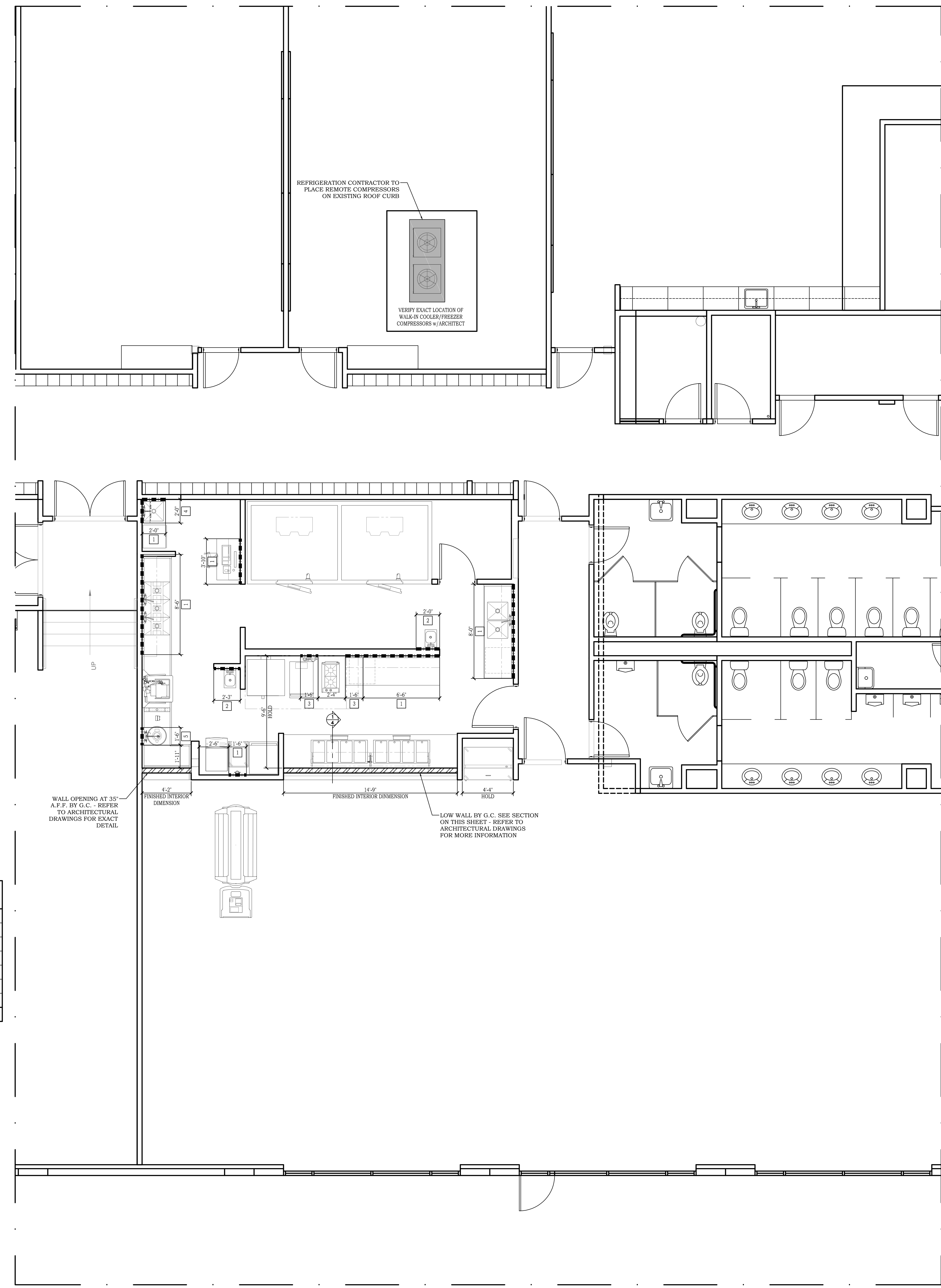
**BUILDING
CONDITIONS
PLAN**
Drawn: CR
Checked: CS

FS4.0
DECEMBER 21, 2015

- BUILDING CONDITIONS NOTES:**
- ALL WORK INDICATED ON THIS PLAN AND IN THESE NOTES SHALL BE BY OTHER THAN THE KITCHEN EQUIPMENT CONTRACTOR, UNLESS OTHERWISE NOTED.
 - WALLS, FLOORS, AND CEILINGS IN KITCHEN, PREF. SERVICE, WASHING AND BAR AREAS OR ANY OTHER LOCATION WHERE FOOD OR BEVERAGES ARE PREPARED SHALL BE SMOOTH, EASILY CLEANABLE, NONABSORBENT AND DURABLE. WALL AND CEILINGS SHALL BE LIGHT COLORED, AS PER LOCAL CODES. LEAD BASED PAINT SHALL NOT BE USED.
 - PARTITION WALLS BETWEEN KITCHEN AREAS AND PUBLIC AREAS SHOULD BE CONSTRUCTED FOR MAXIMUM SOUND CONTROL.
 - GENERAL CONTRACTOR OR EQUIVALENT SHALL:
 - PROVIDE WALL REINFORCING OR BACKING AS REQUIRED FOR WALL MOUNTED KITCHEN EQUIPMENT. SEE WALL BACKING SCHEDULE FOR BACKING TYPES AND HEIGHTS.
 - SLOPE FLOORS TO FLOOR DRAINS OR FLOOR TROUGHS, AND FLOOR SINKS IF NOT ELEVATED.
 - PROVIDE DOOR/WALL OPENINGS AND/OR PASSAGES TO ASSURE ACCESS FOR ALL KITCHEN EQUIPMENT AND FRONT END ITEMS. COORDINATE SIZES WITH W.WEST.
 - PROVIDE DEPRESSIONS FOR WALK-IN COOLER/FREEZER. SMOOTH AND TRANSIT LEVEL, WHERE DEPRESSIONS ARE REQUIRED. DEPTH AS NOTED.
 - AFTER WALK-IN COOLER/FREEZER HAS BEEN INSTALLED BY W.WEST, FILL EXCESS DEPRESSION AROUND WALK-IN COOLER/FREEZER w/ GROUT. FINISH FLOOR MATERIAL AND COVERED BASE. PROVIDE ENCLOSURES FROM TOP OF WALK-IN TO FINISHED CEILING (IF REQUIRED). E.C. WALK-IN PENETRATIONS SHALL BE PROVIDED WITH ESCUTCHEON PLATES BY ELECTRICAL CONTRACTOR.
 - PROVIDE MASONRY PADS WITH TROWEL SMOOTH AND LEVEL FINISH AS REQUIRED. (SEE MASONRY CONTRACTOR NOTES)
 - PROVIDE FIRE RATED MATERIALS AND/OR INSULATION AS REQUIRED FOR EXHAUST DUCTS, VENT STACKS, HEAT PRODUCING EQUIPMENT, ROOF/WALL PENETRATIONS, ETC., PER LOCAL CODES.
 - PROVIDE COVERED BASE-MOULDING OR COVERED INTEGRAL FLOOR MATERIALS AS REQUIRED AT ALL VERTICAL SURFACES FOR KITCHEN FLOORS.
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 - ALL REMOTE COMPRESSORS & CONDENSERS ARE TO BE LOCATED OUTDOORS UNLESS OTHERWISE NOTED BY ARCHITECT & MECHANICAL ENGINEERS.

SYMBOLS & ABBREVIATIONS

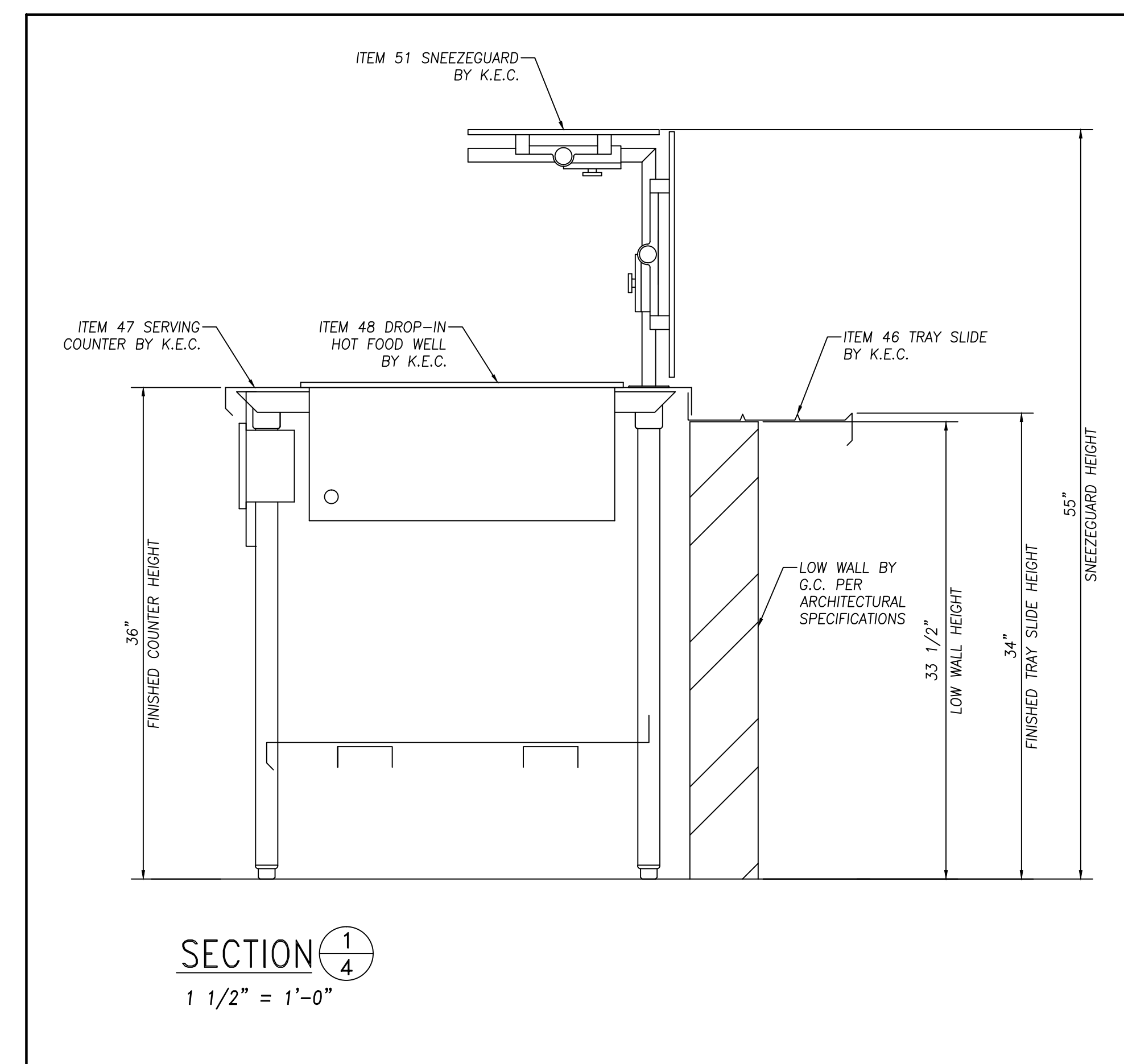
	EXHAUST DUCT CONNECTION
	MAKE-UP AIR DUCT CONNECTION
	SPECIAL PURPOSE EXHAUST DUCT w/GRILLE
	FLOOR DEPRESSION
	SMOOTH & LEVEL FLOOR
	INSULATED FLOOR
	6" DIA. P.V.C. SODA/BEER CHASE



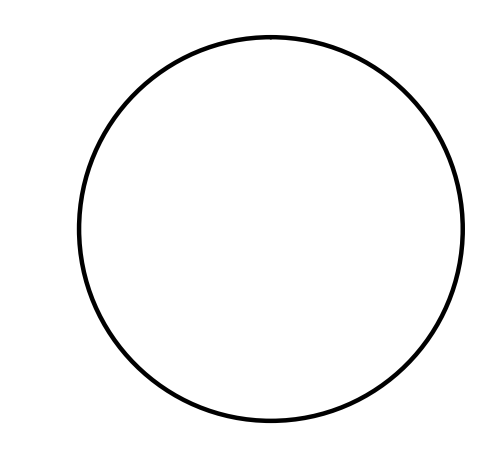
WALL BACKING SCHEDULE

NO.	TYPE	HGT. ABOVE FINISHED FLOOR (TOP OF BACKING)	REMARKS
1	PLYWOOD	74" DOWN TO 36"	WALL SHELF, POT RACK, MOP RACK, WATER FILTER
2	PLYWOOD	48" DOWN TO 24"	HAND SINK
3	12 GA. METAL	74" DOWN TO 50"	WALL SHELF, STEAMER WATER FILTER
4	PLYWOOD	48" DOWN TO 24"	UTILITY FAUCET
5	PLYWOOD	66" DOWN TO 48"	PRE-RINSE

WALL BACKING IS TO PROVIDE SUPPORT FOR ALL MOUNTED EQUIPMENT. ALWAYS EXTEND BACKING TO THE NEXT STUD IN EACH DIRECTION. WALL BACKING MAYBE INDICATED ON WALLS THAT MAY BE OF CONCRETE BLOCK CONSTRUCTION, AND THEREFORE WALL BACKING MAY NOT BE REQUIRED.



BUILDING CONDITIONS PLAN
SCALE: 1/4" = 1'-0"



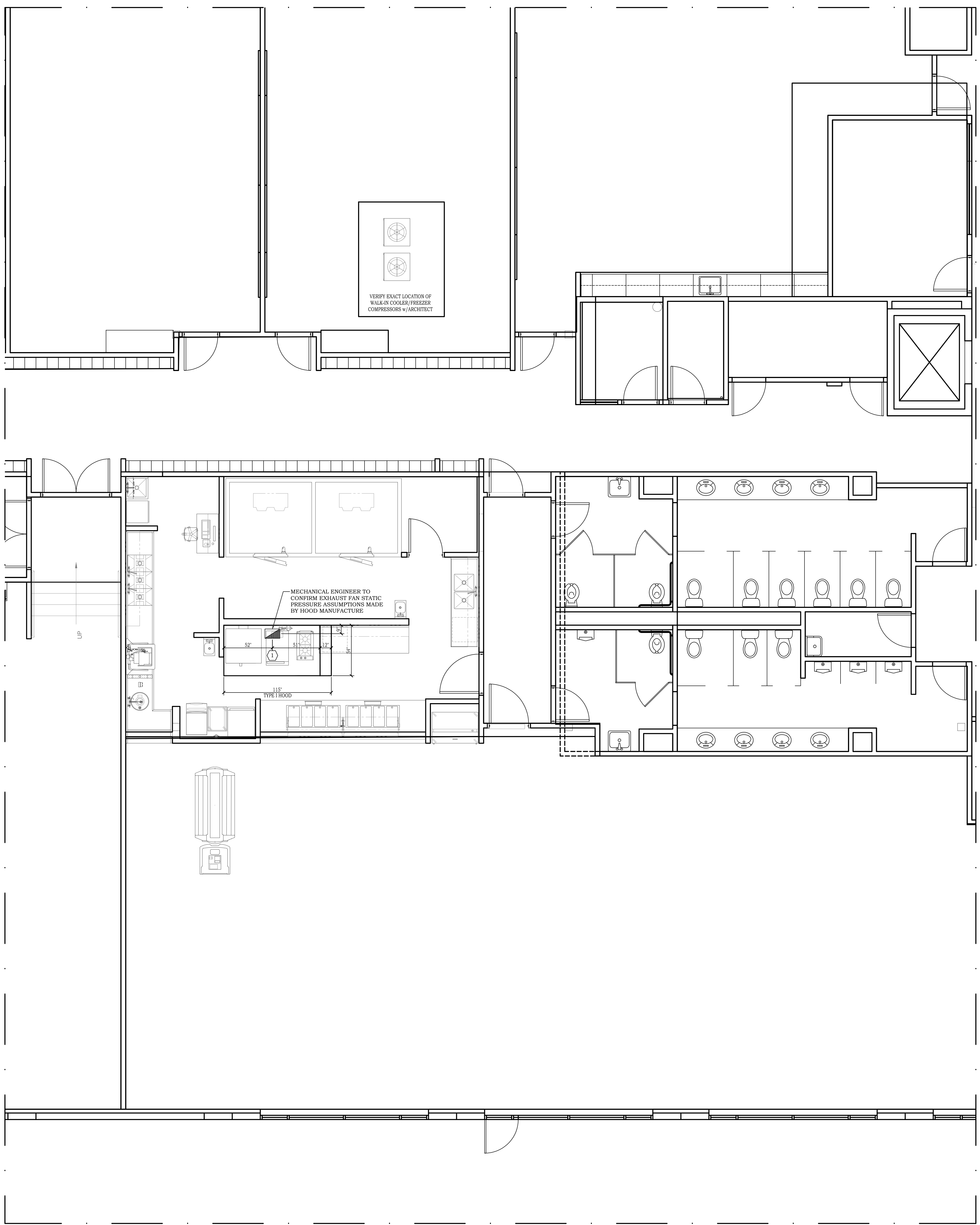
**STEM SCHOOL AND ACADEMY
 BARRONS BUILDING - PHASE 3**
 8878 BARRONS BOULEVARD Highlands Ranch, Colorado 80129

ARCHITECT'S PROJECT NUMBER
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**KITCHEN HOOD
 PLAN &
 SCHEDULE**

Drawn: CR
 Checked: CS



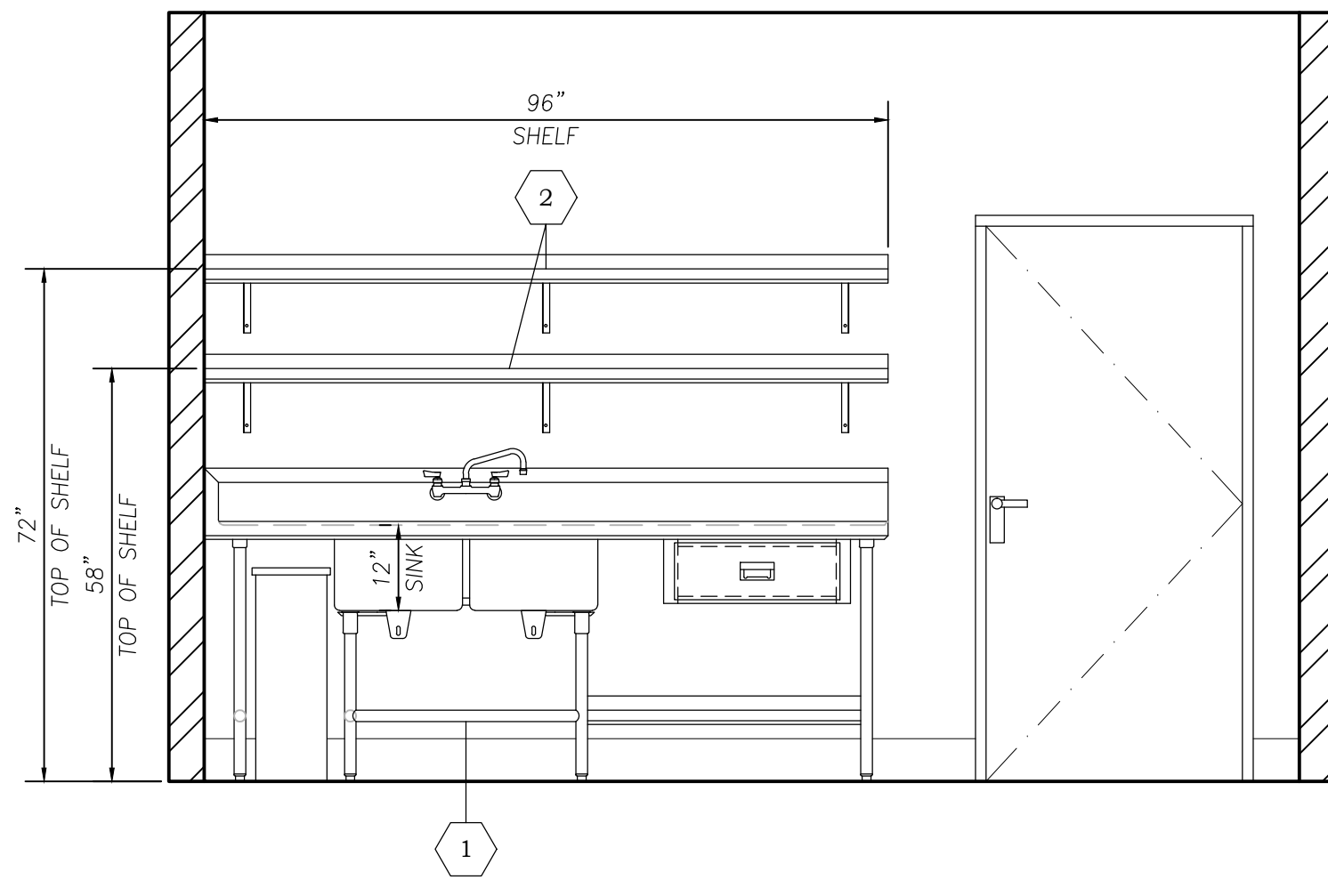
VENTILATION SCHEDULE					
No.	Size	C.F.M.		W.G.S.F. @Collar	Remarks
		Exhaust	Make-up		
1	10"x16"	1700		-0.570"	EXHAUST DUCT COLLAR

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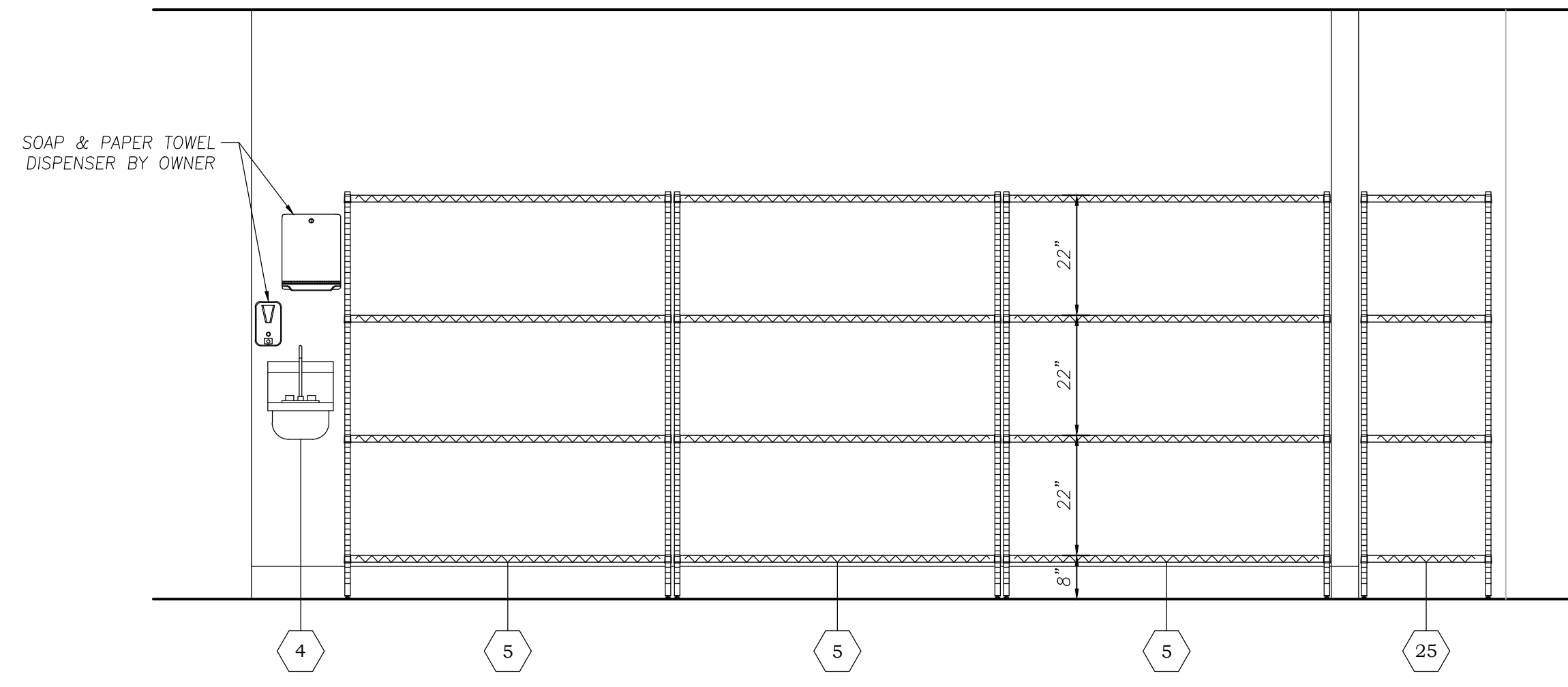
SYMBOLS & ABBREVIATIONS

	EXHAUST DUCT CONNECTION
	MAKE-UP AIR DUCT CONNECTION
	SPECIAL PURPOSE EXHAUST DUCT w/GRILLE
	FLOOR DEPRESSION
	SMOOTH & LEVEL FLOOR
	INSULATED FLOOR
	6" DIA. P.V.C. SODA/BEER CHASE

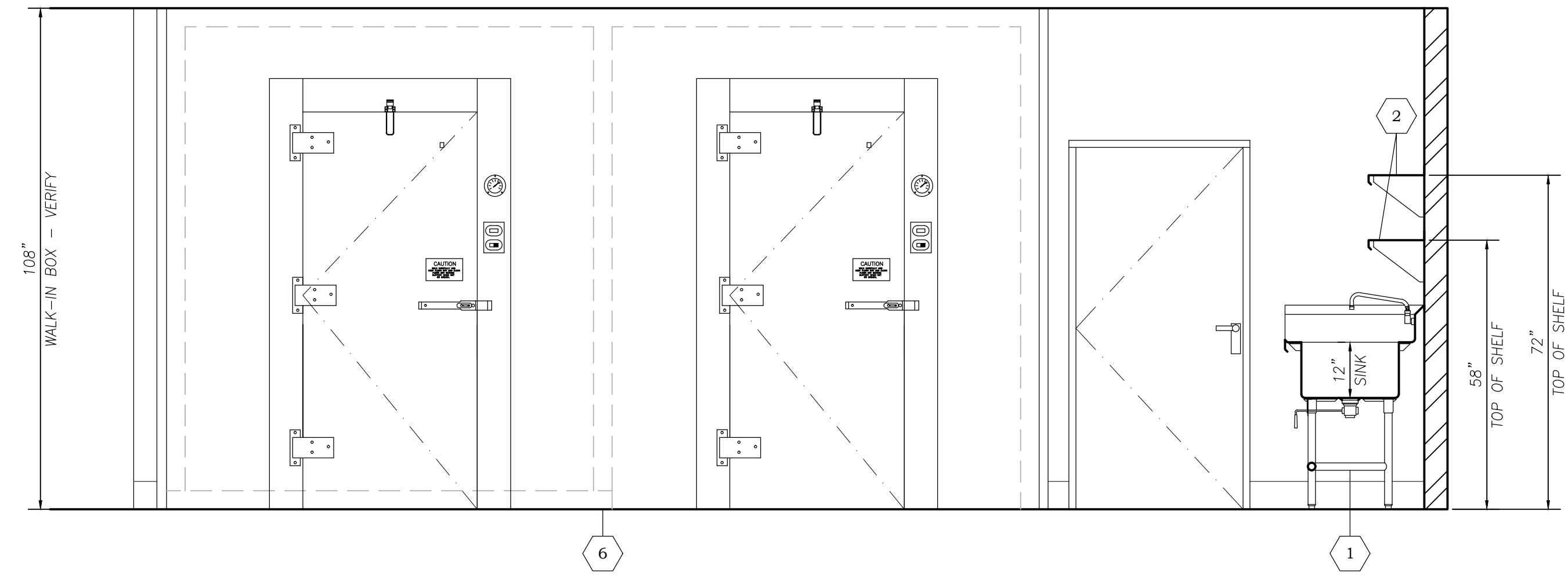
BUILDING CONDITIONS PLAN
 SCALE: 1/4" = 1'-0"



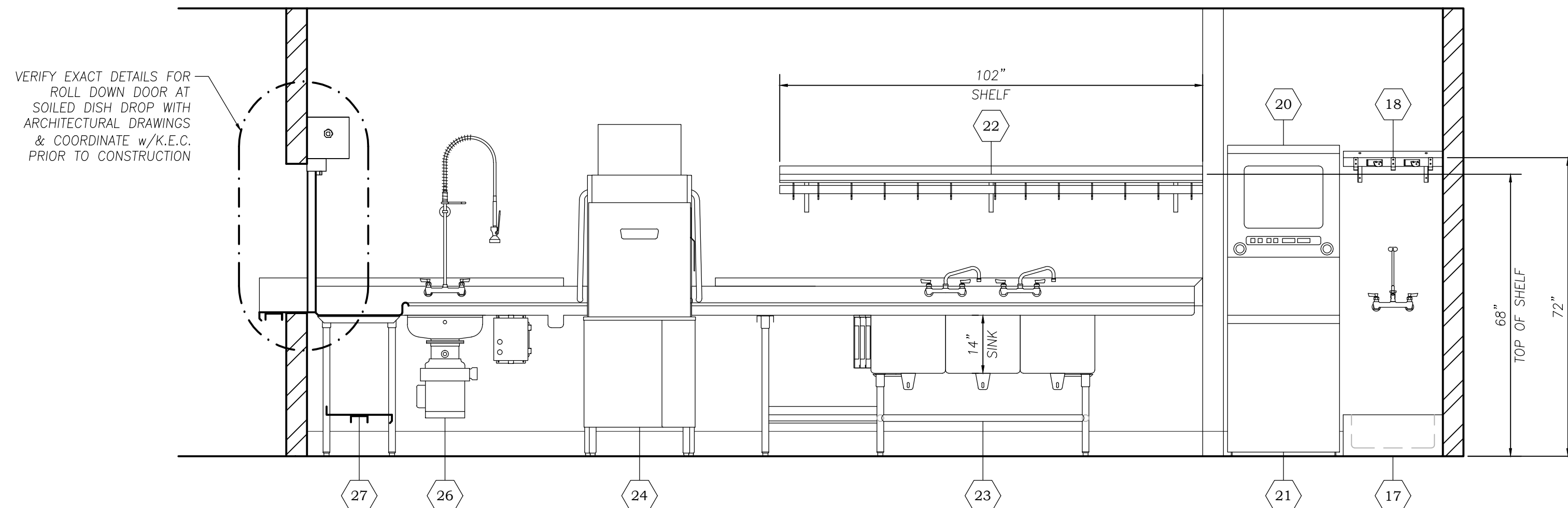
1 **PREP TABLE**
SCALE: 1/2" = 1'-0"



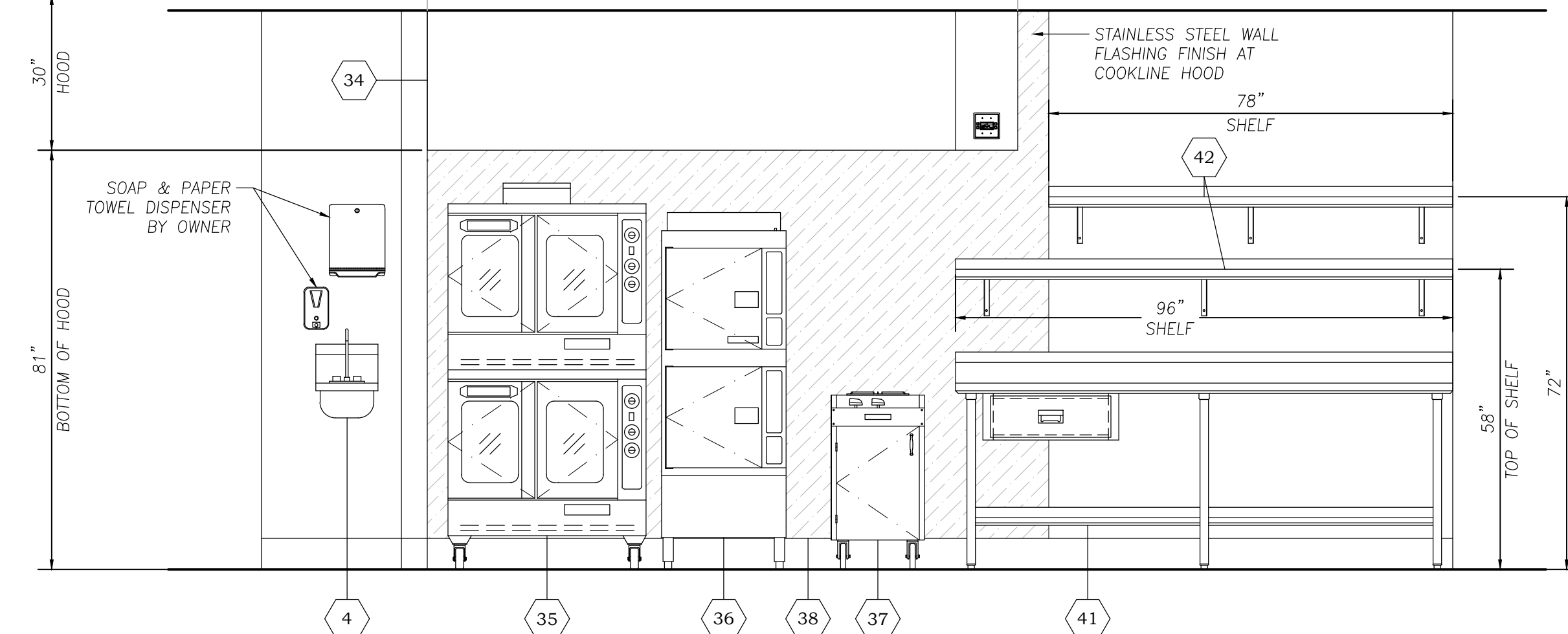
2 **DRY STORAGE**
SCALE: 1/2" = 1'-0"



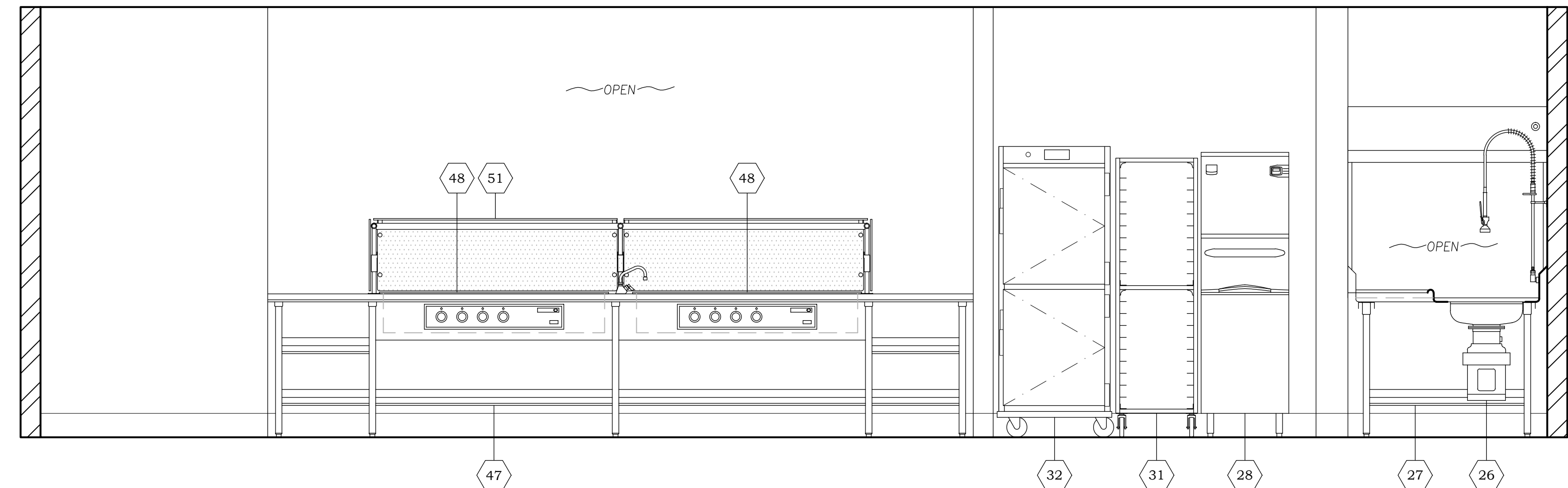
3 **WALK-IN COOLER**
SCALE: 1/2" = 1'-0"



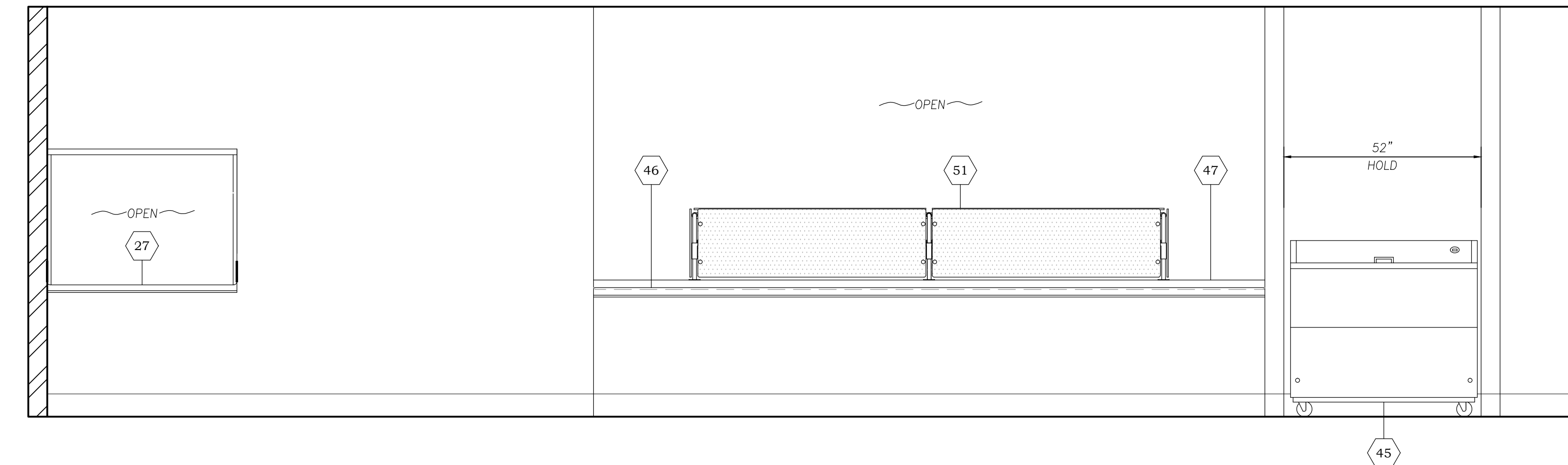
4 **DISH ROOM**
SCALE: 1/2" = 1'-0"



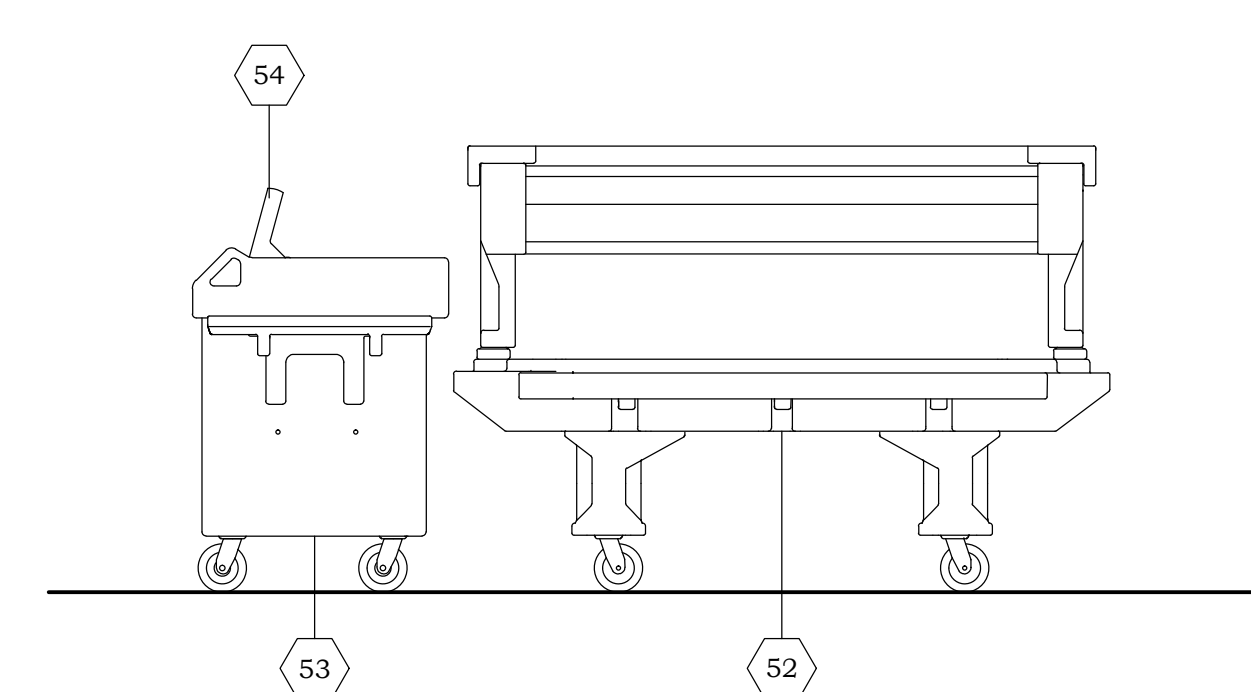
5 **COOKLINE**
SCALE: 1/2" = 1'-0"



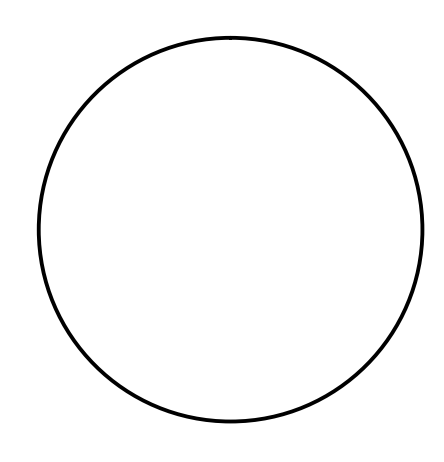
6 **SERVING COUNTER/SOILED DISH DROP OPERATOR SIDE**
SCALE: 1/2" = 1'-0"



7 **SERVING COUNTER/SOILED DISH DROP STUDENT SIDE**
SCALE: 1/2" = 1'-0"



8 **SALAD BAR/CASHIER STAND**
SCALE: 1/2" = 1'-0"



ARCHITECT'S PROJECT NUMBER	2015.002
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EQUIPMENT ELEVATIONS
Drawn: CR
Checked: CS

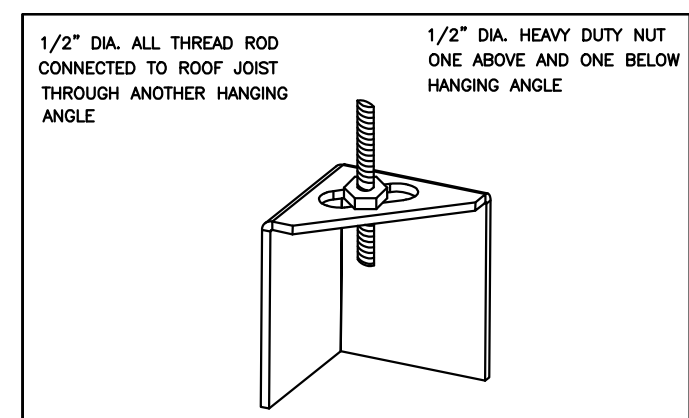
STEM SCHOOL AND ACADEMY
BARRONS BUILDING - PHASE 3
8878 BARRONS BOULEVARD Highlands Ranch, Colorado 80129

ARCHITECT'S PROJECT NUMBER
2015.002
ISSUE:
Permit and Construction
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KITCHEN HOOD
SHOP
DRAWINGS
Drawn: CR
Checked: CS

FS7.0

DECEMBER 21, 2015



HOOD AND NUTS TO BE SUPPLIED BY INSTALLING CONTRACTOR
HANGING ANGLE IS PRE-FERRED AT FACTORY

HANGING ANGLE DETAILS

HOOD STYLE / MODEL	450 DEGREES CFM/FT.	600 DEGREES CFM/FT.	700 DEGREES CFM/FT.
CANOPY ND2	150	200	250
WITH END PANELS (LSS PROTECTION)	127.5	170	212.5
SLOPED SMD-2	228	294	-
ISLAND ND-2W	269	300	350
NDI	346	422	475

ETL HOOD LISTING DETAIL

DIAGRAM CAPACITY LENGTH OF HOOD X CFM/INLET (LSS) SUPPLY CFM-EXHAUST CFM X PERCENTAGE REQUIRED

HOOD NO.	TYPE	SIZE	FLOW POINTS	INSTALLATION
1	Ansul R102	3.0	7	Fire Cabinet Right

CALCULATIONS UTILIZED

CAPTIVE-AIRE HOODS ARE BUILT IN COMPLIANCE WITH:

ETL LISTED UNDER ETL FILE NUMBER 3054804-001/002

BUILDING CODES

CAPTIVE-AIRE HOODS HAVE OPTIONAL CLEARANCE REDUCTION SYSTEMS AVAILABLE AS FOLLOWS:

MATERIAL	CLEARANCE REDUCTION SYSTEM
NON-COMBUSTIBLE	NONE REQUIRED
LIMITED-COMBUSTIBLE	3" UNINSULATED STANDOFF
COMBUSTIBLE	1" INSULATED STANDOFF

CLEARANCE TO COMBUSTIBLES

INSTALLATION

- ALL ELECTRICAL "FIELD" CONNECTIONS AND RELATED INTERCONNECTIONS BY ELECTRICAL CONTRACTOR
- ALL FLUING "FIELD" CONNECTIONS AND RELATED INTERCONNECTIONS BY FLUING CONTRACTORS
- HANGING BRACKETS LOCATED AND WELDED AS SHOWN ON PLANS. ALL OTHER HANGING MATERIALS PROVIDED BY INSTALLING CONTRACTORS.
- ALL CONNECTIONS FROM CAPTIVE-AIRE DUCT PER MECHANICAL CONTRACTORS PLANS.
- COOKING EQUIPMENT TO SHUTOFF IN EVENT OF FIRE.
- EXHAUST FANS TO TURN ON IN EVENT OF FIRE.
- ALL LIGHTS FIXTURE SHOWN INSTALLED BY CAPTIVE-AIRE HANGING FACTORY PRE-INSTALLED BETWEEN HOODS AND TO SWITCHES BY ELECTRICAL CONTRACTORS.
- LAMPS FOR LIGHT FIXTURES BY INSTALLING CONTRACTORS.
- SEISMIC RESISTANTS ARE RESPONSIBILITY OF INSTALLING CONTRACTOR.
- INSTALLING CONTRACTORS ASSUME ALL RELATED RESPONSIBILITY FOR VERIFICATION OF LOADS.
- DATA CONTAINED ON THESE DOCUMENTS FOR ACCURACY, PRECISION AND COMPLETION OF CODE REQUIREMENTS IN EFFECT PRIOR TO ANY RELEASE FOR PRODUCTION OF EQUIPMENT SHOWN.

GENERAL NOTES

1. ALL ELECTRICAL "FIELD" CONNECTIONS AND RELATED INTERCONNECTIONS BY ELECTRICAL CONTRACTOR

2. ALL FLUING "FIELD" CONNECTIONS AND RELATED INTERCONNECTIONS BY FLUING CONTRACTORS

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VERIFY CEILING HEIGHT

Height required to verify that the hood will fit and to size the enclosure panels

INSTALLATION

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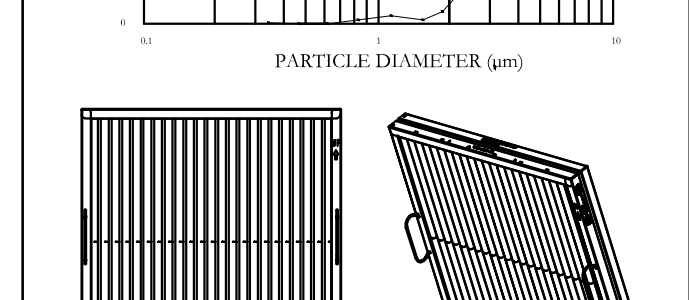
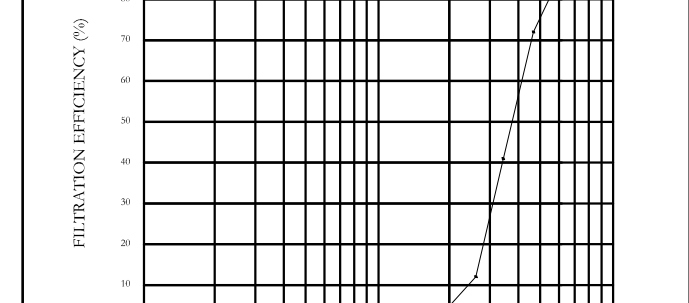
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CaptiveAire Captrate Solo Filter
ETL-Listed Grease Extracting Filters
Made From 430 Stainless Steel

FILTER DETAIL

HOOD INFORMATION - Job#2516780

HOOD NO.	TAG	MODEL	LENGTH	MAX. COOKING TEMP.	TOTAL EXH. CFM	WIDTH	LENG.	DIA.	CFM	S.P.	HOOD CONSTRUCTION	HOOD END TO END	HOOD CONFIG.
1	34	5430 ND-2	8' 6.00"	600 Deg	1700	10"	16"	1700	-0.570"		430 SS Where Exposed	ALONE	ALONE

HOOD INFORMATION

HOOD NO.	TAG	TYPE	QTY.	HEIGHT	LENGTH	EFFICIENCY @ 9 MICRONS	QTY.	TYPE	WIRE GUARD	LOCATION	FIRE SYSTEM TYPE	SIZE	ELECTRICAL MODEL #	SWITCHES QUANTITY	FIRE SYSTEM PIPING	HOOD HANGING WT
1	34	Captrate Solo Filter	6	20"	16"	93% See Filter Spec.	4	Screw In Halogen	NO	Right	Ansul R102	3.0	SC-01010FP	1 Light 1 Fan	YES	584 LBS

HOOD OPTIONS

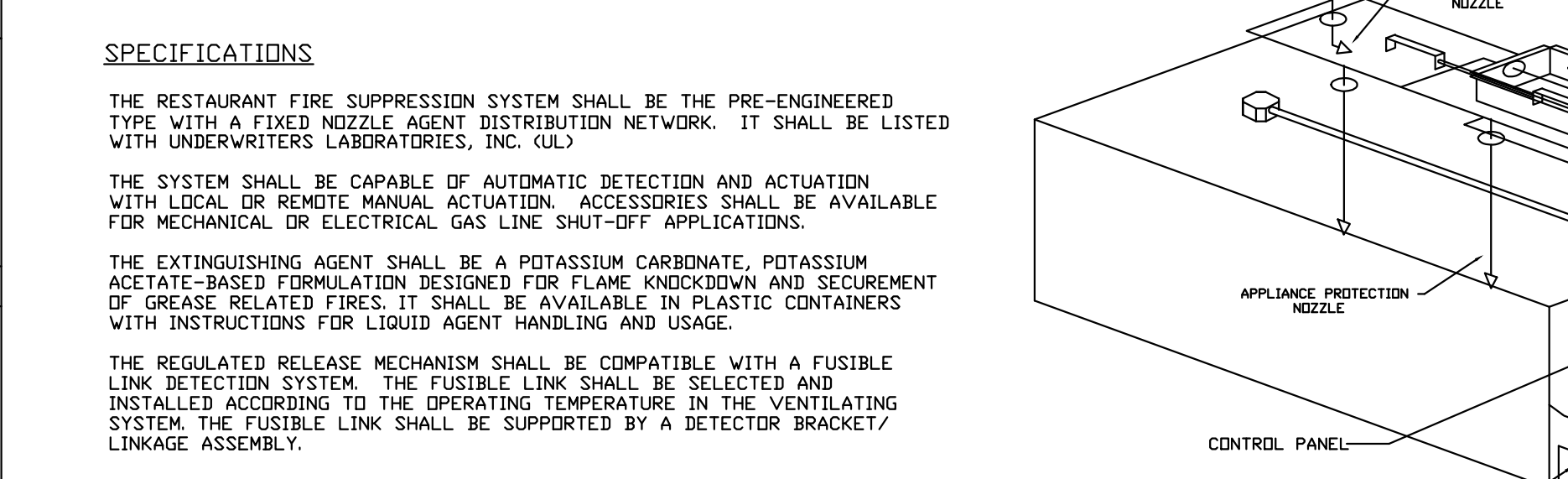
HOOD NO.	TAG	OPTION
1	34	FIELD WRAPPER 12.00' High Front, Left, Right BACKSPLASH 128.00' High X 133.00' Long 430 SS Vertical LEFT SIDESPLASH 128.00' High X 36.00' Long 430 SS Vertical LEFT END STANDOFF (FINISHED) 1' Wide 54' Long Insulated RIGHT QUARTER END PANEL 23' Top Width, 0' Bottom Width, 23' High 430 SS

Fire System Information - Job#2516780

FIRE SYSTEM NO.	Tag	TYPE	SIZE	FLOW POINTS	INSTALLATION
1		Ansul R102	3.0	7	Fire Cabinet Right

GAS VALVE(S)

FIRE SYSTEM NO.	TAG	TYPE	SIZE	SUPPLIED BY
1		Mechanical	2.000	CaptiveAire Systems



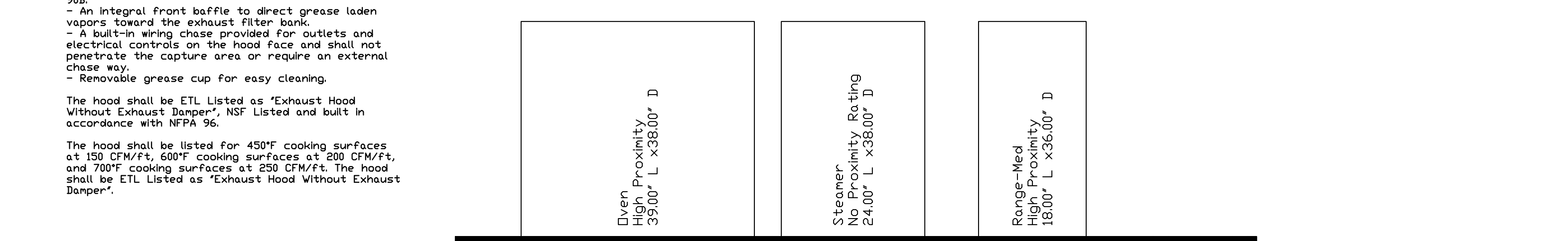
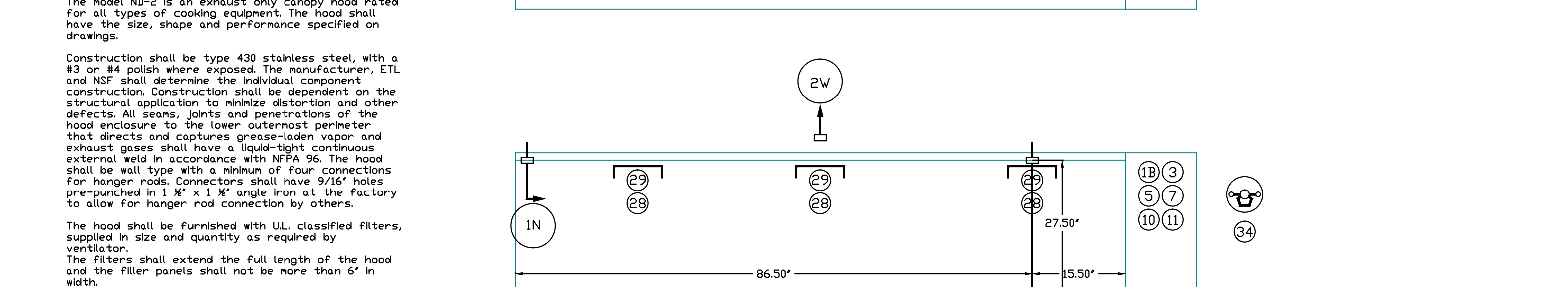
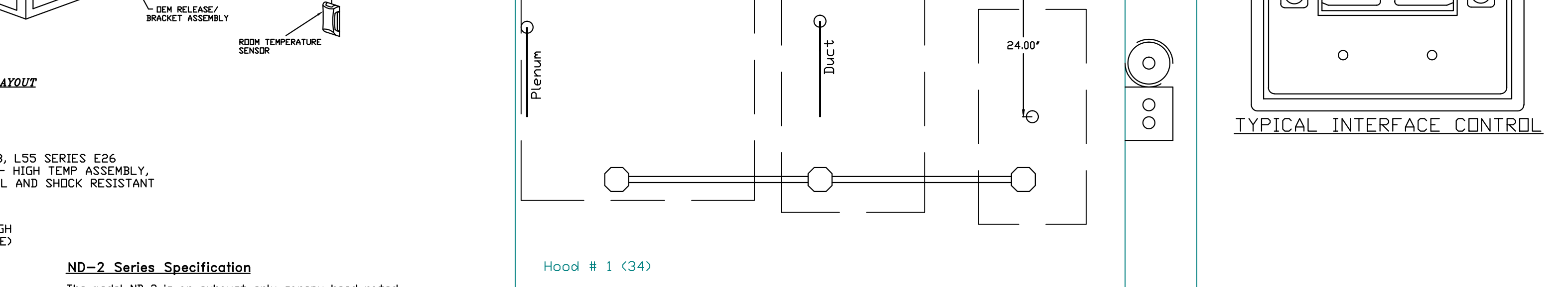
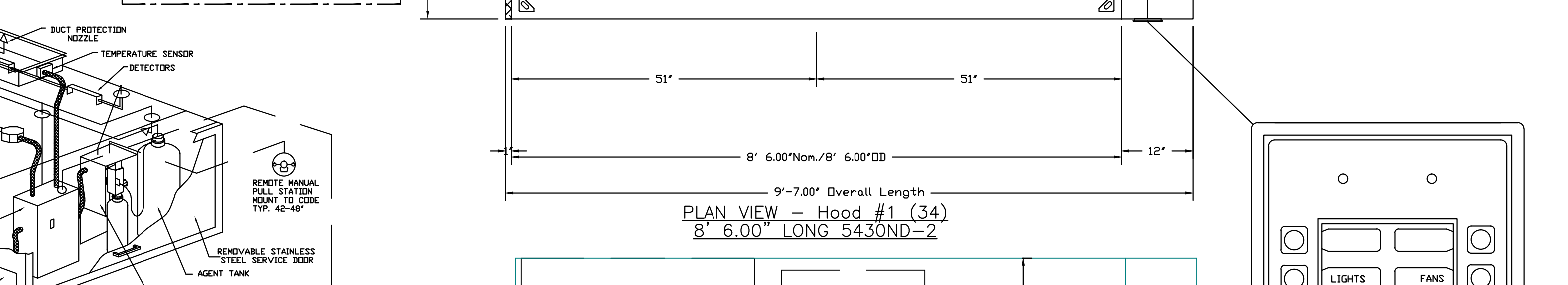
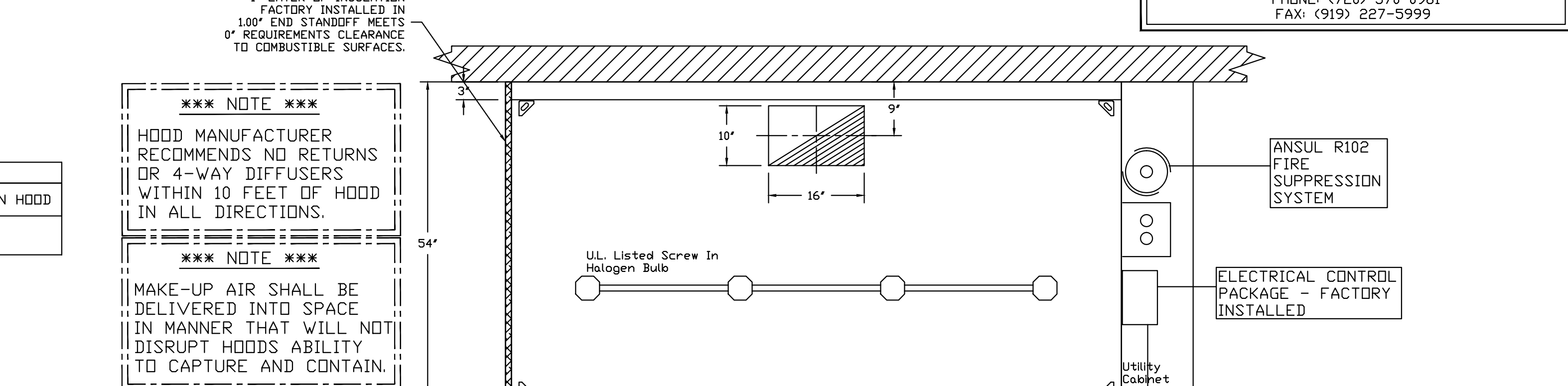
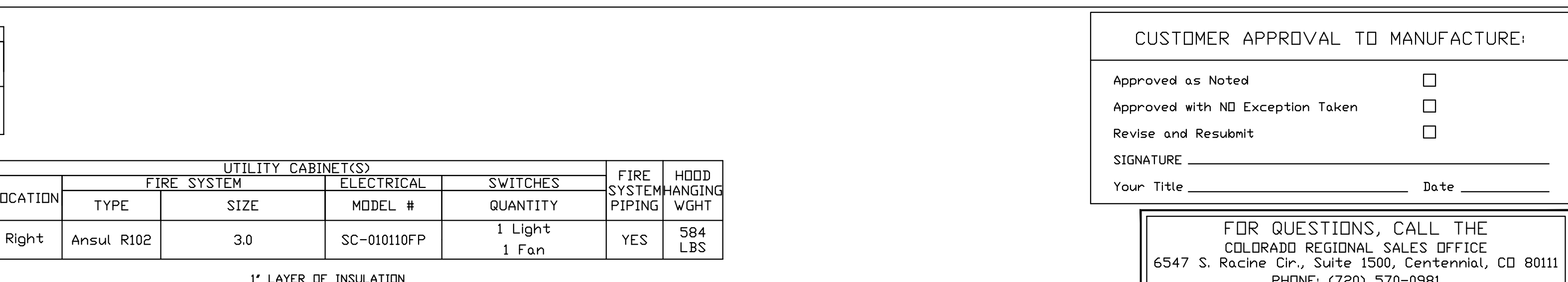
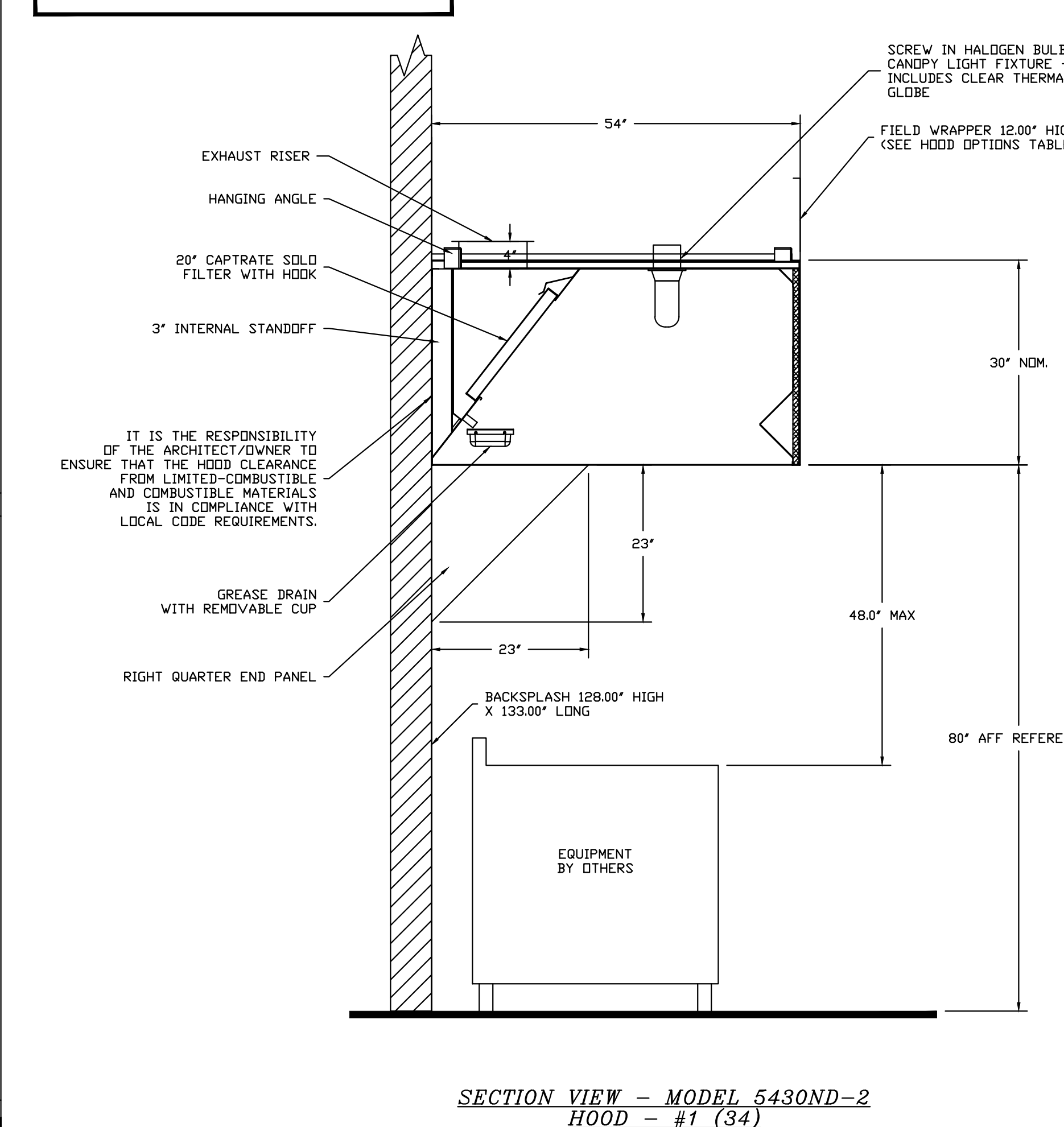
SPECIFICATIONS

THE RESTAURANT FIRE SUPPRESSION SYSTEM SHALL BE THE PRE-ENGINEERED TYPE WITH A FIXED NOZZLE AGENT DISTRIBUTION NETWORK. IT SHALL BE LISTED WITH UNDERWRITERS LABORATORIES, INC. (UL)

THE SYSTEM SHALL BE CAPABLE OF AUTOMATIC DETECTION AND ACTUATION WITH LOCAL OR REMOTE MANUAL ACTUATION. ACCESSORIES SHALL BE AVAILABLE FOR MECHANICAL OR ELECTRICAL GAS LINE SHUT-OFF APPLICATIONS.

THE EXTINGUISHING AGENT SHALL BE A POTASSIUM CARBONATE, POTASSIUM ACETATE-BASED FORMULATION DESIGNED FOR FLAME KNOCKDOWN AND SECUREMENT OF GREASE RELATED FIRES. IT SHALL BE AVAILABLE IN PLASTIC CONTAINERS WITH INSTRUCTIONS FOR LIQUID AGENT HANDLING AND USAGE.

THE REGULATED RELEASE MECHANISM SHALL BE COMPATIBLE WITH A FUSIBLE LINK DETECTION SYSTEM. THE FUSIBLE LINK SHALL BE SELECTED AND INSTALLED ACCORDING TO THE OPERATING TEMPERATURE IN THE VENTILATING SYSTEM. THE FUSIBLE LINK SHALL BE SUPPORTED BY A DETECTOR BRACKET/LINKAGE ASSEMBLY.



CUSTOMER APPROVAL TO MANUFACTURE:

Approved as Noted

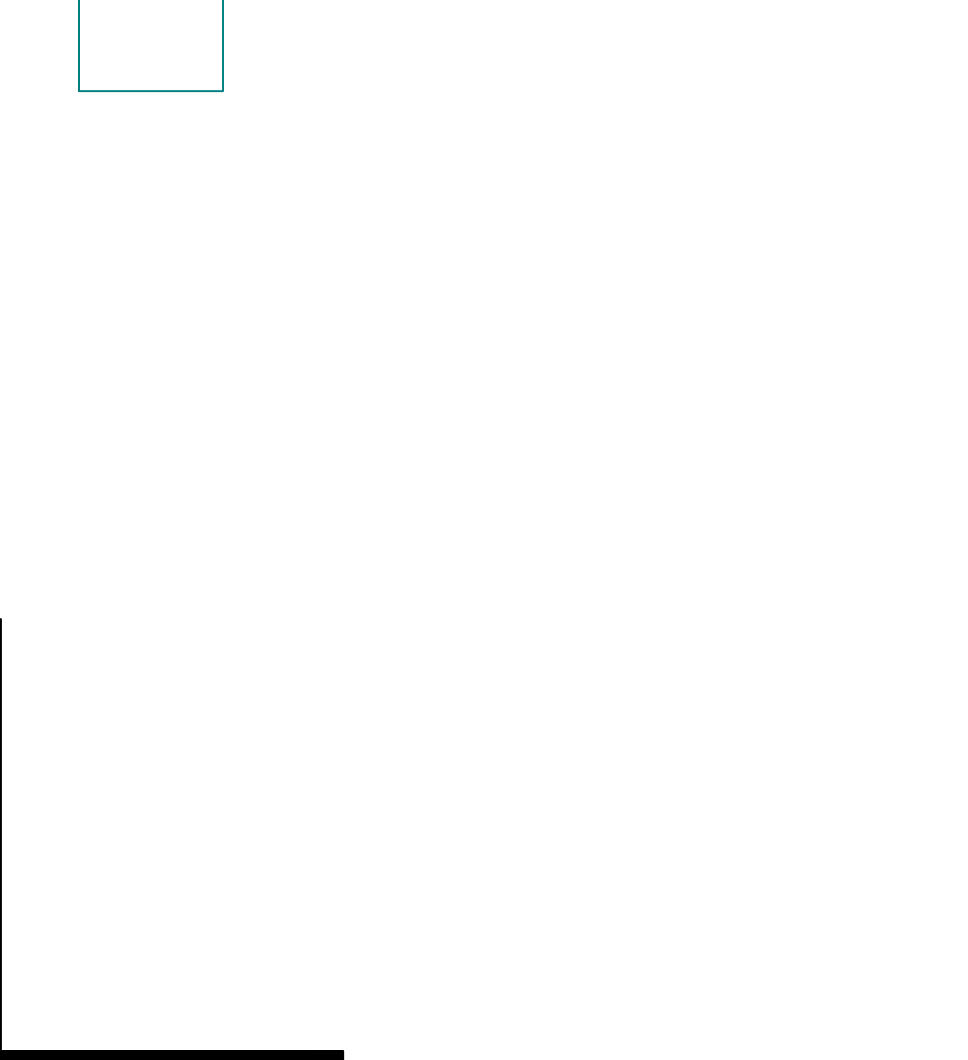
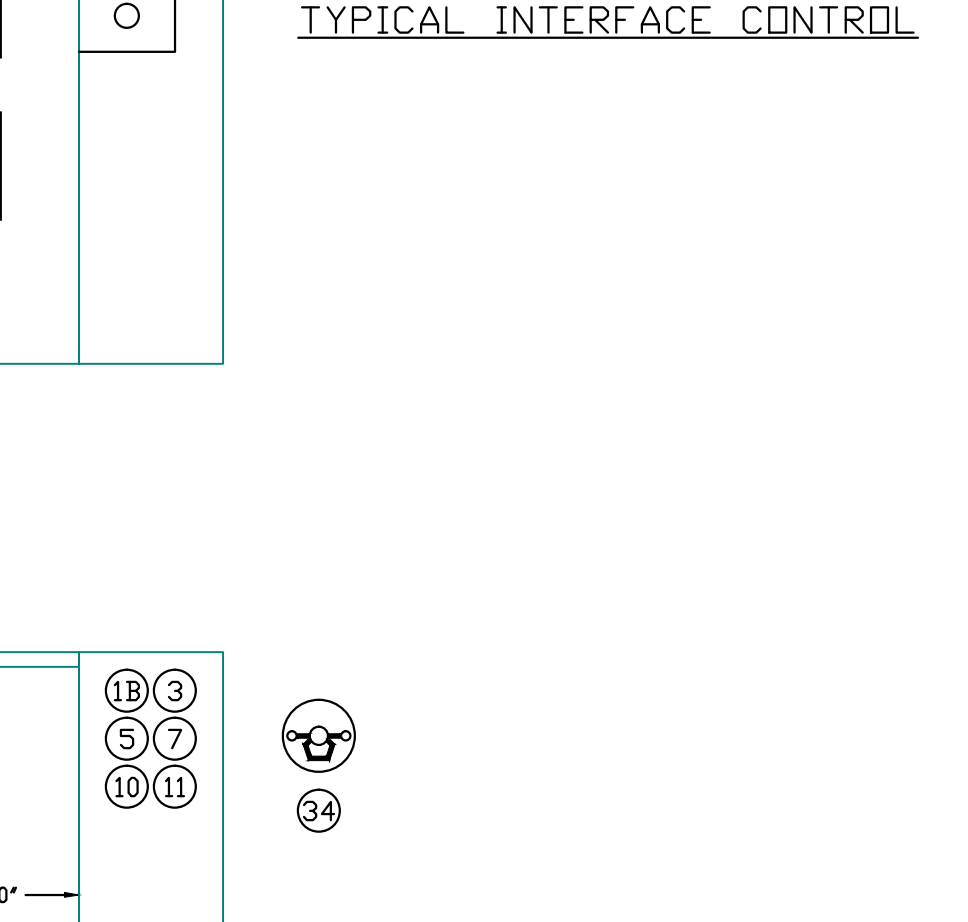
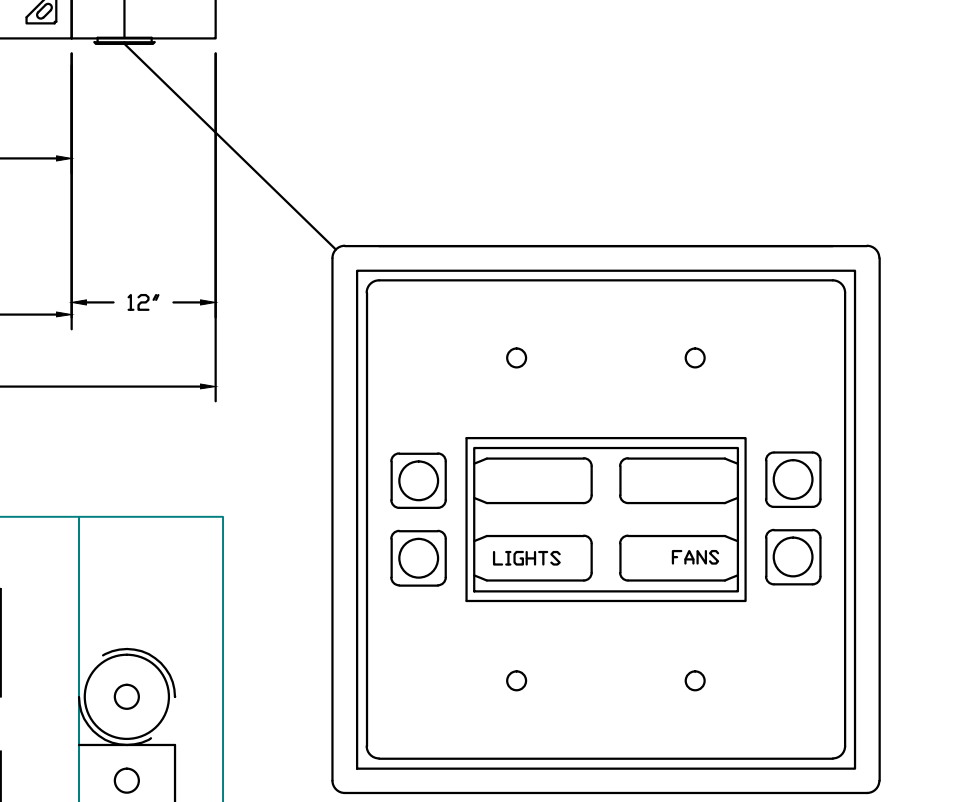
Approved with NO Exception Taken

Revise and Resubmit

SIGNATURE _____ Date _____

Your Title _____

FOR QUESTIONS, CALL THE COLORADO REGIONAL SALES OFFICE
6547 S. Racine Cir., Suite 1500, Centennial, CO 80111
PHONE: (720) 570-0981
FAX: (919) 227-5999



REVISIONS

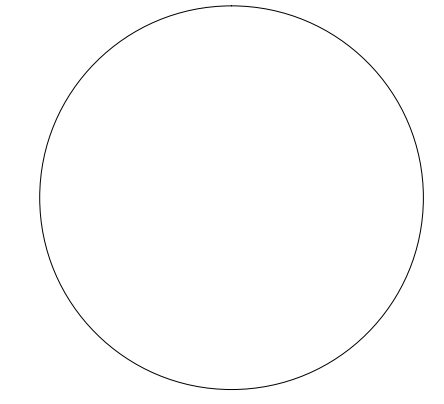
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CAPTIVE
DENVER OFFICE
6547 South Racine Circle, Suite 1500, Centennial, CO 80111 PHONE: (720) 570-0981 FAX: (919) 227-5999 EMAIL: rsg42@captivair.com
www.captivair.com

Stem School & Academy - R1
8878 Barrons Boulevard,
LITTLETON, CO, 80129

DATE: 12/17/2015
DWG.#: 2516780
DRAWN BY:
SCALE: 3/4" = 1'-0"
MASTER DRAWING

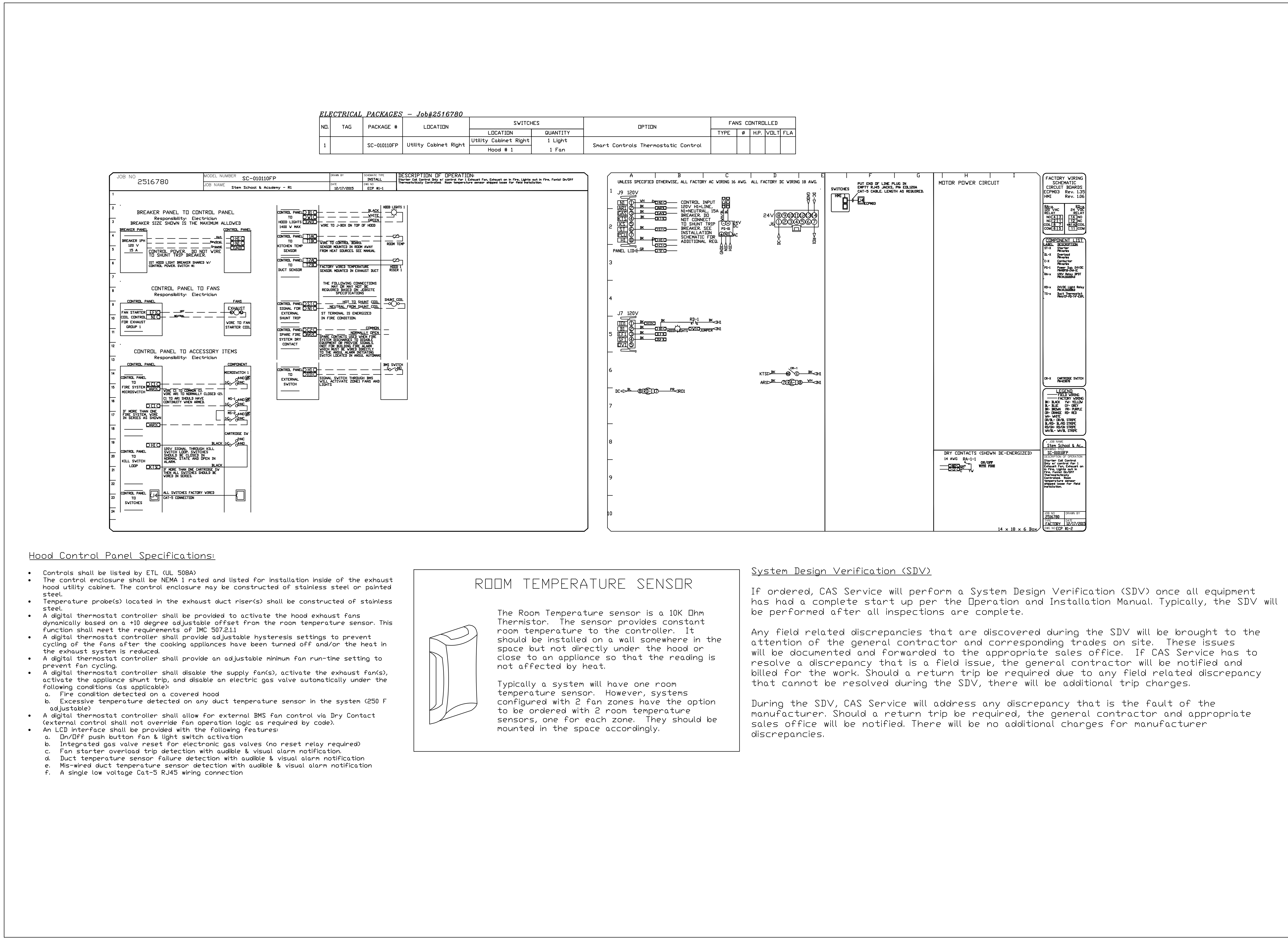
SHEET NO.
1



**STEM SCHOOL AND ACADEMY
BARRONS BUILDING - PHASE 3**
8878 BARRONS BOULEVARD Highlands Ranch, Colorado 80129

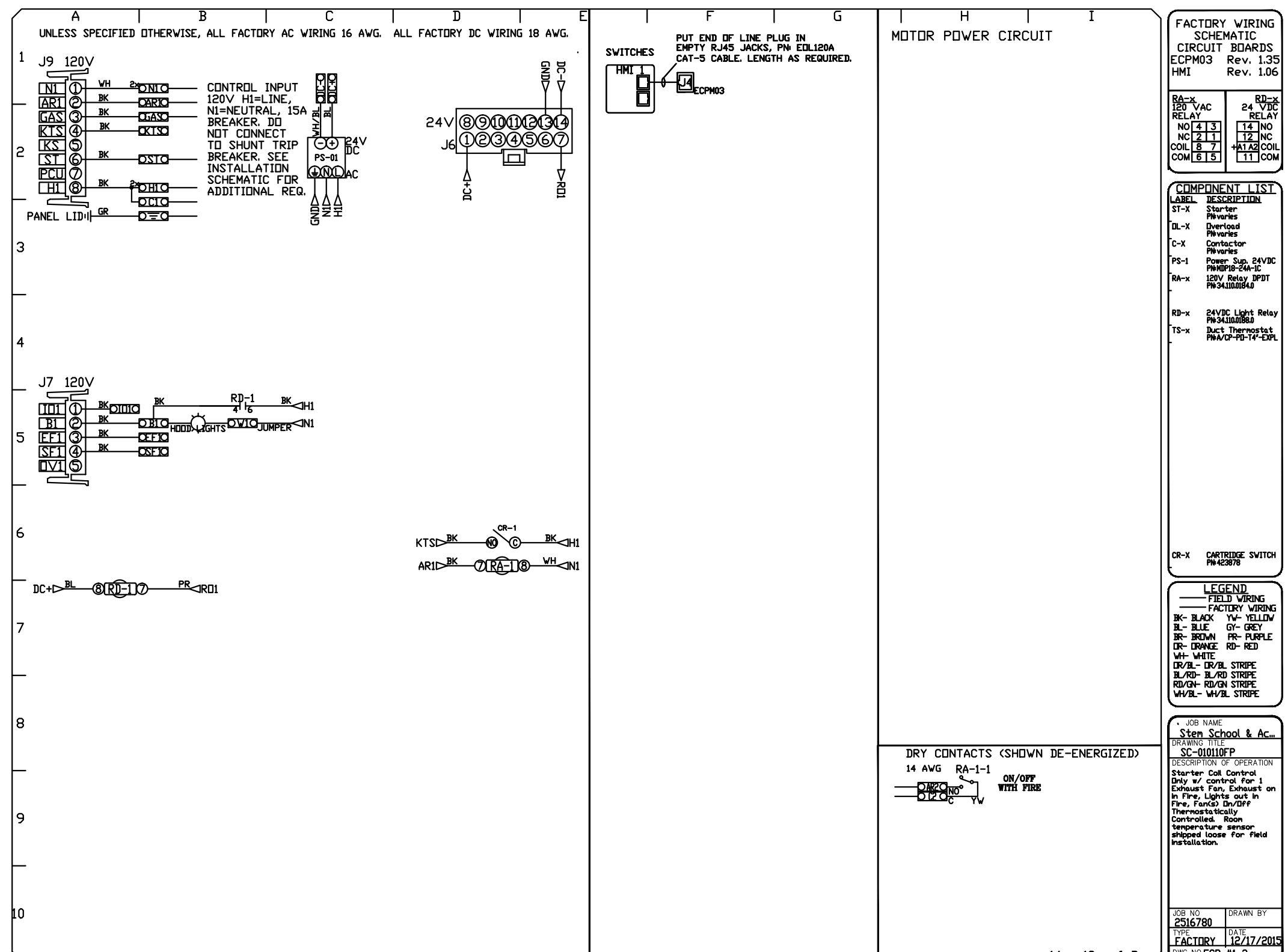
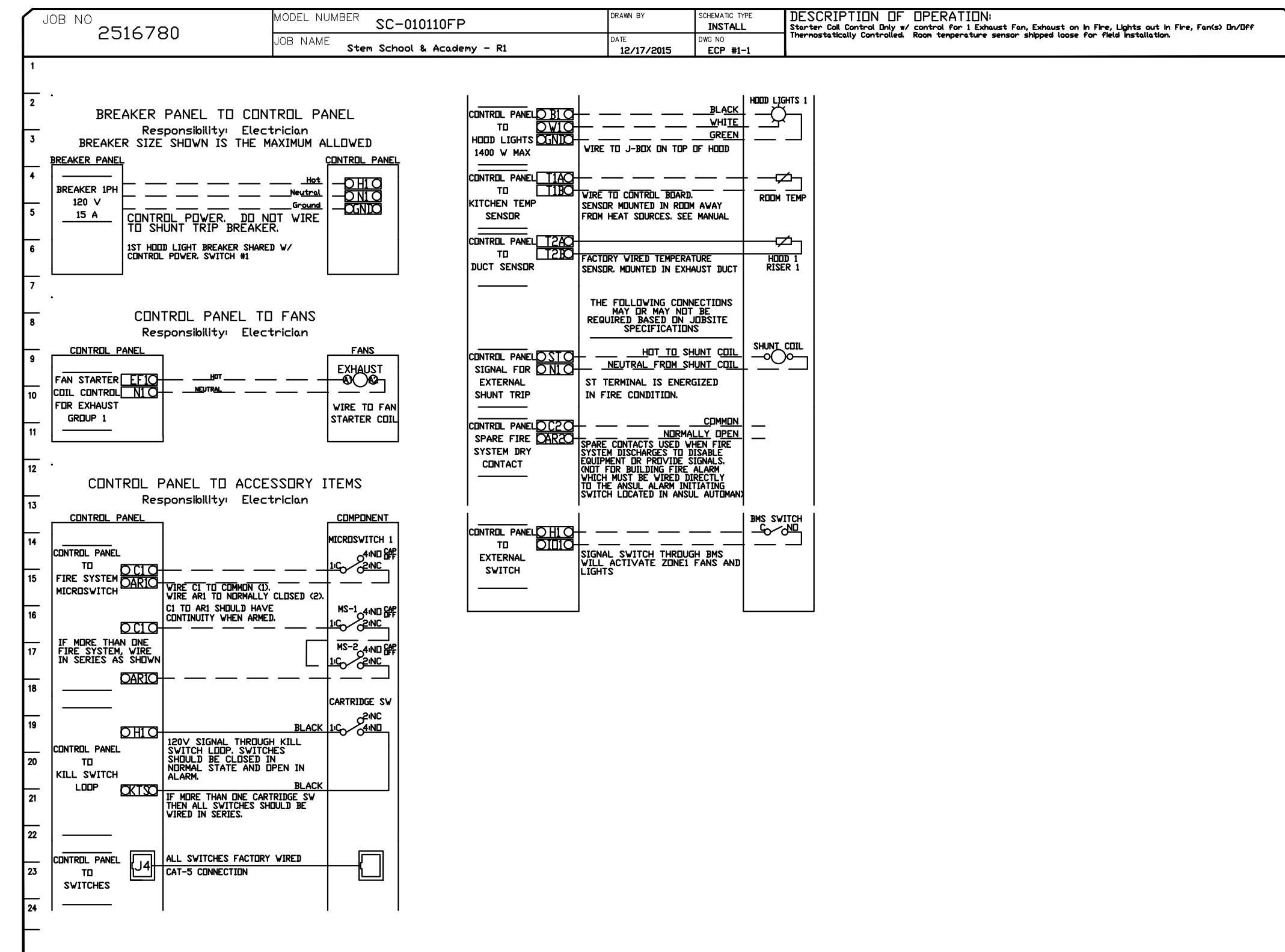
ARCHITECT'S PROJECT NUMBER
2015.002
ISSUE:
Permit and Construction
December 21, 2015

**KITCHEN HOOD
SHOP
DRAWINGS**
Drawn: CR
Checked: CS



ELECTRICAL PACKAGES - Job#2516780

NO.	TAG	PACKAGE #	LOCATION	SWITCHES		OPTION	FANS CONTROLLED		
				LOCATION	QUANTITY		TYPE	#	H.P.
1		SC-0101DFP	Utility Cabinet Right	Utility Cabinet Right	1 Light 1 Fan	Smart Controls Thermostatic Control			



Hood Control Panel Specifications:

- Controls shall be listed by ETL (UL 508A)
- The control enclosure shall be NEMA 1 rated and listed for installation inside of the exhaust hood utility cabinet. The control enclosure may be constructed of stainless steel or painted steel.
- Temperature probe(s) located in the exhaust duct riser(s) shall be constructed of stainless steel.
- A digital thermostat controller shall be provided to activate the hood exhaust fans dynamically based on a +10 degree adjustable offset from the room temperature sensor. This function shall meet the requirements of IMC 507.2.1.1
- A digital thermostat controller shall provide adjustable hysteresis settings to prevent cycling of the fans after the cooking appliances have been turned off and/or the heat in the exhaust system is reduced.
- A digital thermostat controller shall provide an adjustable minimum fan run-time setting to prevent fan cycling.
- A digital thermostat controller shall disable the supply fan(s), activate the exhaust fan(s), activate the appliance shunt trip, and disable an electric gas valve automatically under the following conditions (as applicable):
 - Fire condition detected on a covered hood
 - Excessive temperature detected on any duct temperature sensor in the system (250 F adjustable)
- A digital thermostat controller shall allow for external BMS fan control via Dry Contact external control shall not override fan operation logic as required by code).
- An LCD interface shall be provided with the following features:
 - On/Off push button fan & light switch activation
 - Integrated gas valve reset for electronic gas valves (no reset relay required)
 - Fan starter overload trip detection with audible & visual alarm notification
 - Duct temperature sensor failure detection with audible & visual alarm notification
 - Mis-wired duct temperature sensor detection with audible & visual alarm notification
 - A single low voltage Cut-5 RJ45 wiring connection

ROOM TEMPERATURE SENSOR

The Room Temperature sensor is a 10K Ohm Thermistor. The sensor provides constant room temperature to the controller. It should be installed on a wall somewhere in the space but not directly under the hood or close to an appliance so that the reading is not affected by heat.

Typically a system will have one room temperature sensor. However, systems configured with 2 fan zones have the option to be ordered with 2 room temperature sensors, one for each zone. They should be mounted in the space accordingly.

System Design Verification (SDV)

If ordered, CAS Service will perform a System Design Verification (SDV) once all equipment has had a complete start up per the Operation and Installation Manual. Typically, the SDV will be performed after all inspections are complete.

Any field related discrepancies that are discovered during the SDV will be brought to the attention of the general contractor and corresponding trades on site. These issues will be documented and forwarded to the appropriate sales office. If CAS Service has to resolve a discrepancy that is a field issue, the general contractor will be notified and billed for the work. Should a return trip be required due to any field related discrepancy that cannot be resolved during the SDV, there will be additional trip charges.

During the SDV, CAS Service will address any discrepancy that is the fault of the manufacturer. Should a return trip be required, the general contractor and appropriate sales office will be notified. There will be no additional charges for manufacturer discrepancies.

REVISIONS

NO.	DESCRIPTION	DATE

CAPTIVE ENGINEERING
www.captiveeng.com

REVISIONS
DENVER OFFICE
8547 South Regene Circle, Suite 1500, Centennial, CO 80111 PHONE: (720) 570-0981 FAX: (919) 227-5598 EMAIL: reg@2.captiveeng.com

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