



Chick-fil-A

5200 Buffington Rd.  
Atlanta Georgia,  
30349-2998

Revisions:

Mark	Date	By
1	4/10/15	HEALTH DEPT
REV FOR PERMIT & BID REVIEW		

Mark	Date	By

Mark	Date	By

Seal

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STORE

CABBAGE PATCH

CUSTOM - IN-FILL

25 West Underwood St.  
Cleveland, GA 30528

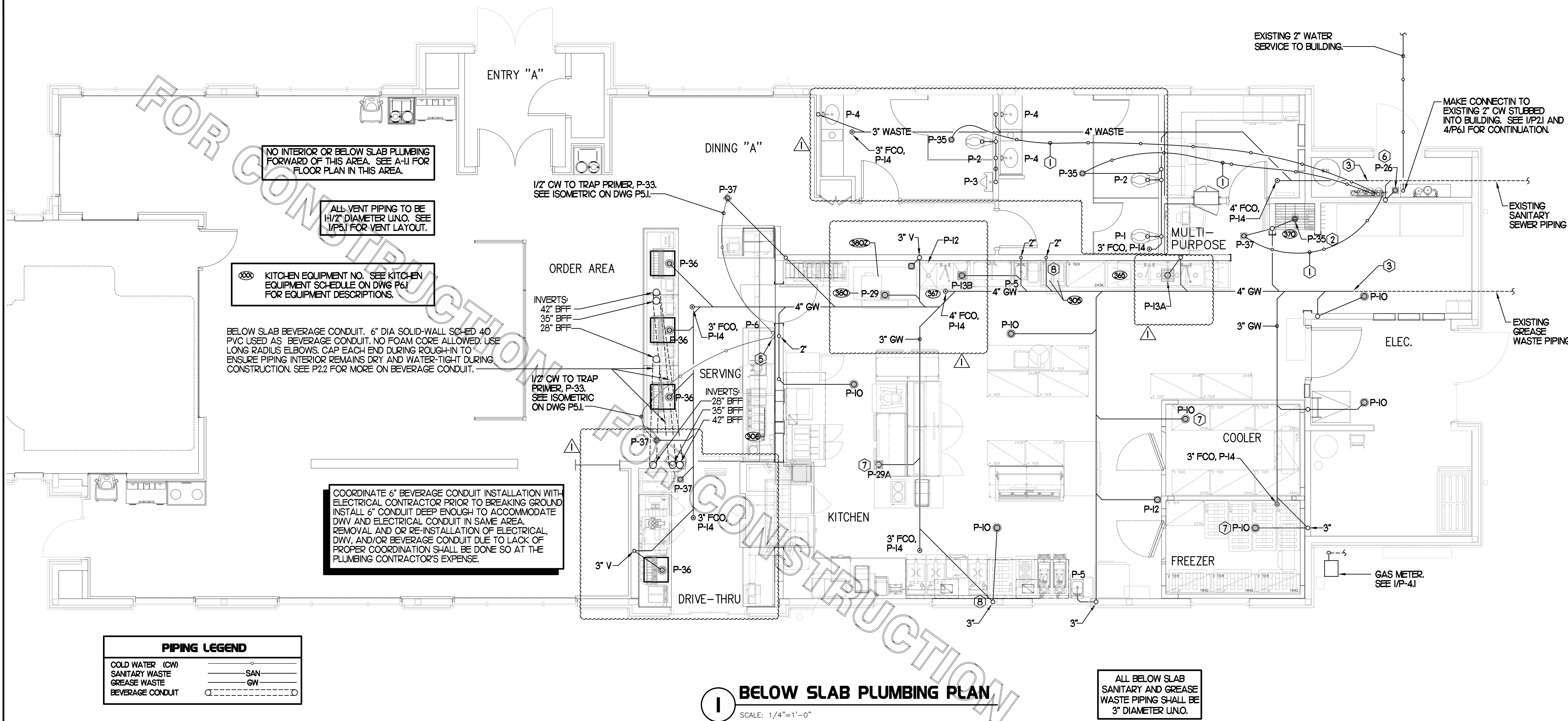
SHEET TITLE  
BELOW SLAB  
PLUMBING PLAN

VERSION: V2  
ISSUE DATE: 11-2014

Job No. : CF1514  
Store : 2913  
Date : 05/14/15  
Drawn By : BF  
Checked By : MK

Sheet

P-11



### KEY NOTES

- ROUTE 1/2" CW TO P-33 TRAP PRIMER ON MECH ROOM WALL. SEE 2/P5.1.
- INSTALL FLOOR DRAIN P-35 AT MOP SINK DEPRESSION WITH TOP OF STRAINER 0'-7" BFF.
- MAKE CONNECTION TO EXISTING WASTE PIPE. FIELD VERIFY EXISTING LOCATION AND INVERT ELEVATION PRIOR TO INSTALLING NEW PIPING.
- 4" DOUBLE CO, P-15. SEE DETAIL 4/PII.
- 1/2" CW UP TO TRAP PRIMER, P-33. SEE ISOMETRIC ON DWG P5.1. LOCATE PRIMER AND DISTRIBUTION UNIT AT BACK WALL OF CABINET.
- SEE DETAILS 4/P6.1 J FOR P-33 TRAP PRIMER SERVING P-26 FLOOR DRAIN IN MECHANICAL ROOM.
- PROVIDE SOLID COVER IN-IEU OF FLOOR DRAIN GRATE. COVER SHALL SEAL FLOOR DRAIN AIR/WATER TIGHT.
- PROVIDE ACDOR FB-5060 ACCESS DOOR. MOUNT BOTTOM OF DOOR AT 20" AFF. FOR ACCESS TO CAPPED WASTE LINE LOCATED WITHIN WALL.
- PROVIDE STANDARD GRATE WITHOUT FUNNEL.

### 5. SHEET NOTES

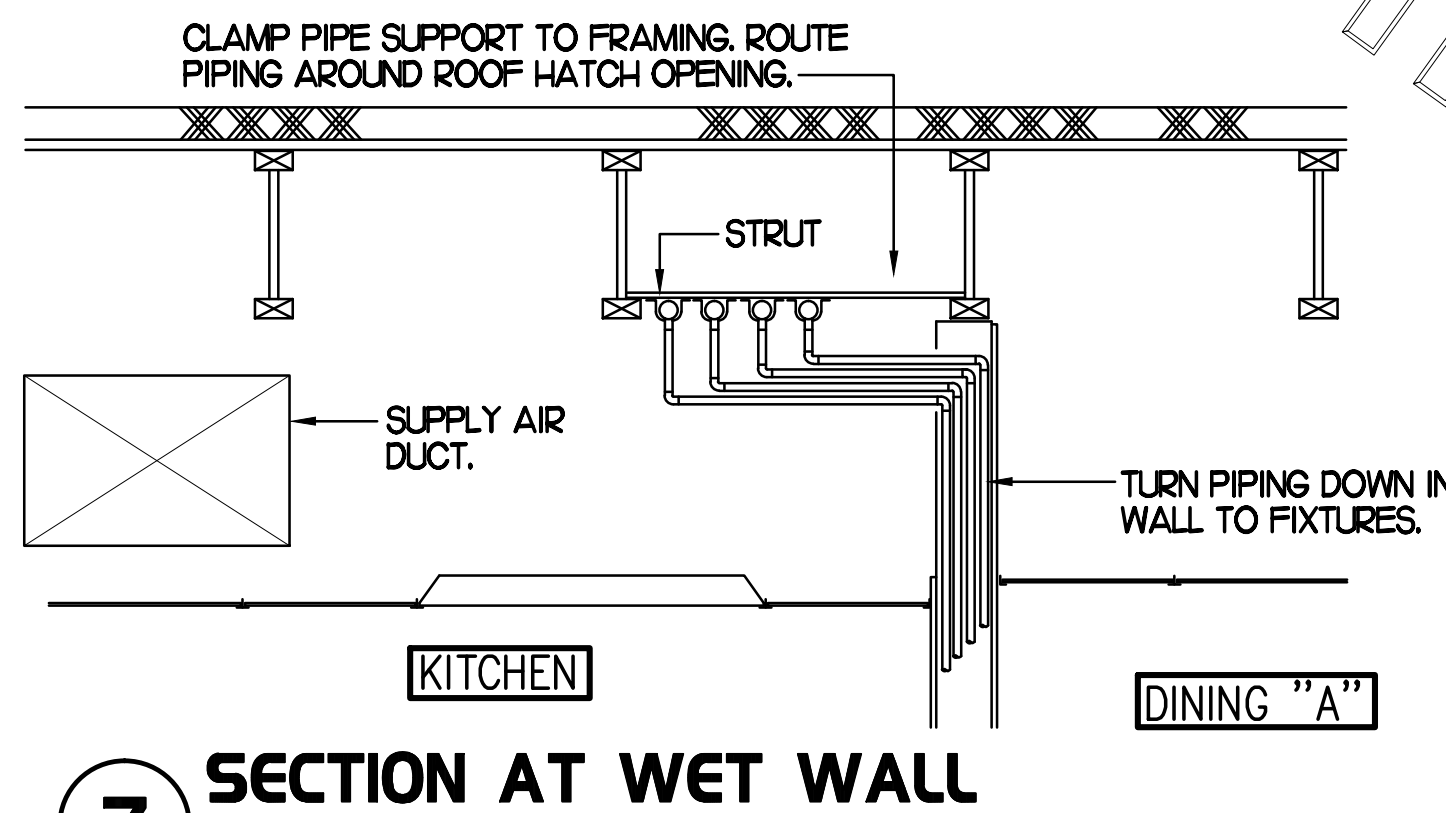
- COORDINATE INSTALLATION OF SANITARY PIPING WITH FOOTINGS IN THE FIELD. SLEEVE PENETRATIONS IN FOOTINGS WITH PVC.
- WHERE REQUIRED BY LOCAL AUTHORITY HAVING JURISDICTION, PROVIDE SAFE-WASTE SYSTEM AS OUTLINED IN STATE AND LOCAL CODE AMENDMENTS.
- ALL WATER PIPING INSTALLED WITHIN EXTERIOR WALLS SHALL BE LOCATED ON THE INTERIOR SIDE OF THE INSULATION.
- ALL VENT PIPING TO BE 1/2" DIAMETER UNO. SEE 1/P5.1 FOR VENT LAYOUT.

FOR CONSTRUCTION



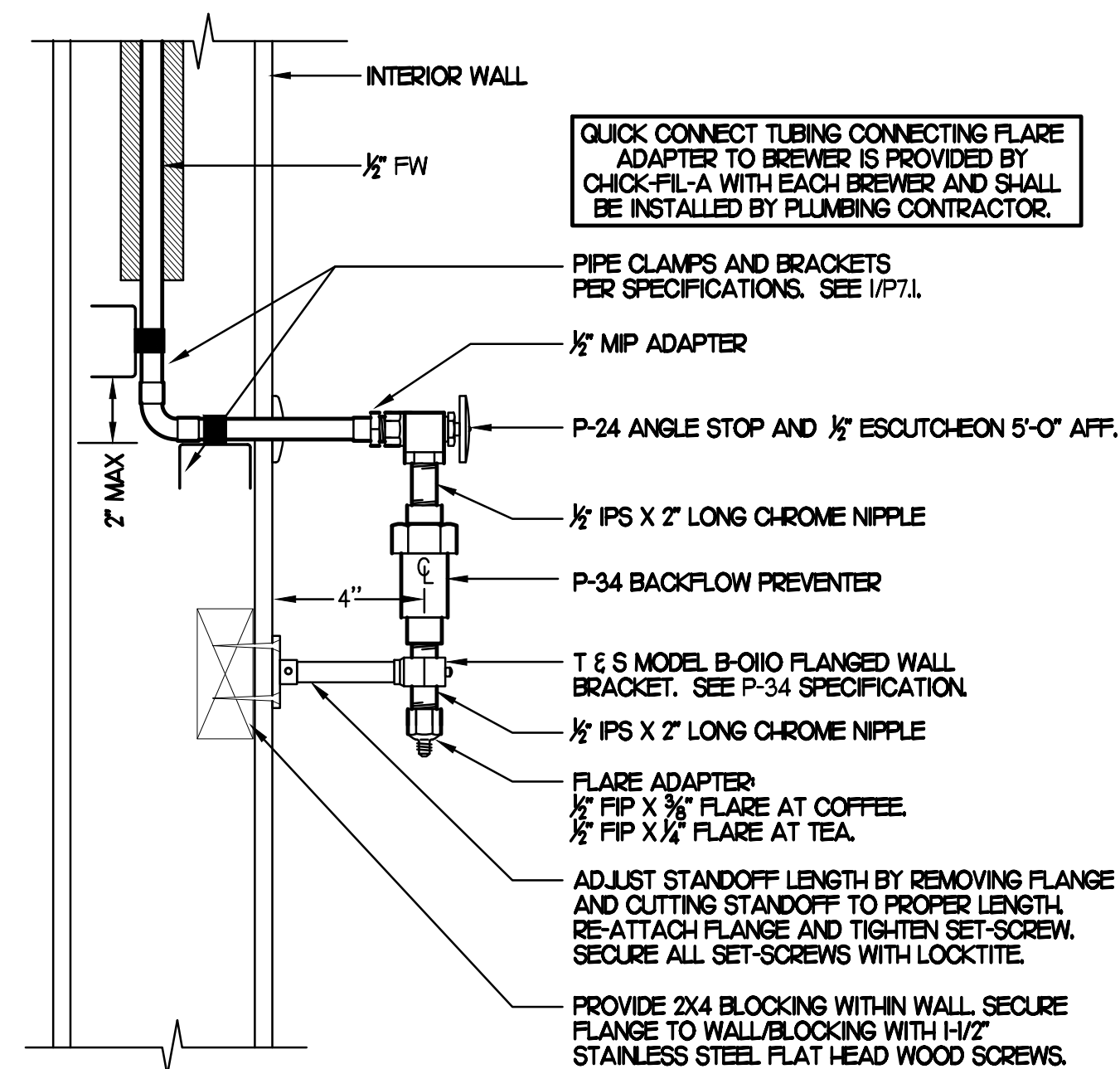
### 3. BEVERAGE CONDUIT NOTES

- ROUTE BEVERAGE SYSTEM PIPING OVER-HEAD FROM THE BEVERAGE RACK TO DRINK TOWERS IN FOUR (4)-6" DIA SCH 40 PVC DWV CONDUITS. ALL CONDUIT SHALL BE HELD TIGHT TO STRUCTURE AND SUPPORTED WITH THREADED ROD AND CLEVIS HANGERS AT INTERVALS SHOWN IN SPECIFICATIONS FOR HORIZONTAL OVER-HEAD PIPING. COORDINATE ROUTING WITH THE GENERAL CONTRACTOR TO AVOID MECHANICAL AND ELECTRICAL SYSTEMS. SEE 1/P-11 AND 1/P-31 FOR BELOW-SLAB BEVERAGE CONDUIT.
- COORDINATE ROUTING OF ALL CONDUITS WITH HVAC DUCT IN KITCHEN. SEE SHEET M-11 FOR LOCATION OF AC UNITS AND DUCT ROUTING.
- TURN THE 6" DIA CONDUIT DOWN THROUGH THE CEILING AT THE BEVERAGE RACK AND PROVIDE CHROME ESCUTCHEONS AT CEILING PENETRATIONS. TERMINATE OPPOSITE END ABOVE CEILING WHERE SHOWN ON PLANS.
- ROUTE 2" DIA BULK CO2 CONDUIT OUT THRU EXTERIOR WALL 7 1/2" AFF AND 6" FROM CORNER. PROVIDE CHROME ESCUTCHEON AT WALL WITH 45 DEGREE ELBOW TIGHT TO ESCUTCHEON AND DIRECTED DOWNWARD. TERMINATE INTERIOR END OF CONDUIT 1'-0" ABOVE KITCHEN CEILING WITH 90 DEGREE ELBOW DIRECTED TOWARD CARBONATORS. EXTEND SINGLE 2" DIA CONDUIT FROM WITHIN 1'-0" OF ELBOW TOWARD CARBONATORS. TERMINATE OPPOSITE END ABOVE CEILING ABOVE CARBONATORS.
- AT 6" DIA CONDUIT DROP IN DRIVE-THRU, PROVIDE 1/8TH BEND FITTING WITH SHORT PIPE STUB AT BASE OF DROP. CUT STUB AND FITTING FLUSH WITH FINISHED WALL.



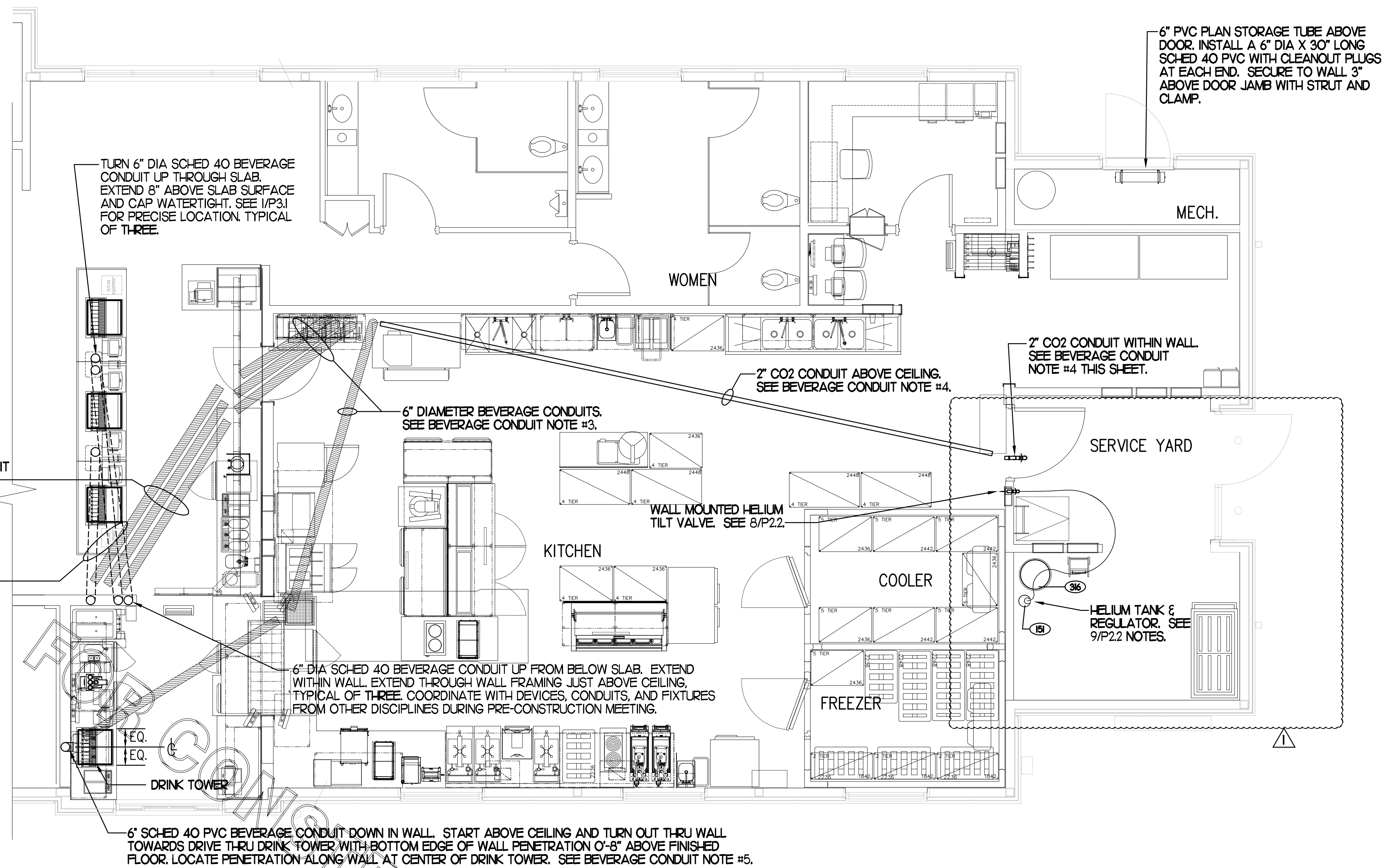
7 SECTION AT WET WALL

1/4" = 1'-0"



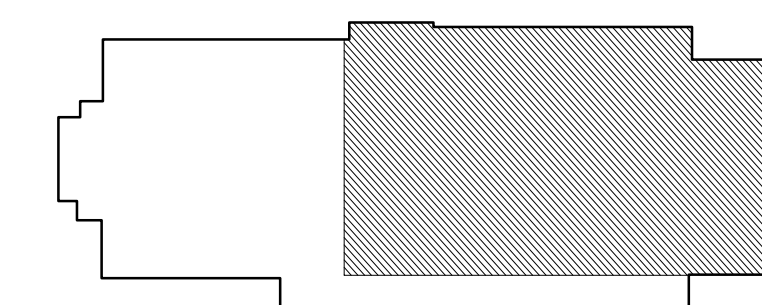
6 COFFEE & TEA BREWER STOP & BFP

SCALE: NONE



1 BEVERAGE CONDUIT AND HELIUM PIPING PLAN

1/4" = 1'-0"

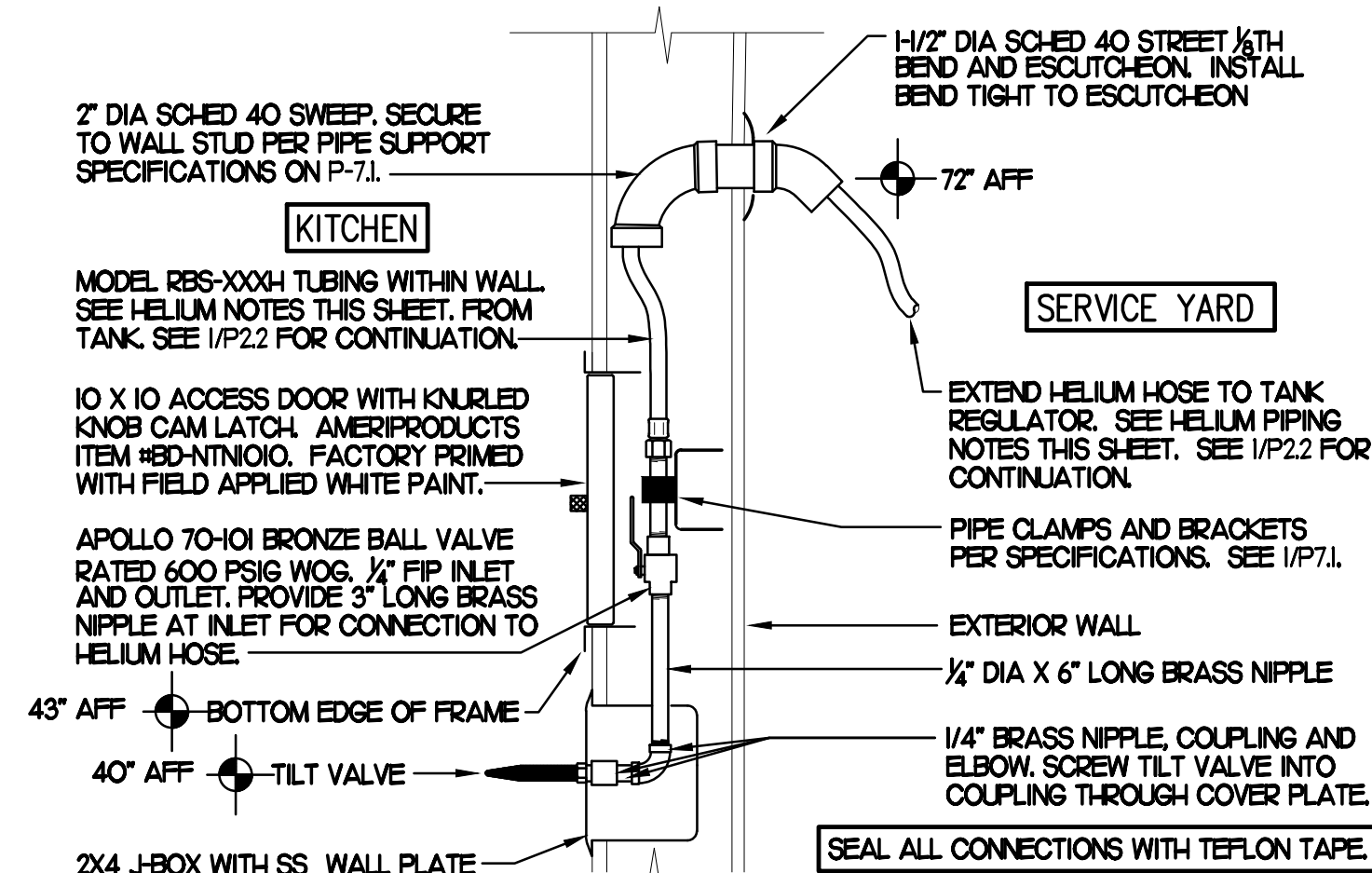


2 KEY PLAN

SCALE: 1/32" = 1'-0"

### 9. HELIUM GAS PIPING NOTES

- HELIUM PIPING, FITTINGS AND EQUIPMENT SHALL BE WESTERN WESTWINDS. MODEL NUMBERS LISTED HERE ARE FOR WESTERN WESTWINDS AND SHALL BE OBTAINED THROUGH AIRGAS RETAIL SOLUTIONS. PHONE # 1-877-717-4540.
- HELIUM TANK SHALL BE PROVIDED BY CHICK-FIL-A THROUGH LOCAL COMPRESSED GAS VENDOR. PLUMBER SHALL COORDINATE INITIAL DELIVERY AND INSTALLATION OF TANK WITH GENERAL CONTRACTOR, LOCAL STORE OPERATOR AND CHICK-FIL-A CONSTRUCTION MANAGER. GENERAL CONTRACTOR TO PROVIDE SAFETY CHAIN AT TANK PER TANK PROVIDER RECOMMENDATION.
- ROUTE 1/2" SCHED 40 PVC HELIUM HOSE OUT THRU EXTERIOR WALL 7 1/2" AFF AND 1" FROM CORNER. PROVIDE CHROME ESCUTCHEON AT WALL WITH 45 DEGREE STREET ELBOW TIGHT TO ESCUTCHEON DIRECTED DOWNWARD. PROVIDE LONG RADIUS SWEEP WITHIN WALL DIRECTED DOWNWARD TO J-BOX SUPPORTING TILT VALVE. SEE 8/P-22.
- HELIUM GAS PIPING SHALL BE RBS-XXXX FLEXIBLE HELIUM HOSE. XXXX IN WESTERN WESTWINDS MODEL NUMBER INDICATES HOSE LENGTH AND SHALL BE DETERMINED BY THE PLUMBING CONTRACTOR BASED ON FIELD CONDITIONS. ROUTE HOSE FROM HELIUM TANK REGULATOR TO WALL MOUNTED J-BOX. SURFACE MOUNT HOSE TIGHT TO SERVICE YARD WALL. ROUTE HOSE WITHIN WALL TO TILT VALVE. SEE 8/P-22. SECURE HOSE TO WALL STUD WITH A RUBBER INSULATED PIPE CLAMP EQUAL TO GARDNER-BENDER MODEL PPR-1550. TERMINATE HOSE AT HELIUM TANK 5'-0" AFF WITH 5'-0" OF SLACK AT HOSE END FOR CONNECTION TO REGULATOR.
- PROVIDE WESTWINDS MODEL "B1-GHT" REGULATOR FOR INSTALLATION ON HELIUM TANK. COORDINATE DELIVERY OF INITIAL TANK ORDER WITH GENERAL CONTRACTOR AND CHICK-FIL-A PROJECT MANAGER TO ENSURE TANK IS ON SITE WHEN REGULATOR IS INSTALLED. TANK REGULATOR ON TANK AND SET PRESSURE AT 100 PSIG. CONNECT HELIUM HOSE TO REGULATOR OUTLET.
- INSTALL 2X4 METAL J-BOX WITH WESTWINDS MODEL "TV" TILT VALVE AND MODEL "207" SHUT-OFF VALVE/AS SHOWN ON DETAIL 8/P-22. ENSURE TILT VALVE AND HOSE INSTALLATION IS COMPLETE AND LEAK TESTED PRIOR TO DELIVERY OF INITIAL HELIUM TANK.
- CONNECTION AT REMOTE SHUT-OFF VALVE AND AT REGULATOR SHALL BE VIA FACTORY APPLIED HOSE END CONNECTIONS. HOSE SHALL NOT BE CUT OR SPLICED.
- PROVIDE PIPE LABELS AT A MINIMUM OF 10'-0" INTERVALS STATING "HELIUM 100 PSI". MARKERS SHALL BE SET ON 21948 OR EQUAL.



8 HELIUM TILT-VALVE AT WALL

SCALE: NONE



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SHEET TITLE  
PLUMBING DETAILS  
& BEVERAGE  
CONDUIT

VERSION: V2  
ISSUE DATE: 11-2014

Job No. : CF1514  
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P-22

### NOTE OF SPECIAL IMPORTANCE:

BELOW-SLAB BEVERAGE CONDUIT SHALL BE 6" DIAMETER SCHED 40 DWV SOLID WALL, NO FOAM CORE ALLOWED. USE LONG RADIUS ELBOWS (A.K.A. SWEEPS) ON ALL BEVERAGE CONDUIT. PLEASE NOTE BEVERAGE CONDUIT ROUGH-IN LOCATIONS ARE MEASURED TO THE FRACTION OF AN INCH.

### IMPORTANT NOTE TO INSTALLER

EXERCISE CAUTION WHEN LOCATING ROUGH-INS AT:  
 - DRIVE THRU AREA  
 - CUSTOMER WAIT AREA  
 DO NOT PULL TAPE FROM THE SLAB EDGE AT THESE AREAS WITHOUT COMPENSATING FOR DIFFERENCE IN OFFSETS. NOTE OFFSET AT BACK CORNER OF BUILDING.

### FLOOR FIXTURE ELEVATIONS

IMPORTANT: INSTALL THE FLOOR FIXTURE SUCH THAT THE TOP-OF-RIM ELEVATION IS AS FOLLOWS:

FIXTURE	TYPE	RIM ELEVATION
P-10	FLOOR DRAIN	3/4" BFF
P-29	ICE BIN FLOOR SINK	3/4" BFF
P-35	RESTROOM FLOOR DRAIN	1/4" BFF
P-35	MOP SINK DRAIN	7" BFF
P-36	INDIRECT WASTE RECEIVER	1/4" BFF
P-37	FLOOR DRAIN	1/4" BFF

NOTE: FIXTURE RIM/GRATE SHALL SET BE FLUSH WITH ADJACENT FLOOR. SEE ARCHITECTURAL PLANS FOR FLOOR SLOPE AT SLAB DEPRESSION FOR FIXTURES INSTALLED BELOW FINISHED FLOOR ELEVATION. FLOOR FIXTURES NOT LISTED HERE SHALL BE INSTALLED FLAT AND FLUSH WITH FINISHED FLOOR ELEVATION.

### COORDINATE LEGEND

TYPE	EXAMPLE	PIPE COORDINATES
#1	CW X-43'8" Y-14'7"	APPLIES TO WATER PIPING ROUGH-IN PENETRATION ONLY. SEE P.I. FOR CONTINUATION.
#2	VENT X-43'8" Y-14'7"	APPLIES TO DWV PENETRATION ONLY.
#3	6" BEV COND X-43'8" Y-27'3"	APPLIES TO 6" BEVERAGE CONDUIT PENETRATION ONLY.

NOTE: TRAP PRIMER PIPING NOT SHOWN ON THIS PLAN. SEE I/P.I. FOR TRAP PRIMER LOCATIONS.

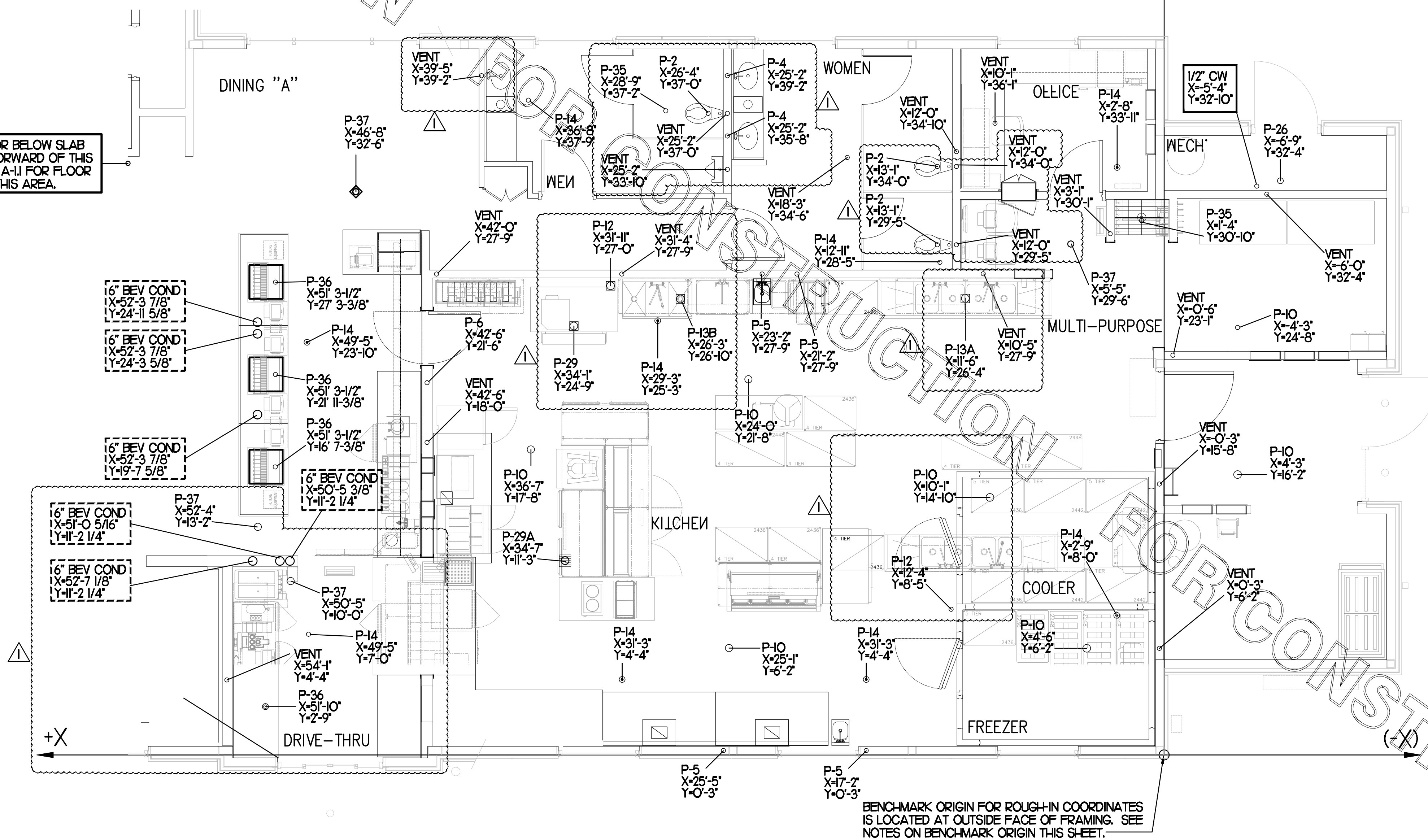
### NOTES ABOUT (0,0) BENCHMARK ORIGIN

- THE (X=0, Y=0) BENCHMARK ORIGIN IS LOCATED AT THE OUTSIDE FACE OF FRAMING FOR THE EXTERIOR WALL AT THE CORNER WHERE SHOWN ON THE ADJACENT PLAN.
- IT IS EXTREMELY IMPORTANT FOR THE PLUMBING INSTALLER TO BECOME COMPLETELY FAMILIAR WITH THE FACE-OF-FRAMING POSITION AND ITS RELATION TO THE FLOOR SLAB CONSTRUCTION PRIOR TO BEGINNING THE UNDERSLAB PLUMBING ROUGH-IN.
- PLUMBING CONTRACTOR SHALL REVIEW STRUCTURAL DETAIL "TYPICAL SECTION @ EXTERIOR WALL" FOR PRECISE LOCATION OF FACE-OF-FRAMING WITH RESPECT TO THE SLAB INSTALLATION PRIOR TO LOCATING SLAB ROUGH-INS. (THIS DETAIL IS TYPICALLY FOUND ON SHEET S3.I OF THE STRUCTURAL SET, DETAIL #5/5A.)

### MOP SINK NOTE

IMPORTANT: INSTALL P-35 FLOOR DRAIN WITH TOP OF DRAIN 0'-7" BFF. COORDINATE WITH GENERAL CONTRACTOR.

NO INTERIOR OR BELOW SLAB PLUMBING TO FORWARD OF THIS BREAKLINE SEE A-11 FOR FLOOR PLAN IN THIS AREA.



### 1 SLAB ROUGH-IN PLAN

1/4"=1'-0"



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P-3.I

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5. GAS CONNECTION SCHEDULE	
EQUIPMENT	GAS LOAD
AC#1	480,000 BTUS
AC#2	240,000 BTUS
AC#3	240,000 BTUS
AC#4	240,000 BTUS
AC#5	150,000 BTUS
WATER HEATER	199,000 BTUS
TOTAL CONNECTED LOAD	1,549,000 BTUS
REMARKS:	1) EQUIVALENT TO 1430.0 CFH 2) 7" W.C. DELIVERY PRESSURE



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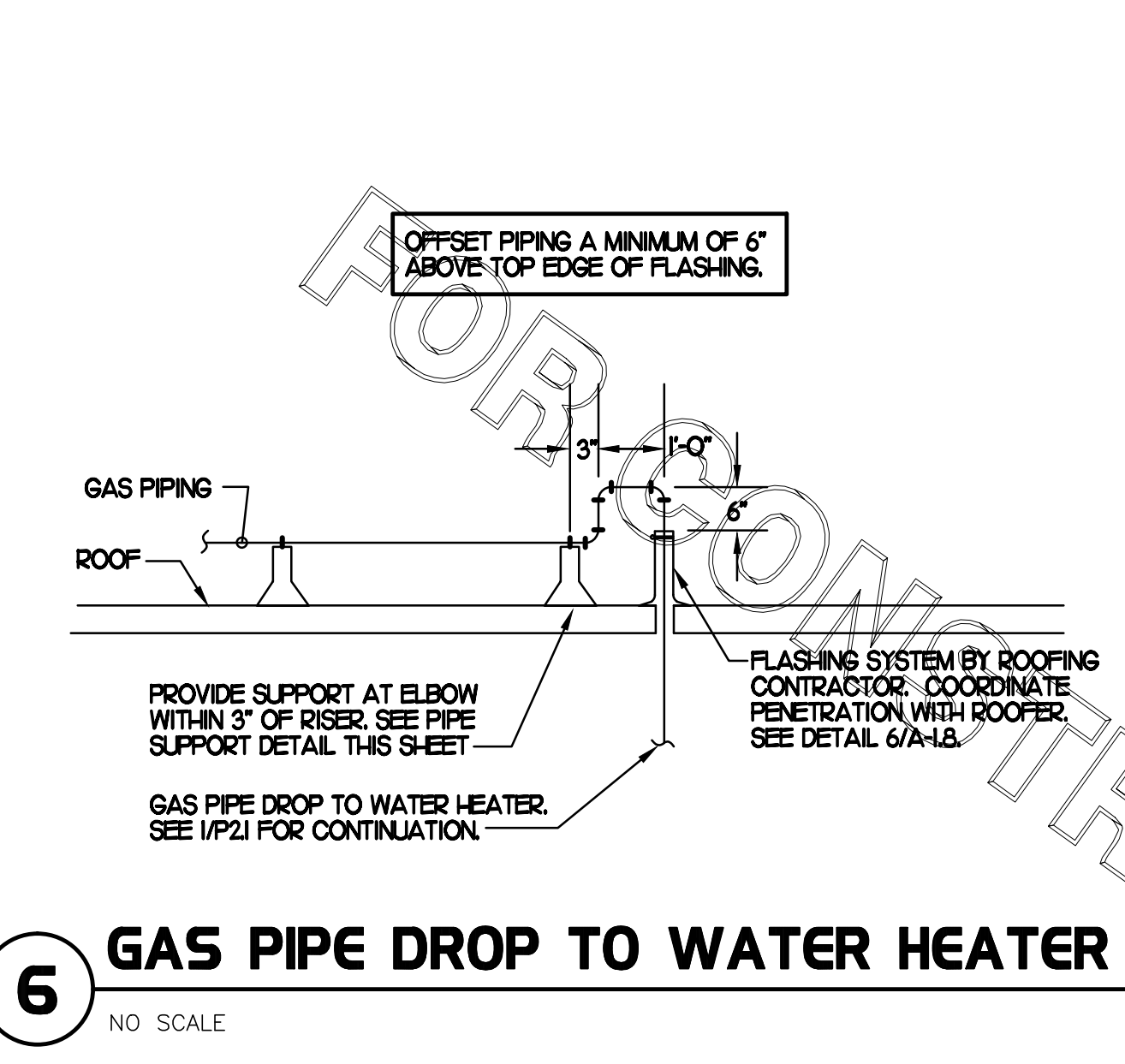
SHEET TITLE  
ROOF PLAN  
AND DETAILS

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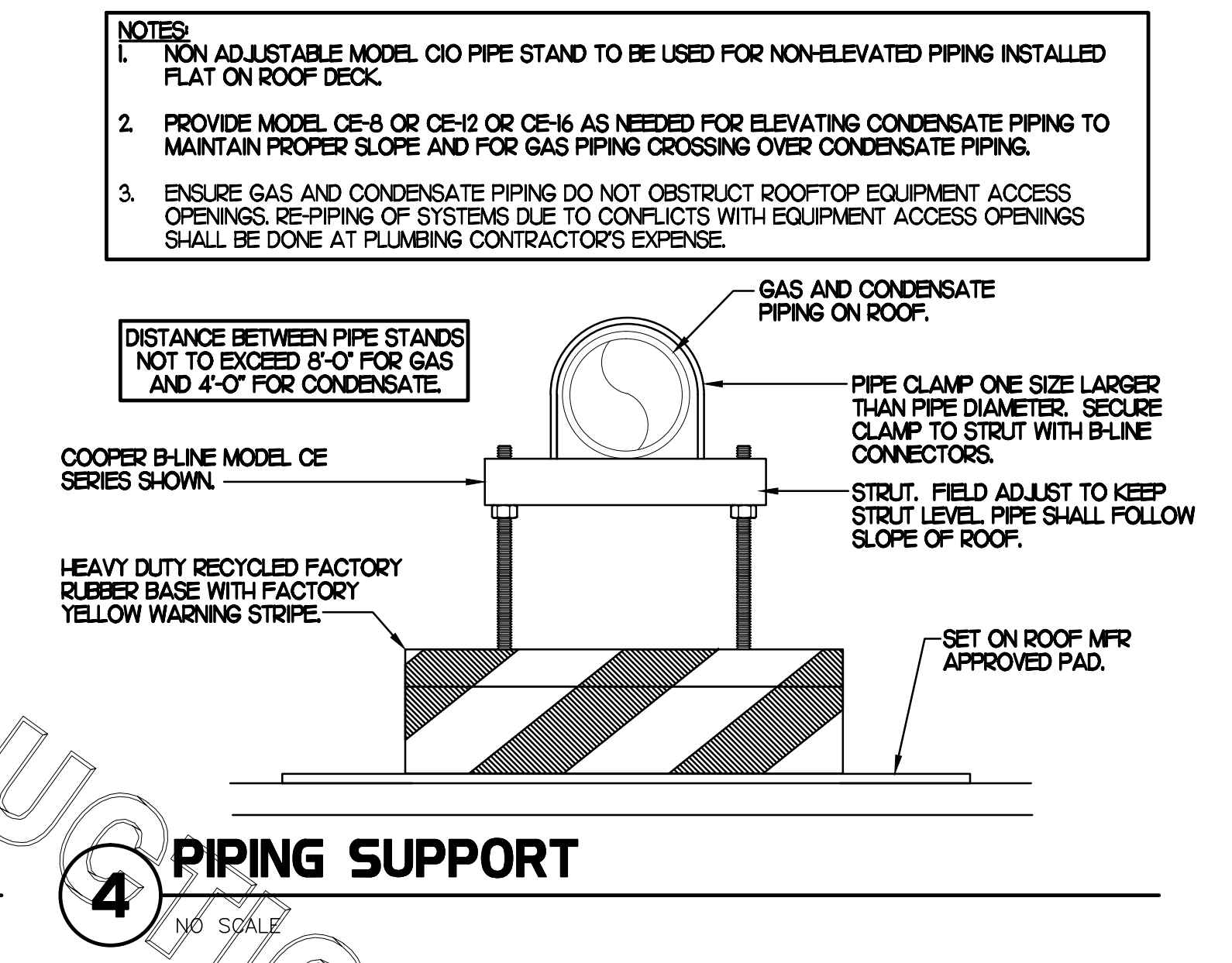
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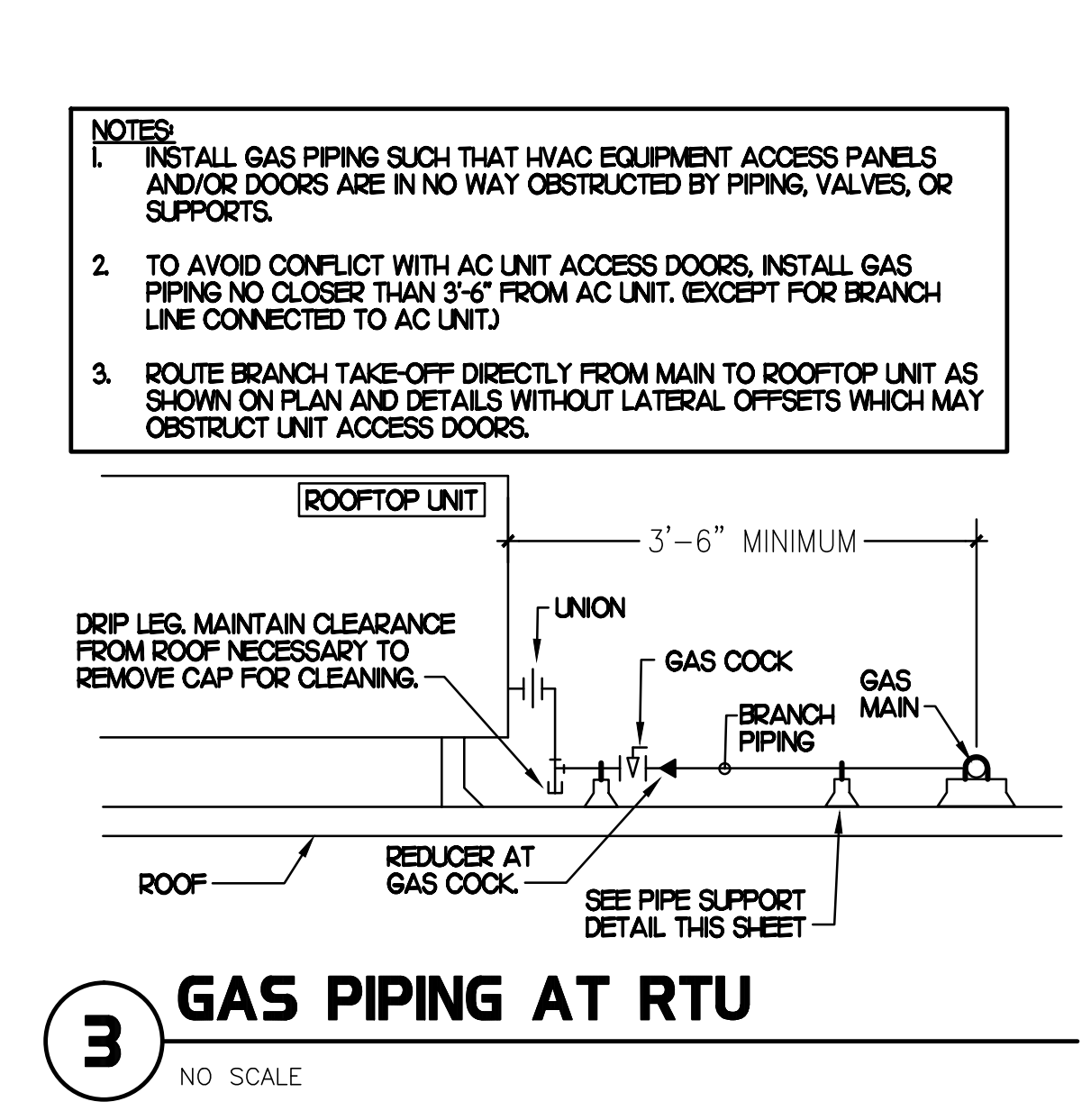
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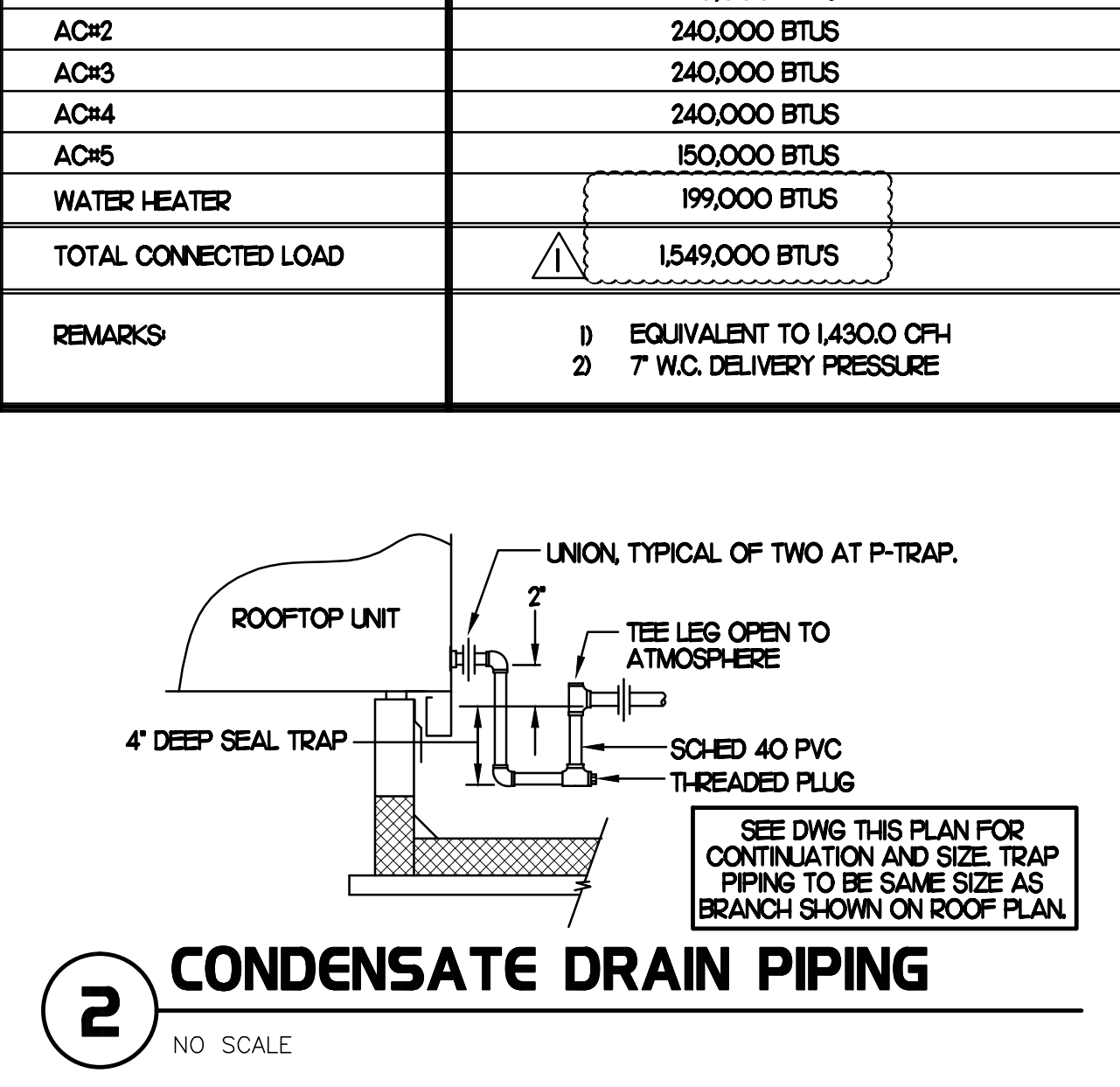
**6 GAS PIPE DROP TO WATER HEATER**  
NO SCALE



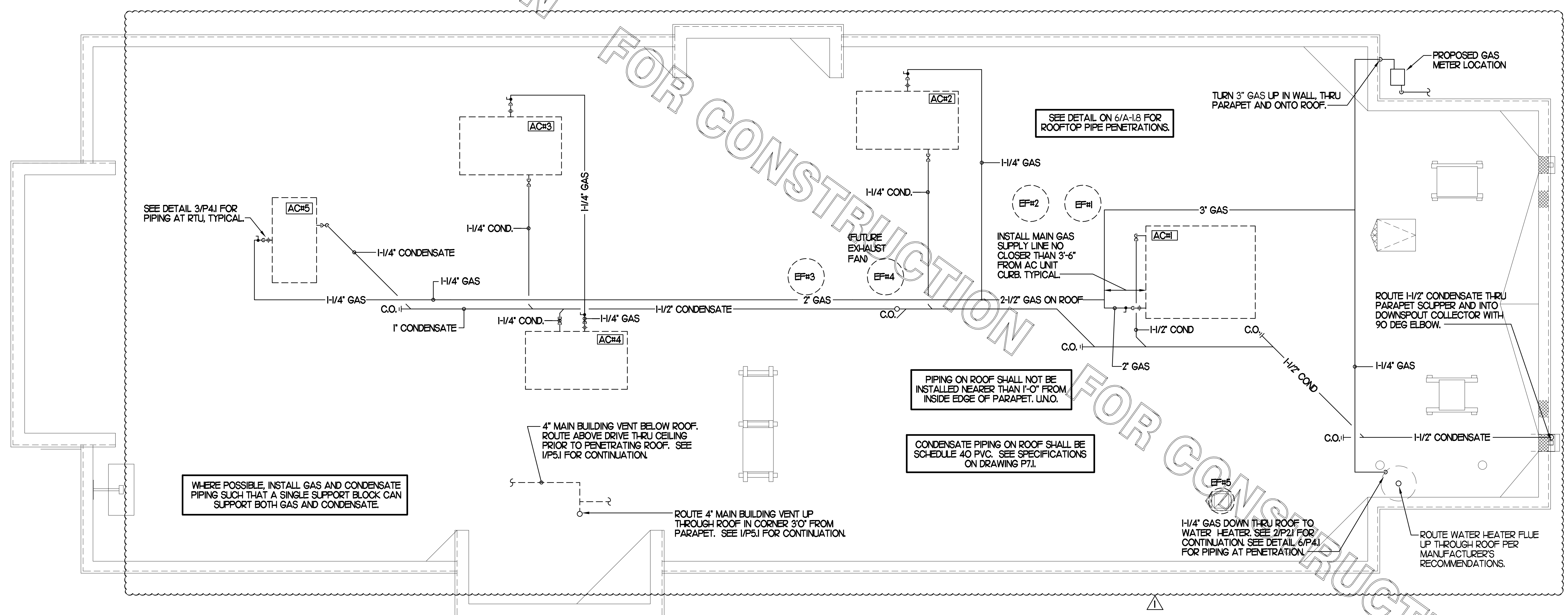
**4 PIPING SUPPORT**  
NO SCALE



**3 GAS PIPING AT RTU**  
NO SCALE

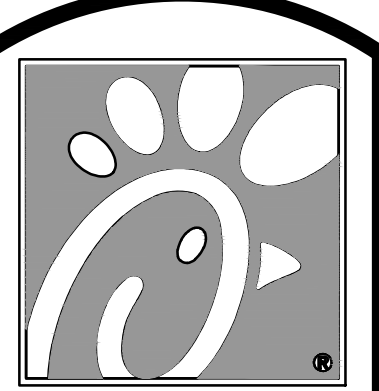


**2 CONDENSATE DRAIN PIPING**  
NO SCALE



**1 ROOF PIPING PLAN**  
1/4" = 1'-0"

PLUMBING CONTRACTOR SHALL PROVIDE AND INSTALL CONDUIT FOR ICE MAKER, AND WALK-IN FREEZER AND COOLER REFRIGERANT TUBING THROUGH ROOF. SEE DETAIL 5/A-1.8 FOR ROOFTOP REFRIGERANT CONDUIT INSTALLATIONS. SEE A-1.7 FOR LOCATION OF ICE MAKER, FREEZER AND COOLER CONDENSING UNITS.



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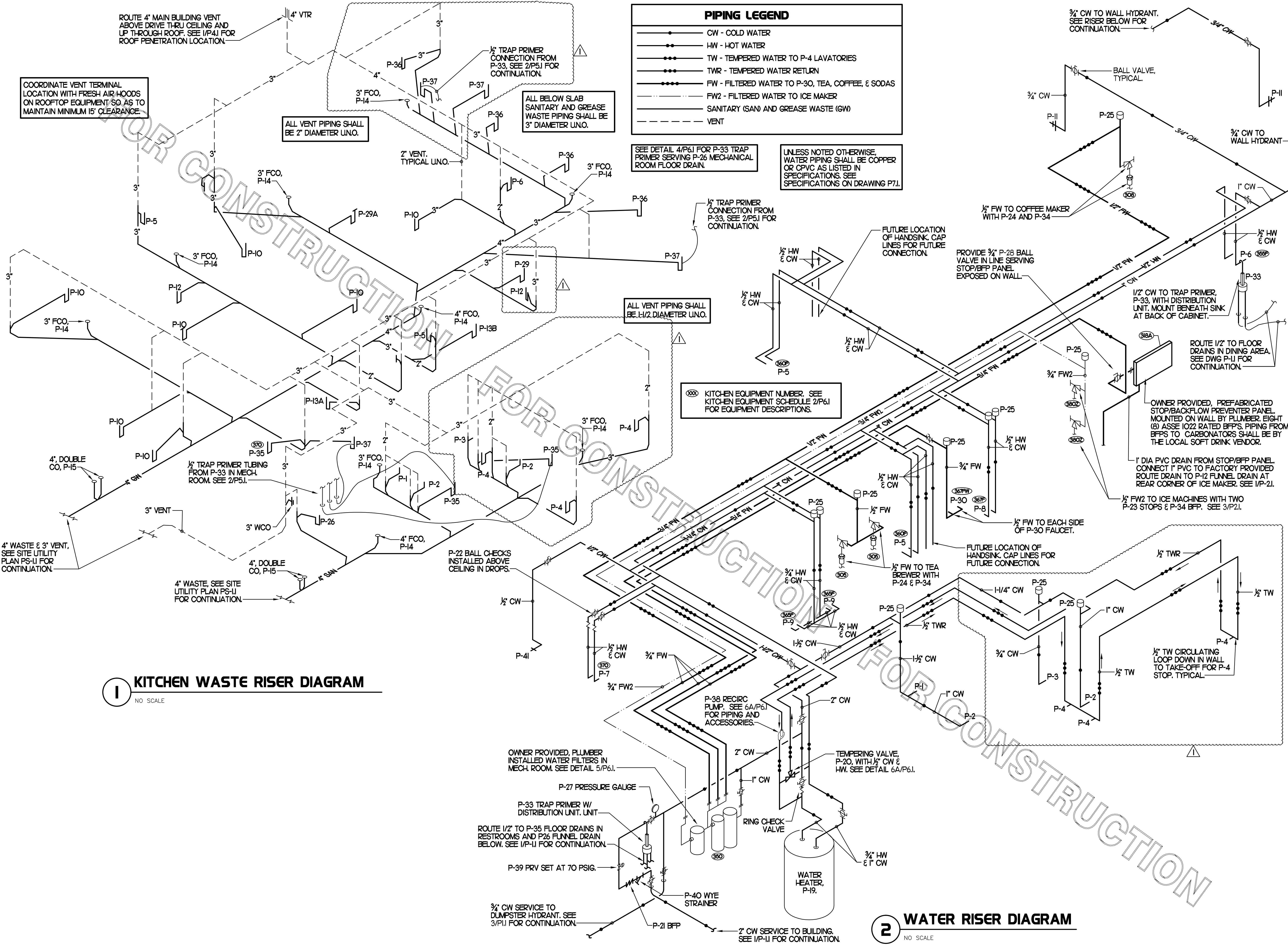
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PIPING LEGEND	
	CW - COLD WATER
	HW - HOT WATER
	TW - TEMPERED WATER TO P-4 LAVATORIES
	TWR - TEMPERED WATER RETURN
	FW - FILTERED WATER TO P-30, TEA, COFFEE, & SODAS
	FW2 - FILTERED WATER TO ICE MAKER
	SANITARY (SAN) AND GREASE WASTE (GW)
	VENT



**1 KITCHEN WASTE RISER DIAGRAM**  
NO SCALE

**2 WATER RISER DIAGRAM**  
NO SCALE



# I. SECTION CIS100 - PLUMBING SPECIFICATIONS

- PART I - PRODUCTS (C15100)
- 1.01 SCOPE
- A. POTABLE WATER PIPING ABOVE SLAB SHALL BE TYPE "L" HARD DRAWN COPPER OR FLOWGUARD GOLD CPVC AS MANUFACTURED BY NIBCO OR CHARLOTTE PIPE & FOUNDRY AND MEETING ASTM D-2846. PIPING WITHIN WALLS BEHIND KITCHEN HOODS SHALL BE COPPER.
- B. POTABLE WATER PIPING BELOW SLAB AND OUTSIDE BELOW GRADE SHALL BE TYPE "K" SOFT ANNEALED SEAMLESS. NO JOINTS SHALL BE ALLOWED BELOW SLAB. POTABLE WATER PIPING BELOW GRADE SHALL BE SLEEVED FOR ITS ENTIRE LENGTH WITH POLY SLEEVE AS MADE BY IPS WATER-TITE. ALL SLAB PENETRATIONS SHALL BE SLEEVED WITH POLY SLEEVE TO PROTECT PIPING FROM CORROSION BY CONCRETE.
- C. COPPER PIPE FITTINGS SHALL BE WROUGHT COPPER SWEEP PATTERN FITTINGS SOLDERED USING 95-5 LEAD-FREE SOLDER MEETING ASTM B-32 OR BRAZED WITH SIL-FOS. SOLDER FLUXES SHALL MEET ASTM B-813 AND SHALL BE LEAD FREE. BRAZING FLUXES SHALL MEET AWS FB3-A OR FB3-C.
- D. WATER PIPING DOWNSTREAM OF SOFT DRINK CARBONATORS SHALL BE PROVIDED AND INSTALLED BY LOCAL SOFT DRINK VENDOR.
- E. CPVC FITTINGS FOR PIPING SHALL BE SOLVENT WELD TYPE MEETING ASTM D-2846 WITH CEMENTS MEETING ASTM F-493 AND PRIMER MEETING ASTM F-656. CURE TIME MUST COMPLY WITH MANUFACTURER'S RECOMMENDATIONS. FOR CPVC PIPING INSTALLATION, WALL STUBS AT FIXTURES AND EQUIPMENT SHALL BE COPPER AND SHALL BE SERIES 830-C. CPVC TO COPPER STUB OUT ELBOWS BY SIOUX CHEF.
- F. NIPPLES, ELBOWS, AND OTHER ACCESSORY FITTINGS REQUIRED TO COMPLETE ANY WATER PIPING CONNECTION SHALL BE BRASS OR OF SIMILAR TYPE METAL AS THE FITTING TO WHICH IT IS CONNECTED. GALVANIZED FITTINGS ARE PROHIBITED. (EXCEPTION: GALVANIZED HEAT TRAP WATER HEATER NIPPLES IF INTERNALLY PROTECTED WITH TEFLON OR POLYMER CORROSION-RESISTANT COATING.)
- G. ALL HVAC CONDENSATE PIPING SHALL BE SCHEDULE 40 PVC DWV AS MANUFACTURED BY CHARLOTTE PIPE AND MEETING ASTM D-1784, D-1785 AND D-2665.
- H. U.N.O., ALL SANITARY VENT, WASTE, STORM DRAINAGE PIPING AND FITTINGS INSIDE THE BUILDING, ABOVE AND BELOW GRADE, SHALL BE SOLID WALL SCHEDULE 40 PVC DWV AS MANUFACTURED BY CHARLOTTE PIPE AND MEETING ASTM D-2665 AND D-2949. FOAM CORE AND/OR CELLULAR CORE PVC PIPING SHALL NOT BE ALLOWED. PVC PIPING OUTSIDE THE BUILDING, BELOW GRADE, SHALL BE TYPE SDR-35 MEETING ASTM D-3034, U.N.O.
- I. DWV PIPE AND FITTINGS WITHIN WALLS BEHIND KITCHEN HOODS SHALL BE SERVICE WEIGHT HUBLESS CAST IRON WITH SLEEVE, SHIELD, AND DRAWBAND JOINTS MEETING ASTM A-888 AND ASTM C-564.
- J. PVC-DWV FITTINGS FOR PIPING SHALL BE SOLVENT WELD TYPE INSIDE AND UNDERSLAB MEETING ASTM D-2665, D-3311 AND F-186. CEMENTS SHALL MEET ASTM D-2564 AND PRIMER MEETING ASTM F-656. CURE TIME MUST COMPLY WITH MANUFACTURER'S RECOMMENDATIONS. EXTERIOR PIPING JOINTS SHALL BE NEOPRENE PUSH-ON TYPE.
- K. PROVIDE 1" THICK PIPE INSULATION FOR ALL ABOVE SLAB HOT AND TEMPERED WATER PIPING. PROVIDE 1/2" THICK INSULATION FOR ALL ABOVE SLAB COLD WATER, FILTERED WATER, CONDENSATE PIPING, AND HORIZONTAL RAIN WATER CONDUCTORS INSIDE THE BUILDING. PIPING INSULATION SHALL BE KNAUF 1000F 25/50 FIBERGLASS PIPE COVERING, WHITE KRAFT PAPER VAPOR BARRIER (02 PERMS) BONDED TO ALUMINUM FOIL AND REINFORCED WITH GLASS FIBERS, MAXIMUM THERMAL CONDUCTIVITY OF 0.23 AT 75F. LONGITUDINAL LAP SHALL BE SELF SEALING. INSULATION FOR WALK-IN COOLER/FREEZER CONDENSATE PIPING SHALL BE ARMACELL A/P ARMAFLEX WITH MINIMUM 1/2" WALL THICKNESS.
- L. PIPE INSULATION AND COVERINGS SHALL HAVE A RATING OF NOT GREATER THAN 25 FLAME SPREAD, NO HIGHER THAN 50 SMOKE DEVELOPED, AND NO MORE THAN 50 FUEL CONTRIBUTED. THE ONLY EXCEPTION SHALL BE ARMAFLEX AP, WHEN SPECIFIED, WHICH SHALL NOT EXCEED 100 SMOKE DEVELOPED.
- M. A PVC 25/50 PRE-FORMED COVER SHALL BE PROVIDED AT ALL INSULATED PIPING FITTINGS EQUAL TO PROTO PVC CORP LOSMOKE, 800-875-7768.
- N. ALL NATURAL GAS PIPING SHALL BE SCHEDULE 40 BLACK STEEL MEETING ASTM A53 WITH SCREWED OR WELDED FITTINGS AND GASKET TYPE UNIONS AND FLANGES. PIPING 3" DIAMETER AND UNDER SHALL BE JOINED WITH BLACK 150 POUND MALLEABLE IRON SCREWED FITTINGS. PIPING LARGER THAN 3" DIAMETER SHALL BE WELDED.
- O. EXPOSED SUPPORTS AND ATTACHMENTS SHALL BE STAINLESS STEEL, CHROME OR CHROME PLATED. GALVANIZED ATTACHMENTS WILL NOT BE ACCEPTED.
- P. USE MATERIALS SPECIFIED ON THESE PLANS. SUBSTITUTIONS ARE ALLOWED ONLY IF SPECIFIED MATERIALS ARE UNAVAILABLE. PRODUCT SUBSTITUTIONS WILL NOT BE ACCEPTED WITHOUT PRIOR APPROVAL. ALL WATER PIPING, FITTINGS, FIXTURES AND ACCESSORIES SHALL BE CERTIFIED LEAD FREE AS DEFINED IN, AND PER THE INTENT OF, THE "REDUCTION IN LEAD IN DRINKING WATER ACT".

- TOPSOIL
- G. SURFACE SHALL BE RESTORED TO ITS ORIGINAL CONDITION.
- 2.02 INSTALLATION (C15100)
- A. WATER PIPING IN EXTERIOR WALL SHALL BE INSTALLED ON THE HEATED SIDE OF WALL INSULATION.
- B. EXPOSED HOT AND COLD WATER TRIM FITTINGS AND ACCESSORIES IN FINISHED AREAS SHALL BE CHROME FINISHED.
- C. ACCEPTABLE METHODS OF PIPE SUPPORT WITHIN WALLS SHALL BE THE SUMNER SYSTEM, POSIFIX, STAKFIX, PIPEFIX, HOLDRITE OR CHANNEL.
- D. PROVIDE J.R. SMITH OR APPROVED EQUAL SHOCK ABSORBERS #5005 THRU 5050 SIZE AS RECOMMENDED BY MANUFACTURER INSTALLED ON HOT AND COLD WATER BRANCH LINES CONTAINING SINGLE LEVER FAUCETS, FLUSH VALVES OR EQUIPMENT WITH QUICK CLOSING VALVES BETWEEN THE LAST TWO FIXTURES AS SHOWN ON THE CONTRACT DRAWINGS. SHOCK ABSORBERS SERVING FIXTURES WITH FLUSH VALVES SHALL BE SECURELY ANCHORED IN THEIR VERTICAL POSITION.
- E. SANITARY WASTE LINES SHALL BE UNIFORMLY GRADED TO ELEVATIONS SHOWN. IF NO ELEVATIONS ARE GIVEN, SEWERS SHALL BE PITCHED NOT LESS THAN 1/4" PER FOOT FOR ALL PIPING 2-1/2" IN DIAMETER AND SMALLER AND 1/8" PER FOOT FOR ALL PIPING 3" IN DIAMETER AND LARGER.
- F. STORM PIPING SHALL BE SLOPED AT 1/2" PER FT (2%) UNLESS NOTED OTHERWISE ON PLANS.
- G. SUPPORT HORIZONTAL PIPING ACCORDING TO LOCAL PLUMBING CODE. HANGER RODS SHALL BE SIZED AS FOLLOWS:
- | NOMINAL PIPE SIZE (IN) | MINIMUM HANGER DIAMETER (IN) |
|------------------------|------------------------------|
| 1/2                    | 3/8                          |
| 3/4 TO 1-1/2           | 3/8                          |
| 2 TO 2-1/2             | 3/8                          |
| 3 TO 6                 | 1/2                          |
- H. HANGERS FOR PIPING GREATER THAN 1" SHALL PASS OVER THE INSULATION. PROVIDE SADDLES FOR INSULATED PIPING.
- I. INSULATION SHALL BE APPLIED WITH JOINTS TIGHTLY BUTTED. OPEN CRACKS, VOIDS AND DEPRESSIONS SHALL BE FILLED WITH HYDRAULIC SETTING CEMENT. LAPPING MATCHING THE FINISH SHALL BE PASTED NEATLY OVER JOINTS. FITTINGS AND VALVES SHALL BE INSULATED WITH THE SAME TYPE.
- J. PROVIDE AND INSTALL A CUT-OFF VALVE, UNION AND FULL SIZE DIRT LEG AT CONNECTION TO EACH GAS-FIRED PIECE OF EQUIPMENT. INSTALL PIPING AT AND AROUND EQUIPMENT SO AS TO NO WAY OBSTRUCT EQUIPMENT ACCESS PANELS AND/OR ACCESS DOORS.
- K. COORDINATE ABOVE-CEILING PIPING LOCATIONS AND ROUTING WITH HVAC CONTRACTOR AND M-SHEETS PRIOR TO INSTALLATION. ALL MAIN DUCT TRUNK LOCATIONS SHALL TAKE PRIORITY. PIPING MAY REQUIRE REMOVAL AND REINSTALLATION AT PLUMBING CONTRACTOR'S EXPENSE IF PIPING OBSTRUCTS THE M-SHEET DUCT LAYOUT AS SHOWN OR PREVENTS ACCESS TO GREASE DUCT CLEANOUT OPENINGS.
- L. ALL GAS PIPING ABOVE ROOF SHALL BE CLEANED FREE OF RUST AND PAINTED WITH COAT OF ZINC RUST PRIMER AND ONE COAT OF ALUMINUM BASE PAINT. METER AND GAS RISER SHALL BE PRIMED AND PAINTED TO MATCH BUILDING. APPLY TWO COATS OF ASPHALTUM BASE PAINT TO PIPING BURIED UNDERGROUND.
- 2.03 TESTING (C15100)
- A. POTABLE WATER PIPING SHALL BE PRESSURE TESTED IN ACCORDANCE WITH APPLICABLE CODE REQUIREMENTS AND MANUFACTURERS RECOMMENDATIONS.
- B. THE POTABLE WATER SYSTEM SHALL BE FLUSHED OUT PROGRESSIVELY BY OPENING OUTLETS AND FLOWING WATER UNTIL IT RUNS CLEAR. AFTER PIPE CLEANING IS COMPLETED, THE STRAINERS SHALL BE REMOVED, CLEANED, AND REPLACED. THEN THE ENTIRE POTABLE WATER SYSTEM SHALL BE DISINFECTED IN ACCORDANCE WITH THE AUTHORITY HAVING JURISDICTION.
- C. THE SANITARY WASTE SYSTEM SHALL BE FLUSHED OUT PROGRESSIVELY WITH FLOWING WATER UNTIL IT RUNS CLEAR.
- D. THE ENTIRE SANITARY WASTE SYSTEM AND STORM DRAINAGE SYSTEM SHALL BE PRESSURE TESTED IN ACCORDANCE WITH APPLICABLE CODE REQUIREMENTS AND MANUFACTURERS RECOMMENDATIONS.
- E. NATURAL GAS PIPING SHALL BE LEAK TESTED IN ACCORDANCE WITH APPLICABLE CODE REQUIREMENTS AND MANUFACTURERS RECOMMENDATIONS.

- PART III - MANUFACTURERS
- 3.01 PRODUCTS - PIPING SYSTEMS, ETC (C15100)
- A. HYDRANTS, CARRIERS, DRAINS, AND SHOCK ABSORBERS: JAY R. SMITH, JONES STEPHENS CORP, WATS ZURN, OR JOSAM.
- B. ALTERNATE FIXTURES: ONLY AS SHOWN ON PLANS. APPROVED JAY R. SMITH (JRS), WATTS (WTS), AND ZURN (ZRN) MODEL NUMBERS LISTED ON FIXTURE SCHEDULE, THIS SHEET.

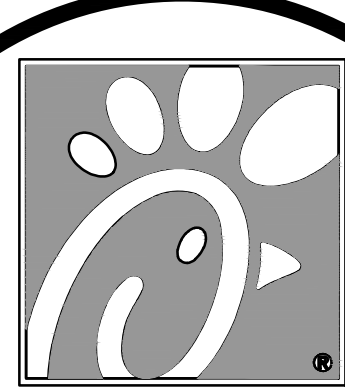
- 3.02 PRODUCTS - RESTROOM FIXTURES PORCELAIN & VALVES (C15405)
- A. PREFERRED FIXTURES: TOTO. NO EXCEPTION.
- B. ALTERNATE FIXTURES: ONLY AS SHOWN ON PLANS.
- C. FITTINGS: AS SPECIFIED ON THE PLANS. NO SUBSTITUTIONS ALLOWED.
- D. FLUSH VALVES AND LAVATORY FAUCETS: TOTO MANUFACTURING. NO SUBSTITUTIONS ALLOWED.
- E. PREFERRED TOILET SEATS: TOTO. ALTERNATE TOILET SEATS: CHURCH, BEMIS, AND BENEKE.

# 2. PLUMBING FIXTURES

- RESTROOM FIXTURES (C15405)
- P-1 WATER CLOSET: TOTO MODEL CT705EN BOWL WITH 1.28 GPF TET-1-LNC+32CP ECO-POWER FLUSH VALVE AND SC534 SEAT. NO SUBSTITUTIONS. WHITE, FLOOR MOUNTED, FLUSH VALVE TYPE, VITREOUS CHINA, 1/2" TOP SPUD, ELONGATED BOWL, ELECTRONIC SENSOR OPERATED HANDS-FREE FLUSH VALVE, WHITE OPEN FRONT SEAT WITH CHECK HINGE. CHECK-FIL-A HAS NATIONAL ACCOUNTS WITH TOTO. PLEASE SEE NATIONAL ACCOUNT INFORMATION ON THIS SHEET FOR PRICING OF TOTO FIXTURES.
- P-2 WATER CLOSET, (ADA): TOTO MODEL CT705ELN BOWL WITH 1.28 GPF TET-1-LNC+32CP ECO-POWER FLUSH VALVE AND SC534 SEAT. NO SUBSTITUTIONS. HC, ACCESSIBLE, WHITE, FLOOR MOUNTED, 17-1/2" HIGH FLUSH VALVE TYPE, VITREOUS CHINA, 1/2" TOP SPUD, ELONGATED BOWL, ELECTRONIC SENSOR OPERATED HANDS-FREE FLUSH VALVE, WHITE OPEN FRONT SEAT WITH CHECK HINGE. CHECK-FIL-A HAS NATIONAL ACCOUNTS WITH TOTO. PLEASE SEE NATIONAL ACCOUNT INFORMATION ON THIS SHEET FOR PRICING OF TOTO FIXTURES.
- P-3 URINAL: TOTO MODEL UT445U URINAL WITH TEU 1 U 12#CP Q125 GPF SELF SUSTAINED HYDROPOWER SELF-GENERATING ELECTRONIC SENSOR-OPERATED FLUSH VALVE. NO SUBSTITUTIONS. VITREOUS CHINA, 3/4" TOP SPUD, SENSOR OPERATED WITH MANUAL OVERRIDE BUTTON, INTERNAL VALVE FILTER PROTECTION. PLEASE SEE NATIONAL ACCOUNT INFORMATION ON THIS SHEET FOR PRICING OF TOTO PRODUCTS.
- P-4 LAVATORY FAUCET (BUILT-IN COUNTERTOP LAVATORY PROVIDED BY OWNER) TOTO MODEL TEL-3L3C-10#CP ECO-POWER SENSOR OPERATED FAUCET. 0.09 GALLONS PER CYCLE. NO SUBSTITUTIONS. PROVIDE MCGUIRE LF175 SUPPLY WITH STOP, MCGUIRE 155-WC GRID DRAIN WITH OFFSET TAILPIECE, MCGUIRE 8872 POLISHED CHROME P-TRAP. P-TRAP SHALL BE PARALLEL WITH BACK WALL. PROVIDE A TRUBRO INC. HANI LAV-GUARD INSULATION KITS MODELS 101E-Z AND 105E-Z. CHECK-FIL-A HAS NATIONAL ACCOUNTS WITH TOTO. PLEASE SEE NATIONAL ACCOUNT INFORMATION ON THIS SHEET FOR PRICING OF TOTO FIXTURES.
- PLUMBING (C15100)
- P-5 KITCHEN HAND SINK ROUGH IN (SINK AND FAUCET WITH 0.50 GPM AERATOR FURNISHED BY OWNER) CONTRACTOR SHALL INSTALL WALL HUNG, STAINLESS STEEL SINK AND FAUCET SET AND MAKE FINAL CONNECTIONS. PROVIDE MCGUIRE LF175 SUPPLIES WITH STOPS AND A MCGUIRE 8912 POLISHED CHROME P-TRAP.
- P-6 SERVING COUNTER DROP IN SINK ROUGH IN (SINK AND FAUCET WITH 0.50 GPM AERATOR FURNISHED BY OWNER) CONTRACTOR SHALL INSTALL SINK AND FAUCET SET AND MAKE FINAL CONNECTIONS. PROVIDE MCGUIRE 8912 POLISHED CHROME P-TRAP AND MCGUIRE LF175 SUPPLIES WITH STOPS.
- P-7 MOP SINK FAUCET: (MOP SINK BASIN BUILT BY GENERAL CONTRACTOR) PROVIDE T&S BRASS MODEL B-2345 FAUCET WITH CERAMA SPRING CHECK VALVE CARTRIDGES, HOSE THREAD SPOUT OUTLET, TOP BRACE, ADJUSTABLE INLET SPREAD FROM 3" TOP 8". INCLUDE T&S BRASS MODEL 43-072 HOSE THREAD X 3/4" FEMALE NPT CHROME ADAPTOR. NO SUBSTITUTIONS. SEE ALSO P-6.
- P-8 VEGETABLE PREP SINK ROUGH IN (SINK AND FAUCET WITH 0.65 GPM SPRAY HEAD FURNISHED BY OWNER) CONTRACTOR SHALL INSTALL SINK AND MAKE FINAL CONNECTIONS. PROVIDE MCGUIRE LF177 SUPPLIES WITH STOPS AND 3/8" RISERS, ASSEMBLE AND MOUNT TWO HANDLE FAUCET WITH PRE-RINSE SPRAY ARM. INSTALL ADD-ON FAUCET WITH 15" DOUBLE-JOINT SPOUT AT BASE OF PRE-RINSE RISER. SEE K-SHEET ELEVATIONS. INSTALL SCHEDULE 40 PVC INDIRECT WASTE MANIFOLD FROM SINK BASIN TO FLOOR SINK P-13B, NO P-TRAP REQUIRED. INSTALL CLEANOUT AT TURN.
- P-9 FOUR COMPARTMENT POT SINK ROUGH IN (SINK AND FAUCETS WITH 0.65 GPM SPRAY HEAD FURNISHED BY OWNER) CONTRACTOR SHALL INSTALL SINK, ASSEMBLE & MOUNT TWO FAUCETS, AND MAKE FINAL CONNECTIONS. PROVIDE MCGUIRE LF177 SUPPLIES WITH STOPS AND 3/8" RISERS. ASSEMBLE AND MOUNT ONE TWO-HANDLE FAUCET WITH PRE-RINSE SPRAY, INSTALL ADD-ON FAUCET WITH 18" DOUBLE-JOINT SPOUT AT BASE OF PRE-RINSE RISER. ASSEMBLE AND MOUNT ONE TWO-HANDLE FAUCET WITH DOUBLE JOINT SPOUT ON OPPOSITE SIDE. SEE K-SHEET ELEVATIONS FOR FAUCET LOCATIONS. PROVIDE 1/2" SCHED 40 PVC INDIRECT WASTE MANIFOLD FROM EACH SINK BASIN TO FLOOR SINK P-13A, NO P-TRAPS REQUIRED. PROVIDE CLEANOUT AT EACH END.
- P-10 FLOOR DRAIN (3") JONES STEPHENS CORP D53-144 PVC BODY, BRONZE SPUD WITH 8" DIAMETER NICKEL BRONZE STRAINER. ALT: (JRS) 2110-HP-NB, (WTS) FDI03-A8-60, (ZRN) FRO6NIP35-C.
- P-11 WALL HYDRANT (NON-FREEZE): WOODFORD MODEL 67-C AUTOMATIC DRAINING WALL HYDRANT WITH DUAL CHECK BFP, ASSE 1052 APPROVED, WALL CLAMP, POLISHED BRASS FINISH, "C" STYLE INLET, SEE WALL HYDRANT NOTES ON 1/P21 FOR WALL THICKNESS AT WALL HYDRANTS. ALT: (WTS) HY-42.
- P-12 FUNNEL DRAIN (3") JR. SMITH 3510L03 FUNNEL-CEPTOR 3" INDIRECT WASTE RECEIVER WITH NICKEL BRONZE STRAINER AND FUNNEL. PROVIDE 6" SQUARE F12 STRAINER WITH 4" ROUND FUNNEL AT ICE MACHINE & WALK-IN COOLER. ALT: (WTS) FDI03P-M6-F4-I, (ZRN) ZN415-6S-3NL + ZN328-4. SEE SHEET P11 TO VERIFY IF FUNNEL IS TO BE PROVIDED.
- P-13A FLOOR SINK (POT SINK) JAY R. SMITH FIGURE NO. 343H-L03-C-10 SANI-CEPTOR CAST IRON INDIRECT WASTE RECEIVER WITH 12" SQUARE BODY, FLASHING CLAMP, 8" DEEP SEDIMENT BUCKET, AND NO GRATE. ALT: (WTS) SF-743P-FC-5-33, (ZRN) Z1901-KC-3NH-I.
- P-13B FLOOR SINK (VEGETABLE SINK) JR. SMITH 341H-L03-10 SANI-CEPTOR CAST IRON INDIRECT WASTE RECEIVER WITH FLASHING CLAMP, 8" SQ. BODY, SEDIMENT BUCKET, AND NO GRATE. ALT: (WTS) SF-713P-FC-5-33, (ZRN) Z1910-KC-3NH-I-23.
- P-14 CLEANOUTS INSIDE BUILDING: JR. SMITH 4053L CLEANOUT WITH 6-1/2" SQUARE NICKEL BRONZE TOP AND TAPER THREAD BRONZE PLUG. SEE PLAN FOR SIZE. ALT (X-PIPE DIA): (WTS) CO-20XP-S, (ZRN) ZN1400-XNL-T.
- P-15 CLEANOUTS OUTSIDE BUILDING: JR. SMITH 426IL SERIES EXTRA HEAVY DUTY CAST IRON CLEANOUT, "C.O." CAST IN COVER, ABS PLUG, SPEEDI SET OUTLET. ALT (X-PIPE DIA): (WTS) CO-XOO-MF + CO-38X, (ZRN) Z1474-X-N.
- P-16 3-WAY DIVERTER VALVE ASSEMBLY: WATTS MODEL LFB 6780 ROUGH BRASS LEAD-FREE DIVERTER BALL VALVE WITH 3/4" FIP INLET AND OUTLETS AND QUARTER TURN LEVER HANDLE. PROVIDE WITH TWO (2) FORGED BRASS 3/4" MIP X 3/4" MALE GARDEN HOSE THREAD ADAPTERS (PLUMBEST MODEL G20-003 OR EQUAL). PROVIDE WITH ONE ASSE 1011 APPROVED CHROME PLATED VACUUM BREAKER (WOODFORD MODEL 34H-CH OR EQUAL). FOR INSTALLATION AT MOP SINK. SEE 4/P21. PROVIDE ALSO TWO 3/4" CLOSE CHROME PLATED BRASS NIPPLE AND 3/4" POLISHED CHROME 90 DEGREE ELBOW.
- P-17 VACUUM RELIEF VALVE: WATTS MODEL #LFN36MI, 3/4" CONNECTION.
- P-18 EXPANSION TANK: STATE INDUSTRIES MODEL ETC-5X, ACCEPTANCE 3.05 GALLONS AT 40 PSI PRECHARGE, 3/4" CONNECTION. ALTERNATE MODELS SIZED PER WATER HEATER MANUFACTURER RECOMMENDATIONS ARE ACCEPTABLE.
- P-19 WATER HEATER: STATE INDUSTRIES LO-NOX UNLTRA FORCE MODEL SLF100 199NE, 100 GALLONS CAP, GAS FIRED WATER HEATER, 199,000 BTUH INPUT, 230 GPH MINIMUM RECOVERY AT 100 DEGREE RISE, 4" CPVC DIRECT VENT, 1/2" CONDENSATE ON EXHAUST FLUE, ACID NEUTRALIZER FOR CONDENSATE DRAIN, PROVIDE CONCENTRIC FLUE TERMINATION KIT PN 9006328005. MANUFACTURER PROVIDED HEAT TRAPS AND THREE YEAR WARRANTY.

- P-20 TEMPERING VALVE: SYMMONS MODEL 7-225-CK ASSE 1017 AND ASSE 1070 APPROVED, BRASS BODY, THERMOSTATIC TYPE, 15 GPM AT 45 PSI DIFFERENTIAL, 4 GPM AT 5 PSI DIFFERENTIAL, 1/2" IPS INLETS AND OUTLETS WITH CHECKSTOPS. SET TEMPERATURE AT 110 DEG F. PROVIDE TRERICE MODEL B83404 3" DIAL TYPE THERMOMETER WITH BOTTOM 1/2" N.P.T. CONNECTION, 4" STEM AND 25F TO 125 F RANGE. LEAD FREE.
- P-21 BACKFLOW PREVENTERS: COORDINATE LOCATION WITH CIVIL SITE UTILITY PLAN. BACKFLOW PREVENTER TYPE AND MODEL IS DETERMINED BY CIVIL ENGINEER IF LOCATED OUTSIDE THE BUILDING.
- DOUBLE CHECK TYPE: WATTS NO. U007MGT 1-1/2" DUAL CHECK MODULAR TYPE BACKFLOW PREVENTER MEETING ASSE 1015 AND AWWA C510-92. WHERE REQUIRED BY LOCAL AUTHORITY, USE THE RPZ TYPE BFP SHOWN BELOW.
- REDUCED PRESSURE ZONE (RPZ) TYPE: WATTS NO. U009M2 1-1/2" MODULAR TYPE WITH TEST PORTS AND INTERMEDIATE RELIEF VALVE MEETING ASSE 1013 AND AWWA C511-89. PROVIDE WATTS NO. 909-AG-C AIR GAP DEVICE.
- P-22 MOP SINK CHECK VALVES: T&S BRASS 1/2" MODEL B-CVW-2 BALL CHECK.
- P-23 UTILITY CONNECTION (ICE MAKER): PROVIDE A MCGUIRE MODEL LF-HST06SB LEAD-FREE CHROME WHEEL ANGLE STOP, 1/2" FIP INLET AND OUTLET. PROVIDE CHROME WALL ESCUTCHEON. INSTALL WITH BFP P-34. SEE DETAIL 3/P21 FOR PIPING AT ICE MAKERS.
- P-24 UTILITY CONNECTION (COFFEE & TEA BREWERS): PROVIDE A MCGUIRE MODEL LF-HST06SB LEAD-FREE CHROME WHEEL ANGLE STOP, 1/2" FIP INLET AND OUTLET. PROVIDE CHROME WALL ESCUTCHEON. INSTALL WITH BFP P-34.
- P-25 SHOCK ABSORBER: JR. SMITH FIGURE 5005 THROUGH 5050, SIZE AS RECOMMENDED BY MANUFACTURER. ALT: (WTS) SSA + SSB, (ZRN) Z1700-100 + Z1700-300.
- P-26 FUNNEL DRAIN (3") JR. SMITH 3510L03 FUNNEL-CEPTOR 3" INDIRECT WASTE RECEIVER WITH NICKEL BRONZE STRAINER AND FUNNEL. PROVIDE 6" ROUND F22 STRAINER WITH 3.25" X 8.25" OBLONG FUNNEL. ALT: (WTS) FD-103P-A8-G-I, (ZRN) ZN451-8S-3NL-OF.
- P-26A TRAP SEAL PROTECTOR: PROVENT TRAP GUARD MODEL TG3H 3" TRAP SEAL INSERT FOR INTERNAL INSTALLATION AND REPLACEMENT ACCESS THROUGH STRAINER. PROVIDE AT P-35 FLOOR DRAINS IN RESTROOMS, P-37 FLOOR DRAINS DINING ROOM, AND P-26 FUNNEL DRAINS IN MECH ROOM. TRAP GUARDS TO BE USED ALONG WITH MECHANICAL TRAP PRIMERS.
- P-27 WATER PRESSURE GAUGE: TRERICE MODEL 800B, 2-1/2" ROUND, BOTTOM OUTLET WITH 1/4" N.P.T. CONNECTION AND O TO 100 PSI RANGE.
- P-28 BALL VALVE: NIBCO MODEL 4660-T, 3/4", WITH IPS INLET AND OUTLET.
- P-29 ICE MACHINE FLOOR SINK: JR. SMITH 34 11 L04-10 SANI-CEPTOR CAST IRON INDIRECT WASTE RECEIVER WITH 8" SQ. BODY, SEDIMENT BUCKET AND NO GRATE. ALT: (WTS) SF-713P-FC-5-33, (ZRN) Z1910-KC-3NH-I-23.
- P-29A FRANKIE TABLE FLOOR SINK: JR. SMITH 34 11 L04-12 SANI-CEPTOR CAST IRON INDIRECT WASTE RECEIVER WITH 8" SQ. BODY, SEDIMENT BUCKET AND HALF GRATE. ALT: (WTS) SF-713P-FC-5-33 + FD-8-1/2 (GRATE), (ZRN) Z1910-KC-3NH-I-23 + P1910-2 GRATE.
- P-30 FILTERED WATER FAUCET: (FAUCET PROVIDED BY OWNER) TWO-HANDLE WALL MOUNT FAUCET WITH DOUBLE JOINT SWING SPOUT. MOUNT ON WALL AS SHOWN ON K-SHEETS. PIPE FILTERED WATER TO BOTH SIDES OF FAUCET. CONNECT TO SUPPLY PIPING WITH BRASS OR CHROME NIPPLES, GALVANIZED NOT ALLOWED.
- P-31 DUMPSTER POST HYDRANT (NON-FREEZE): WOODFORD MODEL Y2 LEVER TYPE POST HYDRANT, 3/4 HOSE CONNECTION, LOCKABLE LEVER HANDLE, BRASS CASING, BRASS OPERATING ROD, ASSE 1052 APPROVED AND 24" DEPTH OF BURY.
- P-32 DUMPSTER PAD DRAIN: JR. SMITH FIGURE NO. 2280C03 3" FLOOR DRAIN WITH 7-1/2" HINGED CAST IRON SLOTTED GRATE AND SEDIMENT BUCKET. PROVIDED AND INSTALLED BY SITE CONTRACTOR. ALT: (ZRN) ZF60-3NL-Y-C.
- P-33 TRAP PRIMER (MECHANICAL TYPE): PRECISION PRODUCTS PR-500. PROVIDE DISTRIBUTION UNIT WHERE SERVING MULTIPLE DRAINS. PROVIDE SCREWDRIWER STOP AT PRIMER INLET. ALT: (WTS) TP-300A-DR.
- P-34 DISPENSER BACKFLOW PREVENTER: WATTS MODEL #WLF7RU22 ASSE 1024 RATED WITH 1/2" FIP INLET AND OUTLET, DUAL CHECK TYPE. PROVIDE 1/2" DIA X 7" LONG CHROME NIPPLE AT BFP INLET AND OUTLET. PROVIDE T&S BRASS MODEL B-0110 CHROME WALL BRACKET.
- P-35 FLOOR DRAIN (3") JONES STEPHENS CORP D50-064 PVC BODY, BRONZE SPUD WITH 6" DIAMETER NICKEL BRONZE STRAINER. SEE DWG P11 FOR DRAINS IN RESTROOMS REQUIRING 1/2" TRAP PRIMER CONNECTION. ALT: (WTS) FDI03-A6-60, (ZRN) FRO6NIP35-C.
- P-36 BEVERAGE TOWER INDIRECT RECEIVER (3") JONES STEPHENS CORP D53-144 PVC BODY, BRONZE SPUD WITH 8" DIAMETER NICKEL BRONZE STRAINER. ALT: (JRS) 2110-HP-NB, (WTS) FDI03-A8-60, (ZRN) ZN550-3NH-Y.
- P-37 FLOOR DRAIN (3") JONES STEPHENS CORP D50-076 PVC BODY, BRONZE SPUD WITH 6" SQUARE NICKEL BRONZE STRAINER. PROVIDE 1/2" TRAP PRIMER CONNECTION FOR DINING ROOM DRAINS. ALT: (WTS) FDI03-M6-7-60, (ZRN) FSO6NIP35-C.
- P-38 TEMPERED WATER RECIRCULATING PUMP: TACO MODEL 006-B7-IFC, 1/2" UNION CONNECTIONS, INTEGRAL FLOW CHECK, 110 VAC, ELECTRICIAN TO PROVIDE AND WIRE PLUG AND GROUND, 1/40 HP, 3 GPM AT 7 FT TOTAL DYNAMIC HEAD. PROVIDE CONTROL WIRING AND HONEYWELL MODEL L6006C 110 VAC AQUA-STAT, WITH ADJUSTABLE SETPOINT, MOUNTED DIRECTLY ON PIPE. SET SHUT-OFF TEMPERATURE AT 110 DEG F.
- P-39 2" PRESSURE REDUCING VALVE: WATTS NO. #LP223-SB WITH BUILT-IN BYPASS FEATURE. SET NO FLOW CONDITION AT 70 PSI. ALT: (ZRN) SERIES 500XLSBR.
- P-40 WYE STRAINER WITH #100 SCREEN 2" WATTS LF777SM3, BRONZE WYE STRAINER WITH THREADED CONNECTION AND TAPPED RETAINER CAP. PROVIDE #100 MESH SCREEN. PROVIDE WATTS #1 BD-1C BRASS BOILER DRAIN WITH BRASS STREET 90 DEGREE ELBOW, MALE END SIZED FOR CONNECTION TO WYE STRAINER RETAINER CAP OUTLET TAP.
- P-41 WALL HYDRANT (NON-FREEZE): WOODFORD MODEL 30-C AUTOMATIC DRAINING WALL HYDRANT WITH DUAL CHECK BFP, ASSE 1052 APPROVED, WALL CLAMP, ROUGH BRASS FINISH, OFFSET OVAL HANDLE AND "C" STYLE INLET, ORDER 4" WALL THICKNESS.

NATIONAL ACCOUNTS	
I.	TOTO VALVES AND FIXTURES (NO SUBSTITUTIONS). PLEASE CONTACT HEATHER CARTER WITH HJC DISTRIBUTORS AT (800) 459-7099 EXT 5969 OR VIA E-MAIL AT: cfa@hjcinc.com FOR NATIONAL PRICING AND DELIVERY FOR ALL ITEMS ON PLUMBING FIXTURE SCHEDULE.



5200 Buffington Rd.  
Atlanta Georgia,  
30349-2998

Revisions:

Mark	Date	By
△	4/10/15	HEALTH DEPT
		REV FOUR PERMIT & BID REVIEW

Mark Date By

△

Mark Date By

△

Seal

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825 Third Avenue, South  
Nashville, Tennessee 37210

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STORE  
CABBAGE PATCH  
CUSTOM - IN-FILL

25 West Underwood St.  
Cleveland, GA 30528

SHEET TITLE  
PLUMBING  
SPECIFICATIONS

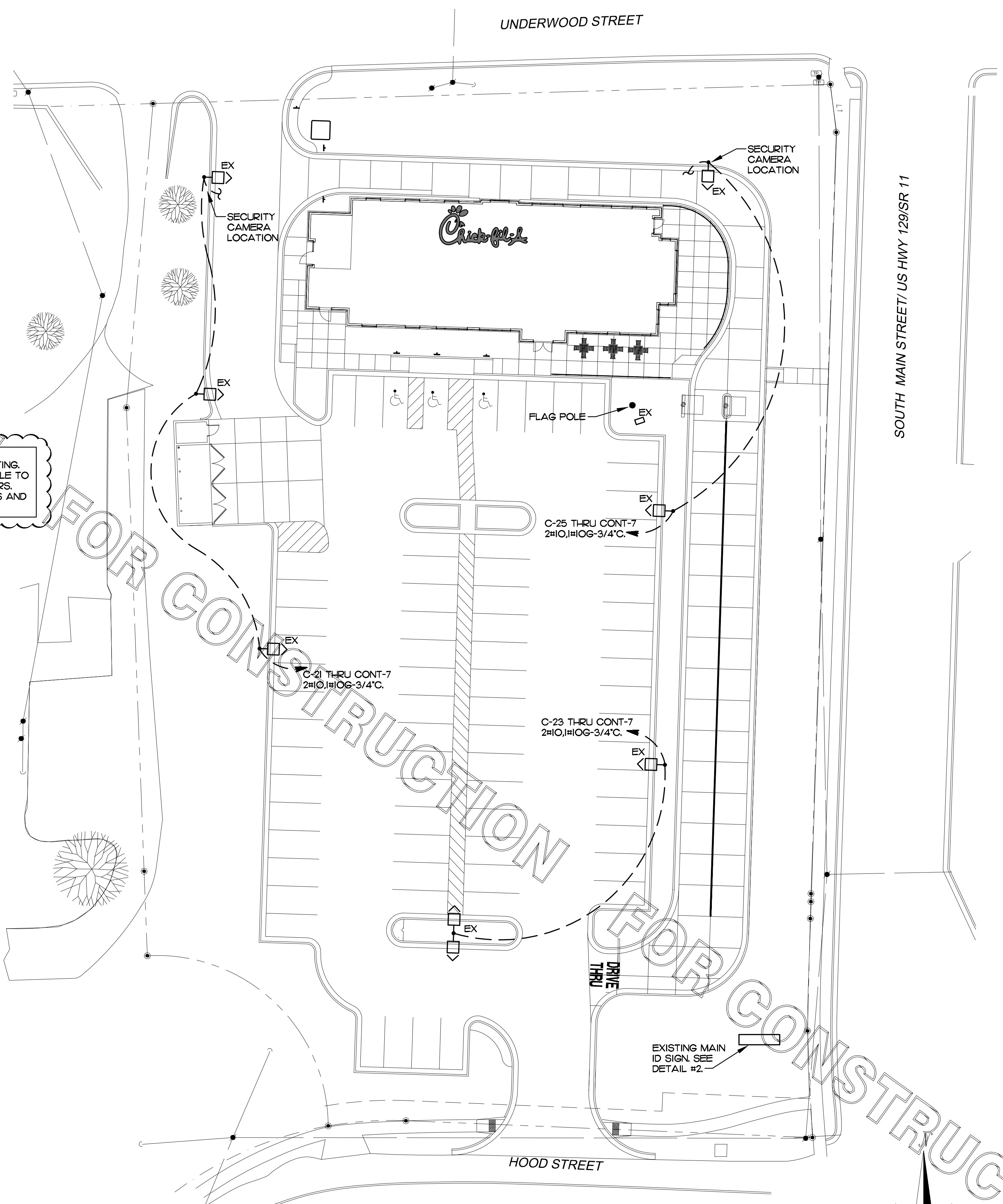
VERSION: V2  
ISSUE DATE: 11-2014

Job No. : CF1514  
Store : 2913  
Date : 05/14/15  
Drawn By : BF  
Checked By: MK

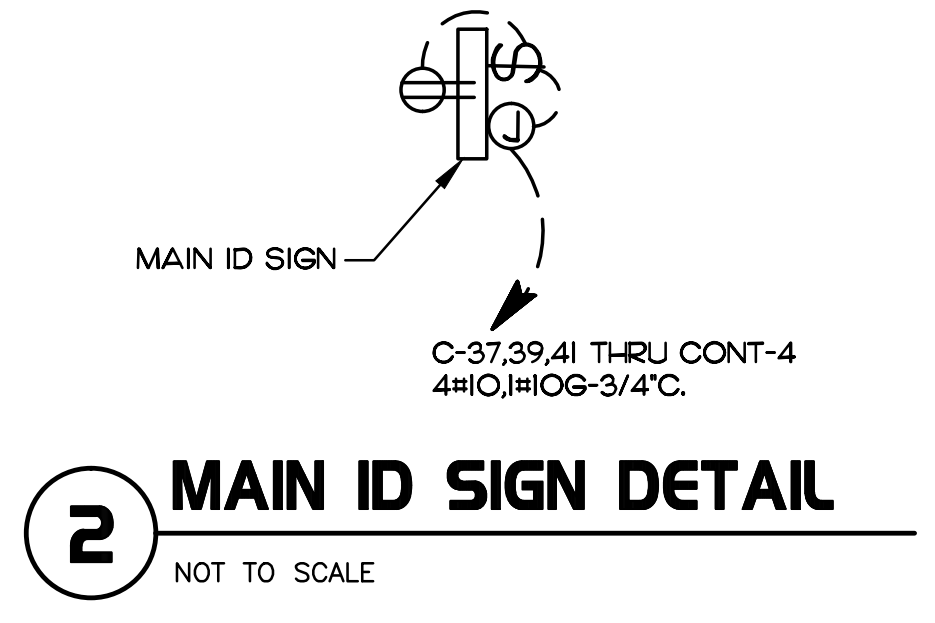
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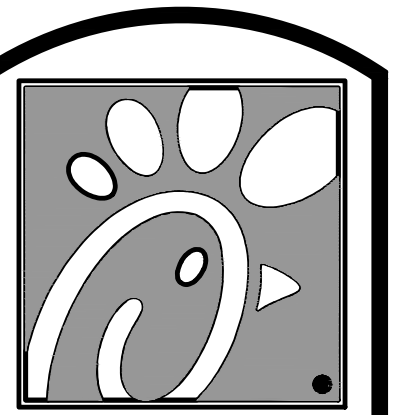
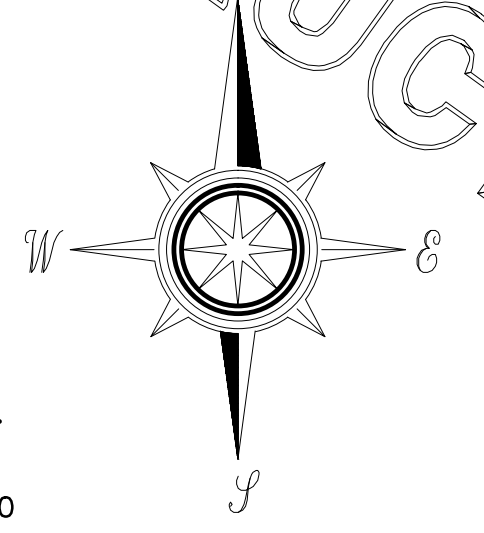
FOR CONSTRUCTION



NOTE: THE SITE LIGHTING, FLAG POLE LIGHTING, AND MAIN ID SIGN ARE EXISTING. THE CONTRACTOR WILL BE RESPONSIBLE TO FURNISH AND INSTALL THE CONDUCTORS. FIELD LOCATE THE EXISTING CONDUITS AND CIRCUIT AS SHOWN.



**1** ELECTRICAL SITE PLAN  
SCALE: 1"=20'-0"



**Chick-fil-A**

5200 Buffington Rd.  
Atlanta Georgia,  
30349-2998

Revisions:

Mark	Date	By
1	4/10/15	
BID REVIEW		

Mark	Date	By
△		

Mark	Date	By
△		

Seal

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STORE  
CABBAGE PATCH  
CUSTOM - IN-FILL  
25 West Underwood St.  
Cleveland, GA 30528

SHEET TITLE  
Electrical Site Plan

VERSION: V2  
ISSUE DATE: 11-2014

Job No. : CF1514  
Store : 2913  
Date : 05/14/15  
Drawn By : ES  
Checked By: MK

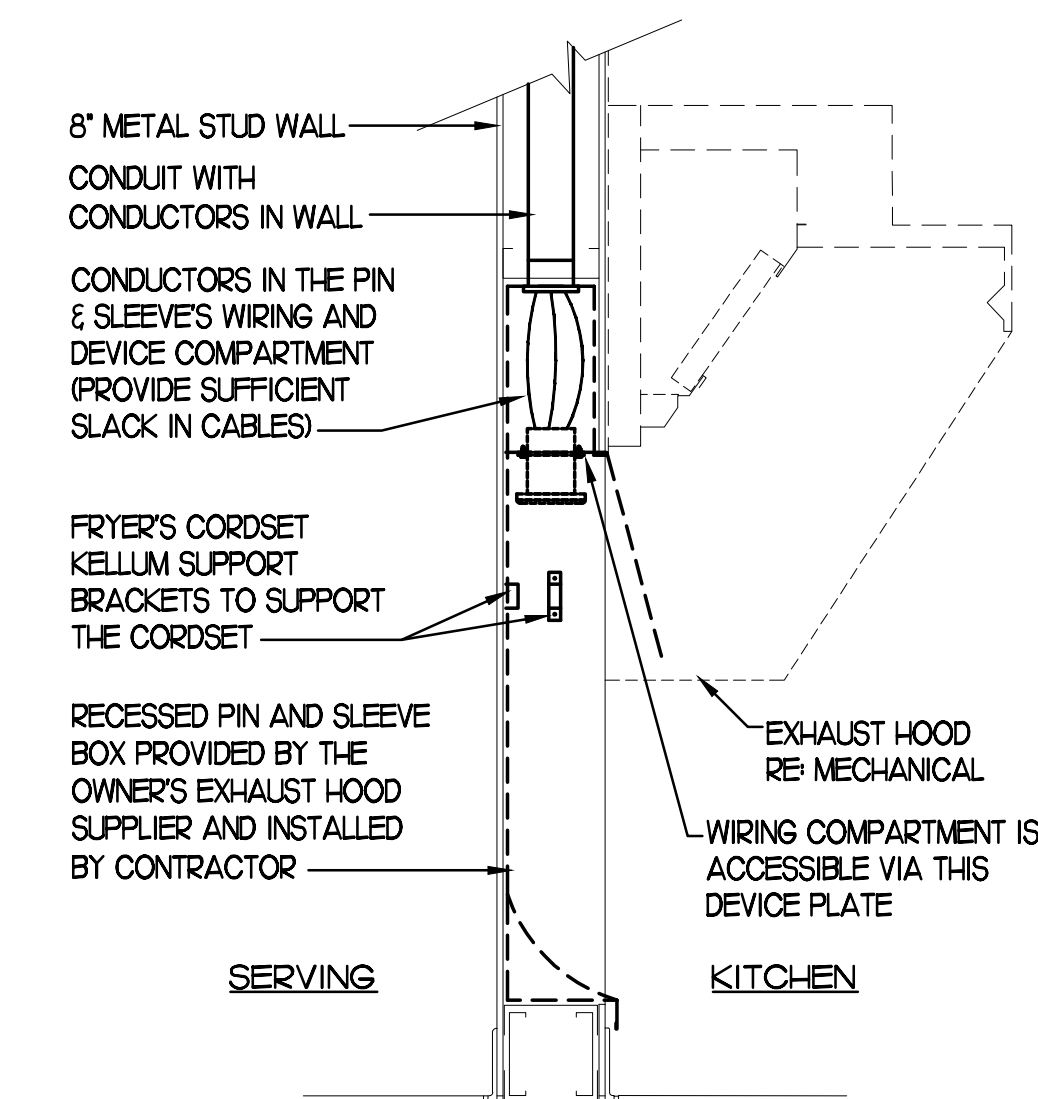
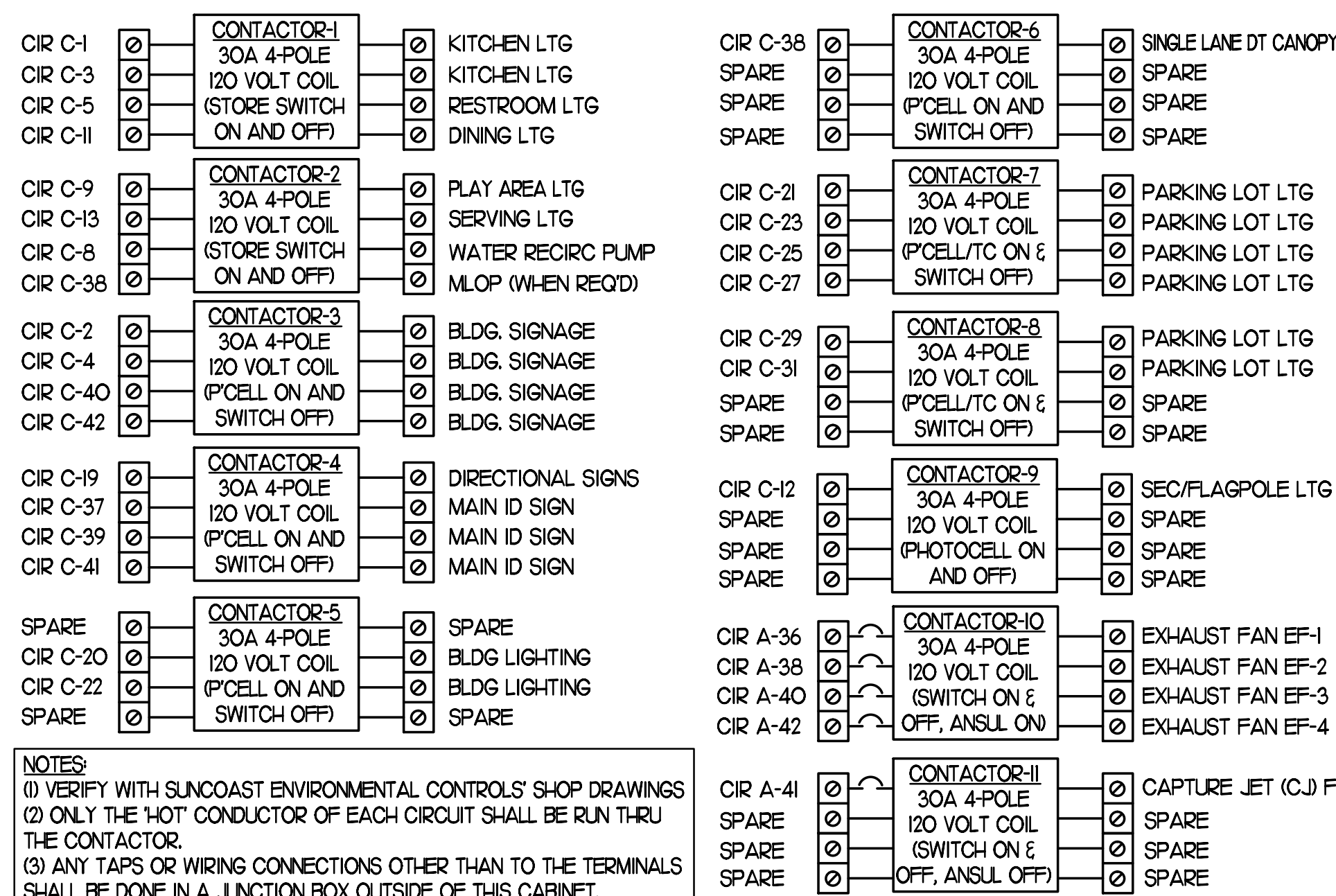
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FOR CONSTRUCTION

### 1 LIGHTING FIXTURE (LUMINAIRE) SCHEDULE - CHICK-FIL-A FSU STORE #2913

MARK	MANUFACTURER	CATALOG NUMBER	NO. LAMPS/TYPE	SYL LAMP NO.	WATTS	VOLTS	MOUNTING	REMARKS
A	LITHONIA	2GT8-G-332-A12V-MVOLT-1/3 OS10ISH	3-F028/835/XP/SS/ECO	22178	98	120	RECESSED	2'X4' STATIC 3-LAMP "HIGH OUTPUT" TROFFER. SMOOTH SIDE OF PRISMATIC LENS DOWN.
AE	LITHONIA	2GT8-G-332-A12V-MVOLT-1/3 OS10ISH-EL14	3-F028/835/XP/SS/ECO	22178	98	120	RECESSED	SAME AS 'A' WITH EMERGENCY BATTERY PACK. SEE PLAN NOTES ABOUT LAMP SWITCHING
B1	ILLUMITEX	CS1-48-B-BW-6-75-U-WH-W	INTEGRAL WITH FIXTURE	-	75	120	SURFACE	MOUNT LIGHT TO BTM OF OVERHEAD WIRE SHELVING & PROVIDE CORD & PLUG
D1	LITHONIA	REAL6CD6/MW/1000L/30K/.955C-LP6LN	FURNISHED	-	14.2	120	RECESSED	LED DOWNLIGHT WITH WHITE TRIM
F	MEYDA	30894-8 (144638)	1-CF13EL/GU24/827	28957	13	120	CEILING	EGG LIGHT ABOVE SERVING COUNTER
G1	LITHONIA	C-232-AL-MVOLT-OS10IS-WGCUN	2-F028/835/XP/SS/ECO	22178	50	120	WALL	STRIP FLUORESCENT WITH LOW TEMP BALLAST AND WIREGUARD, MTD ABOVE DOOR FRAME
J	LITHONIA	CA-132-MVOLT-OS10IS	1-F028/835/XP/SS/ECO	22178	25	120	WALL	MOUNT ABOVE DOOR FRAME
J1	LITHONIA	Z-132-MVOLT-OS10IS	1-F028/835/XP/SS/ECO	22178	25	120	COVE	MOUNT IN MENUBOARD COVE AND PROVIDE TUBE GUARDS ON LAMPS
J2	LITHONIA	AV-G232-MDR-ASY-MVOLT-OS10IS	2-F028/835/XP/SS/ECO	22178	50	120	RECESSED	1'X4' ASYMMETRIC WITH LIGHT DIRECTED TOWARDS THE CENTER OF THE ROOM
K2	JUNO / INDY	MS302-WH/HB-28/15621	2-12PAR30S/END/F22/27K	PHILLIPS	24	120	RECESSED	WHITE HOUSING 2 LAMP MULT-SPOT WITH LED RETROFIT LAMPS, AIM AS DIRECTED
L	LITHONIA	VSL-232-MVOLT-DL-OS10IS	2-F028/835/XP/SS/ECO	22178	50	120	SURFACE	LOW PROFILE DAMP LOCATION FLUORESCENT.
MS	LEVITON	PS110-10W	N/A	-	4	120	WALL	MOTION SENSOR ON FLUSH BACKBOX, PROVIDE COVERPLATE W/ CENTER THREADED KNOCKOUT
M	LITHONIA	2GT8-G-232-A12V-MVOLT-OS10IS	2-F028/835/XP/SS/ECO	22178	50	120	RECESSED	2'X4' STATIC 2-LAMP TROFFER. SEE PLAN NOTES ABOUT LAMP SWITCHING.
ME	LITHONIA	2GT8-G-232-A12V-MVOLT-OS10IS-EL	2-F028/835/XP/SS/ECO	22178	50	120	RECESSED	SAME AS 'M' WITH EMERGENCY BATTERY PACK. SEE PLAN NOTES ABOUT LAMP SWITCHING
N	MINKA	4531-267B	1-CF19EL/mini-TWIST/2700	29396	19	120	WALL	"COW BELL" LAVATORY WALL SCONE WITH SHADE POINTED DOWN
P2	MEYDA	142777	1-CF19EL/mini-TWIST/2700	29396	19	120	PENDANT	MINI PEACH BASKET PENDANT WITH BTM AT 6'-6" AFF ABY TABLE, 7'-6" OTHERWISE
Q	TROY	KF14856-1	FURNISHED	-	43	120	PENDANT	CUSTOM 48"X12"X12" COCA-COLA BOTTLE PENDANT, BTM AT 6'-3" AFF
R	LITHONIA	2RT8S-232-MVOLT-OS10IS	2-F028/835/XP/SS/ECO	22178	50	120	RECESSED	2'X4' VOLUMETRIC RECESSED LIGHTING SYSTEM WITH DUAL LEVEL (50%-100%) BALLAST
RE	LITHONIA	2RT8S-232-MVOLT-OS10IS-EL14	2-F028/835/XP/SS/ECO	22178	50	120	RECESSED	SAME AS R WITH EMERGENCY BATTERY PACK
U	BESA LIGHTING CON-TECH	BES00298-060	FURNISHED	-	7.5	120	PENDANT	RED FRIT GLASS, BRONZE CABLE & CANOPY, 6'-6" AFF
	CON-TECH	LIR755-S	N/A	-	-	120	TRACK	PENDANT ADAPTER FOR CON-TECH 'ODYSSEY' LIGHTING TRACK
	CON-TECH	LIR424 SERIES ODYSSEY LINE VOLTAGE CURVABLE RAIL LIGHTING TRACK	-	-	-	120	4" STEMS	SILVER ANODIZED ALUMINUM FINISH WITH FITTINGS AND CONNECTORS; LENGTHS AS INDICATED
V	VISUAL COMFORT	SL2923BZ	1-LED8A19/DIM/O/827	78935	8	120	WALL	BOSTON LIBRARY LIGHT WITH RETROFIT LED LAMP, MOUNT BACKBOX AT 86" AFF
XA	LITHONIA	LHQ-S-W-1-R-120	INTEGRAL WITH FIXTURE	-	4	120	WALL	EXIT SIGN WITH BATTERY PACK AND TWO INTEGRAL ADJUSTABLE LAMPHEADS
XB	CHLORIDE	CAX6	INTEGRAL WITH FIXTURE	-	3	120	CEILING	WHITE THERMOPLASTIC BATTERY PACK UNIT WITH TWO LAMPHEADS
XC	LITHONIA	AFN-BN-EXT (TWO LAMP UNIT)	INTEGRAL WITH FIXTURE	-	21	120	WALL	EXTERIOR WALL MOUNTED EMERGENCY LIGHTING UNIT, LOCATE NEAR EGRESS DOOR

NOTES:  
 1. LUMINAIRES UTILIZING DOUBLE-ENDED LAMPS AND CONTAIN BALLASTS THAT CAN BE SERVICED IN PLACE SHALL HAVE A DISCONNECTING MEANS EITHER INTERNAL OF EXTERNAL TO EACH LUMINAIRE PER NEC 410.130(G).  
 2. THE LIGHTING FIXTURE PACKAGE IS AVAILABLE THROUGH A NATIONAL ACCOUNT PROGRAM. REFER TO SHEET E4.2, SECTION 16500 FOR VENDOR INFORMATION.  
 3. THE FLUORESCENT BALLAST CATALOG NUMBER INDICATES OSRAM AND ALL LAMP DESIGNATIONS ARE FOR OSRAM/SYLVANIA PER A NATIONAL ACCOUNT AGREEMENT.  
 4. THE ASTERIK (\*) BESIDE THE FIXTURE MARK IN THE ABOVE SCHEDULE INDICATES THE FIXTURE IS A NON-PROTOTYPICAL LIGHT FIXTURE PER THE CFA NATIONAL HERITAGE PROTOTYPE.



### 4 ELECTRICAL LEGEND

SYMBOL	DESCRIPTION	MTG HT AFF TO CL	SYMBOL	DESCRIPTION	MTG HT AFF TO CL
<b>LIGHTING FIXTURES</b>					
[Symbol]	SURFACE MTD FLUORESCENT LIGHTING FIXTURE		[Symbol]	GROUND	
[Symbol]	RECESSED FLUORESCENT LIGHTING FIXTURE		[Symbol]	MOTOR	
[Symbol]	SURFACE MTD FLUORESCENT OR HID LIGHTING FIXTURE		[Symbol]	EXHAUST FAN MOTOR	
[Symbol]	RECESSED FLUORESCENT OR HID LIGHTING FIXTURE		[Symbol]	JUNCTION BOX	
[Symbol]	WALL MOUNTED LIGHTING FIXTURE. SEE LIGHTING FIXTURE SCHEDULE (FLUORESCENT OR HID FIXTURE)	AS NOTED	[Symbol]	CONDUIT AND WIRE MARK NUMBER, REFER TO CONDUCTORS AND CONDUIT SCHEDULE FOR SIZE	
[Symbol]	WALL MOUNTED EXIT SIGN. SHADING INDICATES FACES. PROVIDE WITH CHEVRON DIRECTIONAL ARROWS WHERE INDICATED ON PLANS PROVIDED WITH BATTERY PACK	6" BELOW CEILING TO TOP	[Symbol]	KITCHEN EQUIPMENT MARK NUMBER, REFER TO KITCHEN EQUIPMENT SCHEDULE FOR REQUIREMENTS	
[Symbol]	CEILING MOUNTED EXIT SIGN. SHADING INDICATES FACES. PROVIDE WITH CHEVRON DIRECTIONAL ARROWS WHERE INDICATED ON PLANS PROVIDED WITH BATTERY PACK		[Symbol]	NOTE NUMBER	
[Symbol]	COMBO EXIT WITH TWO LAMP HEADS, SEE LIGHTING FIXTURE SCHEDULE		[Symbol]	HOOD EXTINGUISHING ANSUL PULL STATION	
[Symbol]	WALL MOUNTED EMERGENCY BATTERY PACK LIGHTING FIXTURE	AS NOTED	[Symbol]	SMOKE DETECTORS REMOTE STATUS INDICATOR W/ 1/2" CONDUIT STUB-UP	
[Symbol]	CEILING MOUNTED EMERGENCY BATTERY PACK LIGHTING FIXTURE		[Symbol]	PUSH-BUTTON	
[Symbol]	FLUORESCENT STRIP LIGHTING FIXTURE		[Symbol]	BELL, TYPE AS NOTED ON PLANS	
[Symbol]	WALLWASHER STYLE RECESSED DOWNLIGHT, AIM LIGHT TOWARD WALL		[Symbol]	PHOTO-ELECTRIC CELL	
[Symbol]	RECESSED LIGHTING FIXTURE WITH EMERGENCY BATTERY PACK		<b>ABBREVIATIONS</b>		
[Symbol]	PENDANT LIGHTING FIXTURE	AS NOTED	AFF	ABOVE FINISHED FLOOR	
[Symbol]	LIGHTING TRACK WITH TRACK HEADS		AFG	ABOVE FINISHED GRADE	
<b>ABBREVIATIONS</b>					
			AHU	AIR HANDLING UNIT	
			C	CONDUIT	
<b>WIRING DEVICES</b>					
[Symbol]	120 VOLT DUPLEX RECEPTACLE, 20 AMPS LUON	18"	CL	CENTER-LINE	
[Symbol]	120 VOLT DUPLEX AT SPECIAL MOUNTING HEIGHT, 20 AMPS LUON	44" LUON	EF	EXHAUST FAN	
[Symbol]	120 VOLT QUADRAPLEX RECEPTACLE, 20 AMPS LUON	18" LUON	FLA	FULL LOAD AMPS	
[Symbol]	120 VOLT QUADRAPLEX AT SPECIAL MOUNTING HEIGHT, 20 AMPS LUON	44"	GF/GFI	GROUND FAULT CIRCUIT INTERRUPTER	
[Symbol]	120 VOLT SIMPLEX RECEPTACLE, 20 AMPS LUON	18" LUON	GND/GRD	GROUND	
[Symbol]	SINGLE SPECIAL PURPOSE RECEPTACLE WITH VOLTS, AMPS, AND PHASE AS NOTED, NEMA CONFIGURATION AS REQUIRED BY EQUIPMENT	18" LUON	HT	HEIGHT	
[Symbol]	RECEPTACLE MOUNTED ON CORD DROP, 120 VOLT, 20 AMP, LUON, OUTLET BOX FLUSH WITH CEILING		IG	ISOLATED GRD, PROVIDE ORANGE DEVICE WHEN ADJACENT TO WIRING DEVICE	
[Symbol]	SINGLE POLE TOGGLE SWITCH	48"	MOCP	MAXIMUM OVER-CURRENT PROTECTION	
[Symbol]	DOUBLE POLE TOGGLE SWITCH	48"	MUA	MAKE UP AIR UNIT	
[Symbol]	THREE WAY TOGGLE SWITCH	48"	NEC	LOCALLY ADOPTED EDITION OF THE NATIONAL ELECTRICAL CODE (NFPA 70)	
[Symbol]	MANUAL MOTOR STARTER SWITCH (WP-NEMA 3R)	48"	NL	NIGHT LIGHT (ON 24 HOURS)	
[Symbol]	SWITCH WITH PILOT LIGHT (ON WHEN SWITCH IS ON)	48"	OC	ON CENTER	
[Symbol]	KEY OPERATED SWITCH	48"	POS	POINT OF SALE EQUIPMENT	
[Symbol]	RECEPTACLES ON A DEDICATED CIRCUIT (THAT IS, NO OTHER LOAD CONNECTED TO THE BRANCH CIRCUIT) SHALL HAVE AMPACITY RATING NOT LESS THAN THE AMPERAGE OF THE CIRCUIT BREAKER SERVING THE DEVICE		RTU	ROOF TOP UNIT	
[Symbol]	CONDUIT CONCEALED ABOVE CEILING OR IN WALL		TL	TWIST-LOCK TYPE DEVICE	
[Symbol]	CIRCUIT HOMERUN TO PANELBOARD WITH MINIMUM 2#12, #12G, 3/4" C		TR	TAMPER-RESISTANT	
[Symbol]	CONDUIT TURNING UP		LUON	UNLESS OTHERWISE NOTED	
[Symbol]	CONDUIT TURNING DOWN		WP	WEATHERPROOF (NEMA 3R)	
[Symbol]	CONDUIT CONCEALED IN OR BELOW SLAB (OUTSIDE - UNDERGROUND)		<b>TELEPHONE</b>		
[Symbol]	FLEXIBLE LIGHT FIXTURE WHIP, SIX FOOT MAXIMUM LENGTH		[Symbol]	TELEPHONE OUTLET	18" LUON
[Symbol]	METAL CLAD CABLE ASSEMBLY - ONLY WHERE INDICATED ON DWGS OR SPECS		[Symbol]	TELEPHONE OUTLET AT SPECIAL MOUNTING HEIGHT	60" LUON
NOTES: FOR ALL CONDUITS: REFER TO PLANS FOR OTHER CONDUITS, REFER TO VENDOR DRAWINGS FOR CONDUIT AND WIRING REQUIREMENTS FOR LOW VOLTAGE SYSTEMS AND CONTROL WIRING. MULTIPLE IPH CIRCUITS MAY OCCUPY THE SAME CONDUIT IN ACCORDANCE WITH THE NEC, MAXIMUM OF THREE AND OF DIFFERENT PHASES. LOW VOLTAGE AND CONTROL WIRING SHALL BE IN SEPARATE CONDUIT FROM POWER WIRING.					
<b>DISTRIBUTION EQUIPMENT</b>					
[Symbol]	NON-FUSIBLE SAFETY SWITCH, SIZE AND TYPE AS NOTED ON PLANS (AMP/POLES/ENCLOSURE) OR ON SCHEDULE, NEMA 1 ENCLOSURE UNLESS NOTED WP FOR NEMA 3R ENCLOSURE	6'-6"	[Symbol]	CLOSED CIRCUIT TELEVISION CAMERA	
[Symbol]	FUSIBLE SAFETY SWITCH, SIZE AND TYPE AS NOTED ON PLANS (AMP/POLES/FUSE AMPS/ENCLOSURE) OR ON SCHEDULE, NEMA 1 ENCLOSURE UNLESS NOTED WP FOR NEMA 3R	6'-6"	[Symbol]	SECURITY ALARM KEYPAD	
[Symbol]	FLUSH MOUNTED LIGHTING PANELBOARD	6'-6"	[Symbol]	SECURITY ALARM HOLD-UP BUTTON	
[Symbol]	SURFACE MOUNTED LIGHTING PANELBOARD	6'-6"	[Symbol]	SECURITY SYSTEM KEY NOTE	
[Symbol]	TRANSFORMER, PROVIDE SECONDARY GROUNDING PER NEC	6'-6"	<b>CCTV / SECURITY SYSTEM</b>		
[Symbol]	ENCLOSED CIRCUIT BREAKER, SIZE AND TYPE AS NOTED (AMPS/POLES/ENCLOSURE) NEMA 1 ENCLOSURE IF NOT NOTED, WP-NEMA 3R	6'-6"	<b>TELEPHONE</b>		
* 6'-6" DISTANCE IS TO TOP-MOST DISCONNECTING DEVICE OR HIGHEST POSITION OF OPERATING HANDLE OF DISCONNECTING DEVICE					

### 5 SIGNAGE COORDINATION NOTE

THE ELECTRICAL SUBCONTRACTOR SHALL INCLUDE THE ELECTRICAL ROUGH-IN AND FINAL CONNECTIONS OF ALL SIGNAGE (BUILDING MOUNTED AND GROUND MOUNTED ON THE SITE) IN HIS SCOPE OF WORK AND UNDER HIS LOCAL CODE PERMITTING PROCESS. PROVIDE A COPY OF THE PERMIT (WHICH SPECIFICALLY INCLUDES THE SIGNAGE) TO THE SIGN VENDOR IN ORDER TO EXPEDITE THE SIGN VENDOR'S PERMIT PROCESS.

5200 Buffington Rd.  
Atlanta Georgia,  
30349-2998

Revisions:  
 Mark Date By  
 [Symbol] [Symbol] [Symbol]  
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 [Symbol] [Symbol] [Symbol]  
 Mark Date By  
 [Symbol] [Symbol] [Symbol]

Seal

Kurzynske & Associates  
CONSULTING ENGINEERS  
825 Third Avenue, South  
Nashville, Tennessee 37210  
 Telephone: (615) 255-5203  
 Fax: (615) 255-5207  
 Email: mail@kurzynske.com

STORE  
CABBAGE PATCH  
CUSTOM - IN-FILL

25 West Underwood St.  
Cleveland, GA 30528

SHEET TITLE  
SCHEDULES  
AND DETAILS

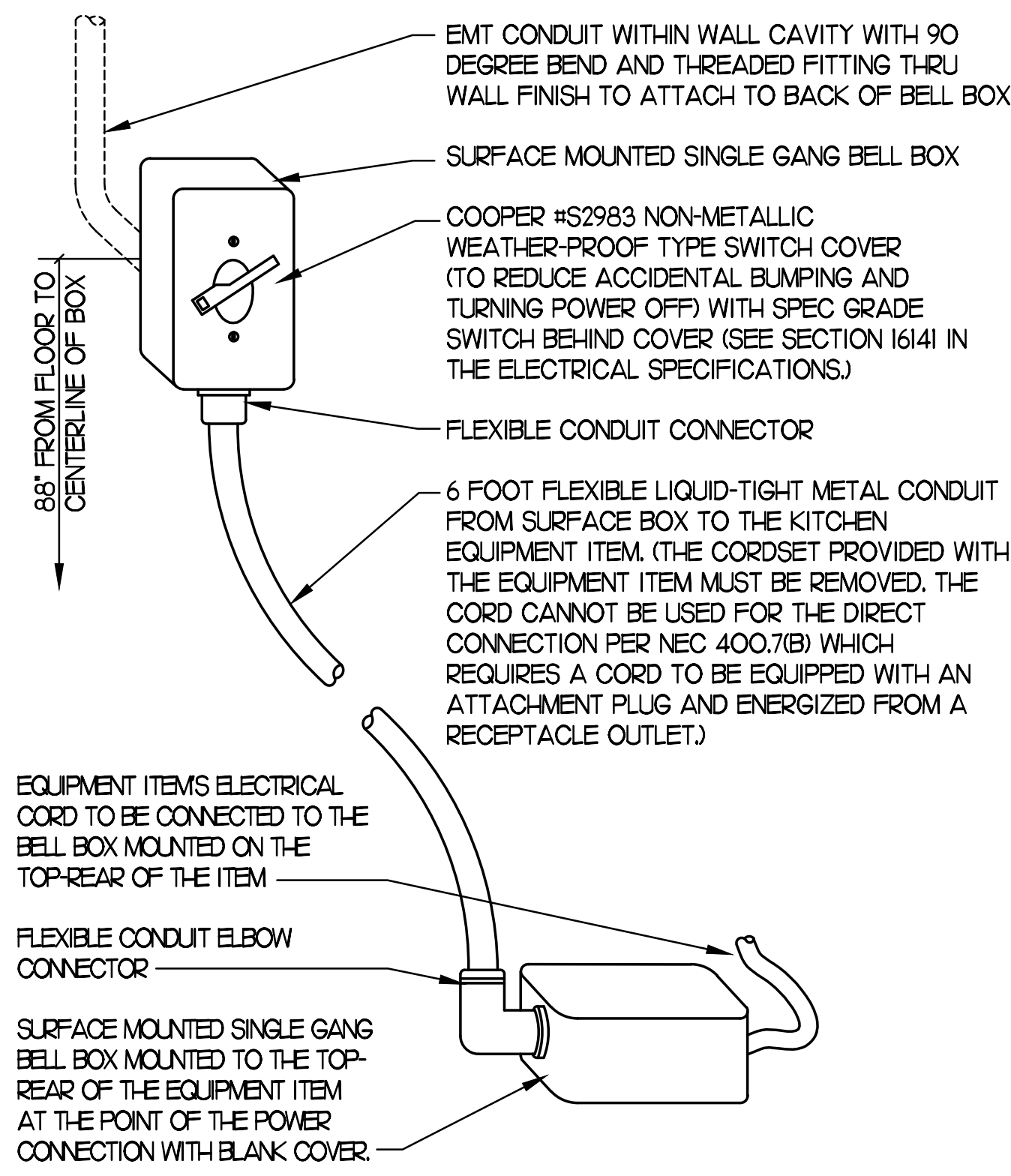
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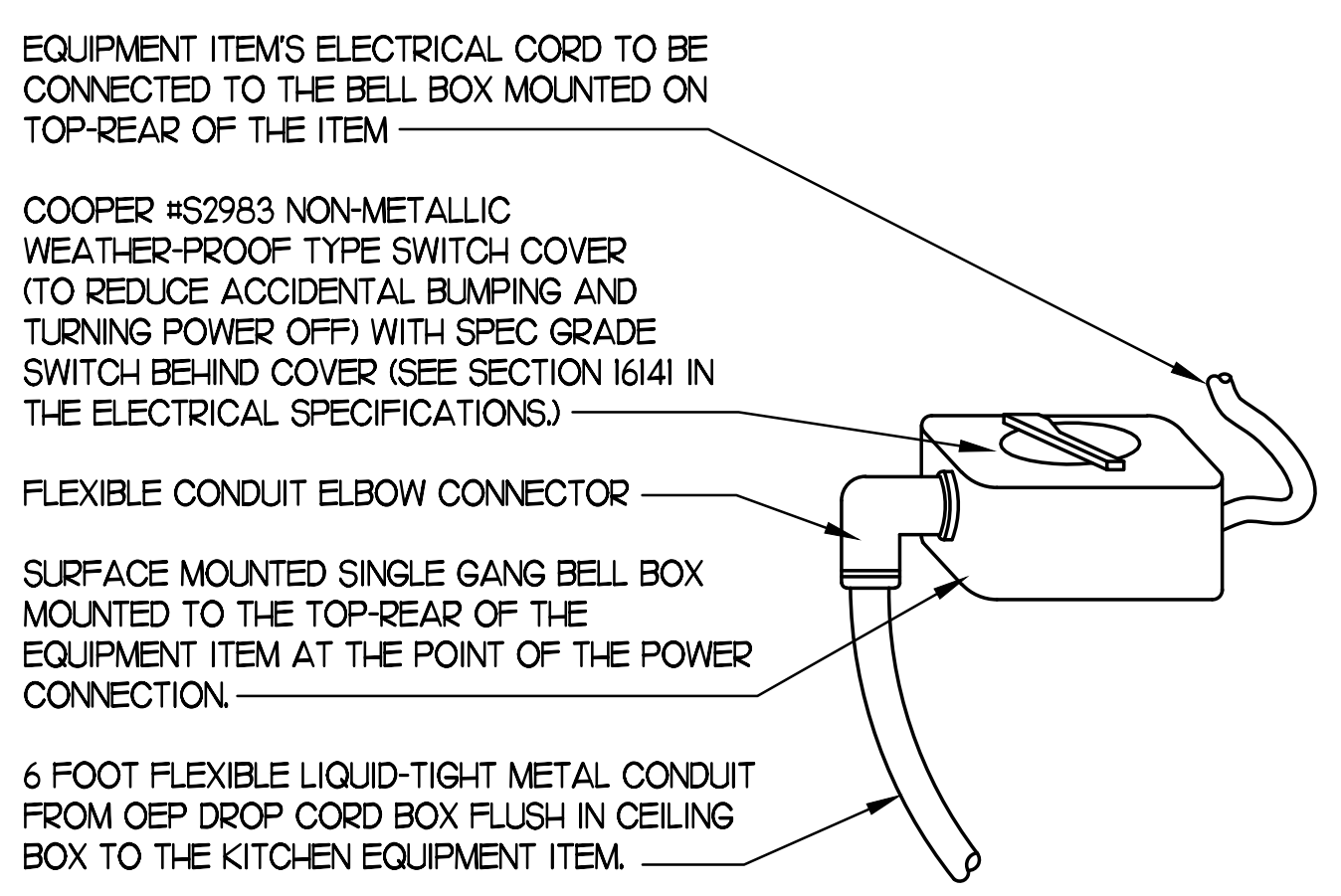
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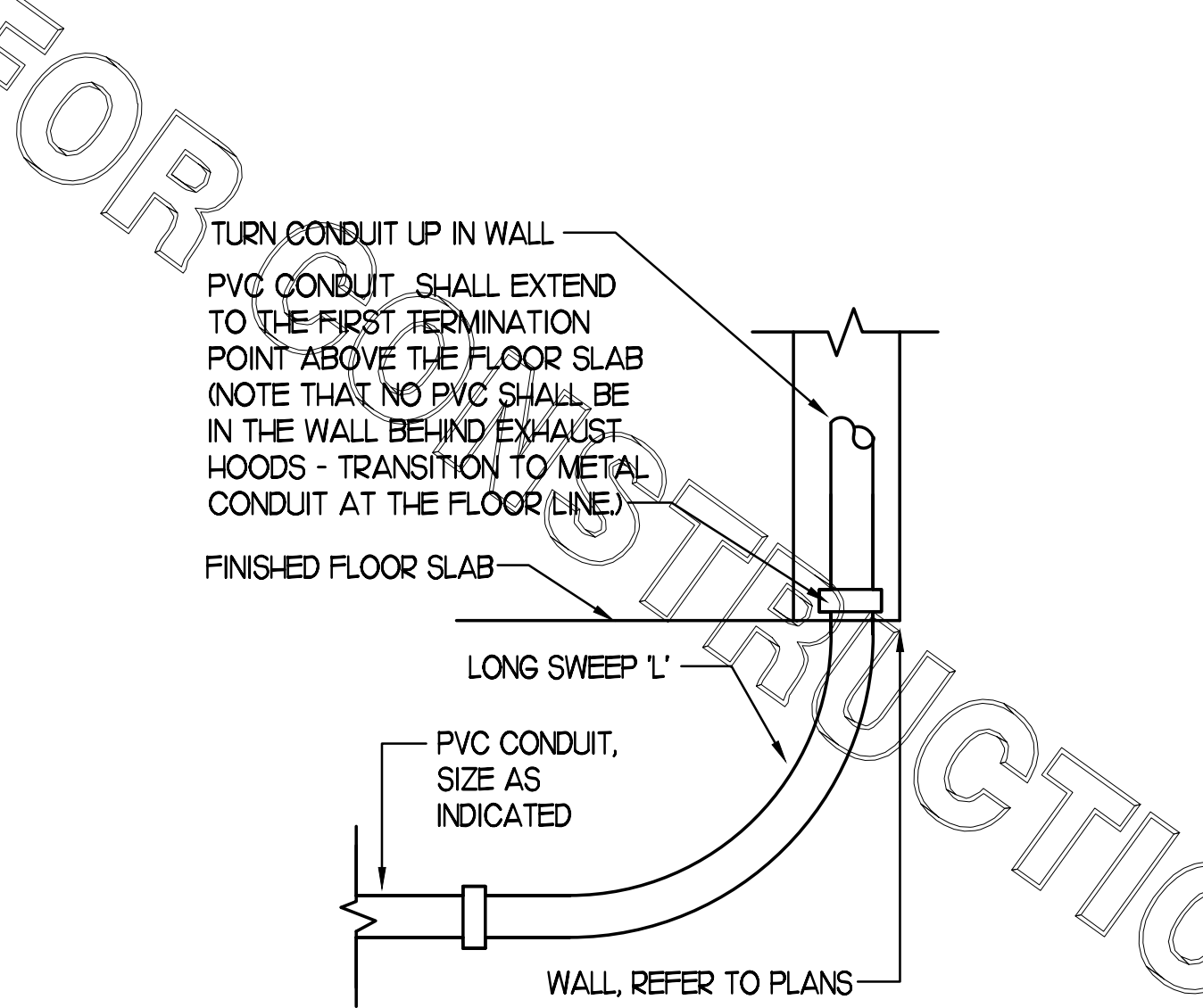
KITCHEN EQUIPMENT SCHEDULE - CHICK-FIL-A 508H-V2 EDITION											
VERIFY THE QUANTITY OF EACH EQUIPMENT ITEM WITH THE KITCHEN EQUIPMENT SCHEDULE ON SHEETS K2.1 AND K2.2											
REQUIRES	EQUIP.	EQUIPMENT	ELECTRICAL LOAD				NEMA	COOPER/ARROW HART	Wire/Conduit	COMMENTS	
IG/GF WIRING	NO.	DESCRIPTION	VOLTS	PH	WIRES	KW	AMPS	CONFIG	(UON) RECEPT. CAT. NO.	MARK NO.	AND REMARKS
IG	180	ORDER REGISTER (POS)	120	1	2		0.7	5-20R	IG5362RN (ORANGE)	1-IG	
IG	182	RECEIPT PRINTER	120	1	2		0.18	5-20R	IG5362RN (ORANGE)	1-IG	
IG / NOTE 5	183	ORDER MONITOR	120	1	2		0.125	5-20R	IG5362RN (ORANGE)	1-IG	
NOTE 2	190	DRIVE-THRU VIDEO MONITOR	120	1	2		0.8	5-20R	CR20	1	
NOTE 5	211b	FLY SYSTEM - KITCHEN AREA	120	1	2	0.078	0.650	5-15R	TR780W (DUPLX)	1	CLOCK STYLE RECEPTACLE REQ'D
	212	FLY SYSTEM - DINING AREA	120	1	2	0.030		5-15R	TR780W (DUPLX)	1	CLOCK STYLE RECEPTACLE REQ'D
	269	ANSUL FIRE SYSTEM	120	1	2					1	FED FROM CFA-T500 PANEL
	270	ANSUL FIRE SYSTEM	120	1	2					1	FED FROM CFA-T500 PANEL
	300X	DOUBLE BARREL ICE DREAM	208	3	3		15.0	15-20R	HUBBELL HBL8420	2	FURNISHED WITH ANGLE PLUG
			208	3	3		19.0	15-30R	HUBBELL HBL8430A	8	FURNISHED WITH ANGLE PLUG
NOTE 2	300a	MILKSHAKE DISPENSER	120	1	2		4.0	5-20R	1877 (SIMPLEX)	1	
NOTE 2	305	TEA BREWER	120	1	2	1.650	13.8	5-20R	VG20	1	
	308	COFFEE BREWER	120/208	3	3	4.000	19.2	L14-30R	CWL1430R	8	
	308d	DRY & DAIRY DISPENSER	120	1	2		1.0	5-20R	CR20	1	
NOTE 2	310	DOUBLE JUICE DISPENSER	120	1	2		8.2	5-20R	1877 (SIMPLEX)	1	
	315W	DRINK TOWER	120	1	2		10.0	5-20R	CR20	1	
NOTE 2	320	TURBO CARBONATOR	120	1	2		6.2	5-20R	CR20	1	
NOTE 5	380Z	INTERIOR ICE MAKER	120	1	2		6.0	5-15R	CR15	1	
	380ZC	ROOF MTD ICE CONDENSER	208	3	4		21.2	DIRECT		12	
NOTE 2	400	REACH-IN FRY FREEZER	120	1	2		9.4	5-20R	VG20	1	
NOTE 5	402	60" FRY FREEZER WORK TABLE	120	1	2		7.3	L5-20R	CWL520R	1	PROVIDE TWIST LOCK PLUG IN FIELD
	410	WALK-IN FREEZER DOOR HTR/LTG	120	1	2		3.3	DIRECT		1	REFER TO LIGHTING FLOOR PLAN
	410a	WI FREEZER CONDENSER	208	3	3		14.38	DIRECT		8	
	410b	WI FREEZER EVAP COIL	208	1	2		1.5	DIRECT		1	POWER FED FROM CONDENSER
NOTE 5	420	SINGLE UC REFRIGERATOR	120	1	2	0.225	3.3	5-20R	1877 (SIMPLEX)	1	
NOTE 2	421	DOUBLE UC REFRIGERATOR	120	1	2	0.480	5.7	5-20R	1877 (SIMPLEX)	1	
NOTE 5	432	REFRIGERATED WORK TABLE	120	1	2	0.480	5.7	L5-20R	CWL520R	1	PROVIDE TWIST LOCK PLUG IN FIELD
	438	33" COLD RAIL	120	1	2		7.1	5-20R	VG20	1	
NOTE 2	440	BREADING TABLE	120	1	2		12.0	5-20R	VG20	1	
NOTE 2	441	REFRIGERATED SALAD PREP	120	1	2		9.0	L5-20R	CWL520R	1	PROVIDE TWIST LOCK PLUG IN FIELD
	444/444S	THAWING CABINET	120	1	2		16.0	DIRECT		1	PROVIDE 6FT "POLYPUFF" TYPE FLEX CONDUIT
	449	WALK-IN COOLER LIGHTING	120	1	2		2.4	DIRECT		1	REFER TO LIGHTING FLOOR PLAN
	449a	WI COOLER CONDENSER	208	3	3		5.75	DIRECT		3	
	449b	WI COOLER EVAP COIL	208	1	2		1.0	DIRECT		1	POWER FED FROM CONDENSER
NOTE 5	500A	VERTICAL CONTACT TOASTER	120	1	2	1.800	15.0	5-20R	VG20	4	
NOTE 5	500B	RADIANT TOASTER	208	1	3	5.000	24.0	6-30R	5700N	8	
	505G	GRIDDLE TOP CONVECTION OVEN	208	3	3	19.800	57.6	15-60R	AH8460N	17	PROVIDE 6 FT CORD AND ANGLE PLUG
	521	WARMING EYES	208	1	3	3.900	18.8	6-30R	5700N	8	PROVIDE 6 FT CORD AND PLUG
NOTE 3	522A	DOUBLE OPEN FRYER - REQUIRES TWO ELECTRICAL CONNECTIONS EACH OF THE SAME LOAD AND CHARACTERISTICS AS #522 ABOVE									
	523	PRESSURE FRYER - ELECTRIC	208	3	3	13.500	38.0	15-50R	HUBBELL HBL8450A	14	PLUG AND CORD-SET PROVIDED W/ EQUIP
	524	DUAL SIDED CHAR-GRILL	208	3	3	16.050	43.4/43.4/47	15-50R	HUBBELL HBL8450A	14	
	550	DOUBLE WARMING DRAWER	120	1	2	1.000	8.3	5-20R	VG20	4	
NOTE 2	560	FRY HOLDING STATION	120	1	2	1.840	15.4	5-20R	VG20	1	
	562A	HOT HOLDING TOWER	120	1	2	1.911	15.9	L5-20R	CWL520R	1	PROVIDE TWIST LOCK PLUG IN FIELD
	563	SANDWICH SLIDE	120/208	1	3	2.260	12.1	L14-20R	CWL1420R	2	
NOTE 5	564	PRODUCT HOLDING CABINET	120	1	2	0.800	6.7	5-20R	VG20	1	
	565D	DOUBLE FOOD WARMING WELL	120	1	2	1.650	13.8	L5-20R	CWL520R	1	PROVIDE TWIST LOCK PLUG IN FIELD
	580/580H	MULTI-USE HOLDING CABINET	120	1	2	2.040	16.0	L5-20R	CWL520R	1	PROVIDE TWIST LOCK PLUG IN FIELD
NOTE 5	600	FLOOR MIXER	120	1	2		8.0	L5-20R	CWL520R	1	PROVIDE TWIST LOCK PLUG IN FIELD
NOTE 5	601	1 HP FOOD CUTTER	120	1	2		16.0	L5-20R	CWL520R	1	PROVIDE TWIST LOCK PLUG IN FIELD
NOTE 2	606	JUICER WORK STATION						5-20R	VG20	1	PROVIDE GFCI DUPLX RECEPTACLE
	650	TV/DVD MONITOR	120	1	2	0.069		5-20R	CR20	1	
	669	OFFICE SAFE (SMART SAFE)	120	1	2			5-20R	CR20	1	
NOTE 2	671	SMALL MENU BOARD	120	1	2	0.054	0.45	5-20R	CR20	1	
SEE RECEPT.		WIRING DEVICE PACKAGE, INCLUDING SWITCHES (EXCEPT HUBBELL BRAND DEVICES) SHALL BE PURCHASED AS A PART OF A NATIONAL ACCOUNTS									
DETAILS		PROGRAM THROUGH GEXPRO (FORMERLY GE SUPPLY). CONTACT WAYNE SANDERS AT 770-840-4178 (EMAIL: WAYNE.SANDERS@GEXPRO.COM)									
NOTE 1:		ALL SO CORD LENGTHS SHALL BE MEASURED FROM THE REAR OF THE EQUIPMENT TO THE END OF THE CORD.									
NOTE 2:		CONTRACTOR SHALL PROVIDE GROUND-FAULT PROTECTION FOR ALL 120 VOLT 15 AMP AND 20 AMP RECEPTACLES IN THE KITCHEN / FOOD PREPARATION AREAS. GROUND-FAULT PROTECTION SHALL BE PROVIDED AT THE RECEPTACLE AS A GFCI TYPE RECEPTACLE UNLESS NOTED OTHERWISE ON THE PLANS WHERE A GFCI TYPE BREAKER IS INDICATED.									
NOTE 3:		A RECESSED PIN & SLEEVE BOX IS PROVIDED WITH THE EXHAUST HOOD PACKAGE AND INSTALLED BY THE CONTRACTOR. THE P&S BOX INCLUDES THE "SLEEVE" RECEPTACLES FOR THE OPEN FRYERS. THE OPEN FRYER SUPPLIER WILL PROVIDE PRE-WIRED CORDSET WITH A "PIN" DEVICE INTEGRAL WITH THE OPEN FRYER TO PLUG INTO THE "SLEEVE" RECEPTACLE.									
NOTE 4:		WIRE NUMBER INDICATED DOES NOT INCLUDE THE REQUIRED GREEN EQUIPMENT GROUND CONDUCTOR OR, WHEN APPLICABLE, THE STRIPED IG CONDUCTOR.									
NOTE 5:		PROVIDE GFCI TYPE BRANCH BREAKER FOR KITCHEN/FOOD PREPARATION AREA RECEPTACLES THAT ARE LOCKING, CLOCK, SPLIT-WIRED, OR IG TYPE OR A RECEPTACLE FURNISHED IN THE CENTERLINE TABLE BY FRANKIE FOODSERVICE SYSTEMS THAT IS NOT A GFCI TYPE RECEPTACLE.									
NOTE 6:		REFER TO THE CONDUIT AND CONDUCTOR SCHEDULE FOR THE WIRE/CONDUIT MARK NUMBER AND THE MINIMUM WIRE AND CONDUIT SIZE FOR EACH EQUIPMENT ITEM.									



**2 KITCHEN EQUIP DIRECT CONNECTION**  
NOT TO SCALE WALL MOUNT CONDITION



**3 KITCHEN EQUIP DIRECT CONNECTION**  
NOT TO SCALE DROP CORD - ISLAND MOUNT CONDITION



**4 INTERIOR PVC CONDUIT DETAIL**  
NOT TO SCALE

NEMA 5-15R

NEMA 5-20R

NEMA L5-20R

NEMA L14-20R

NEMA 14-30R

NEMA L14-30R

NEMA 15-20R

NEMA 15-30R

NEMA 15-50R

NEMA 15-60R

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SHEET TITLE  
EQUIP SCHEDULE  
AND DETAILS

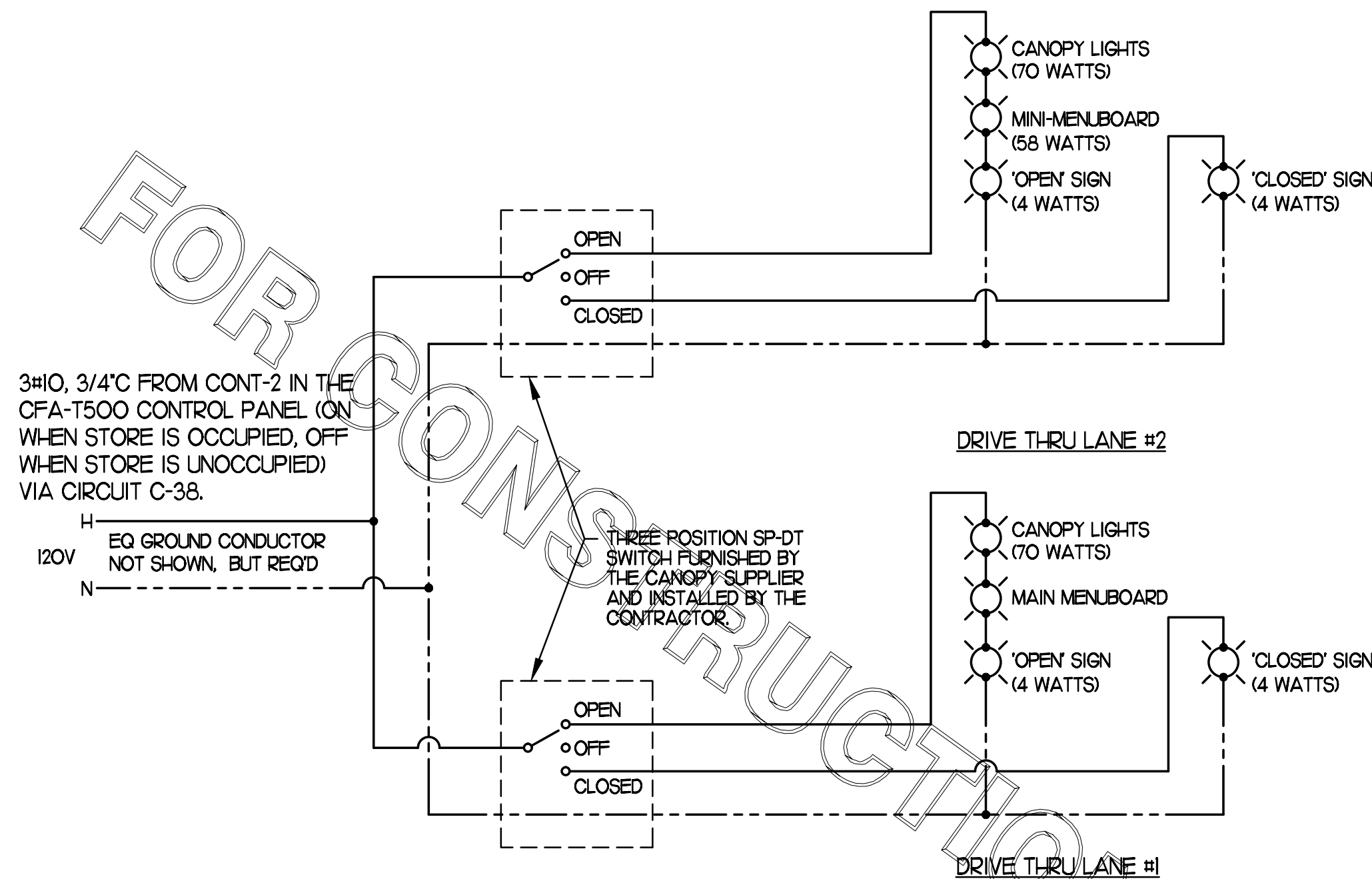
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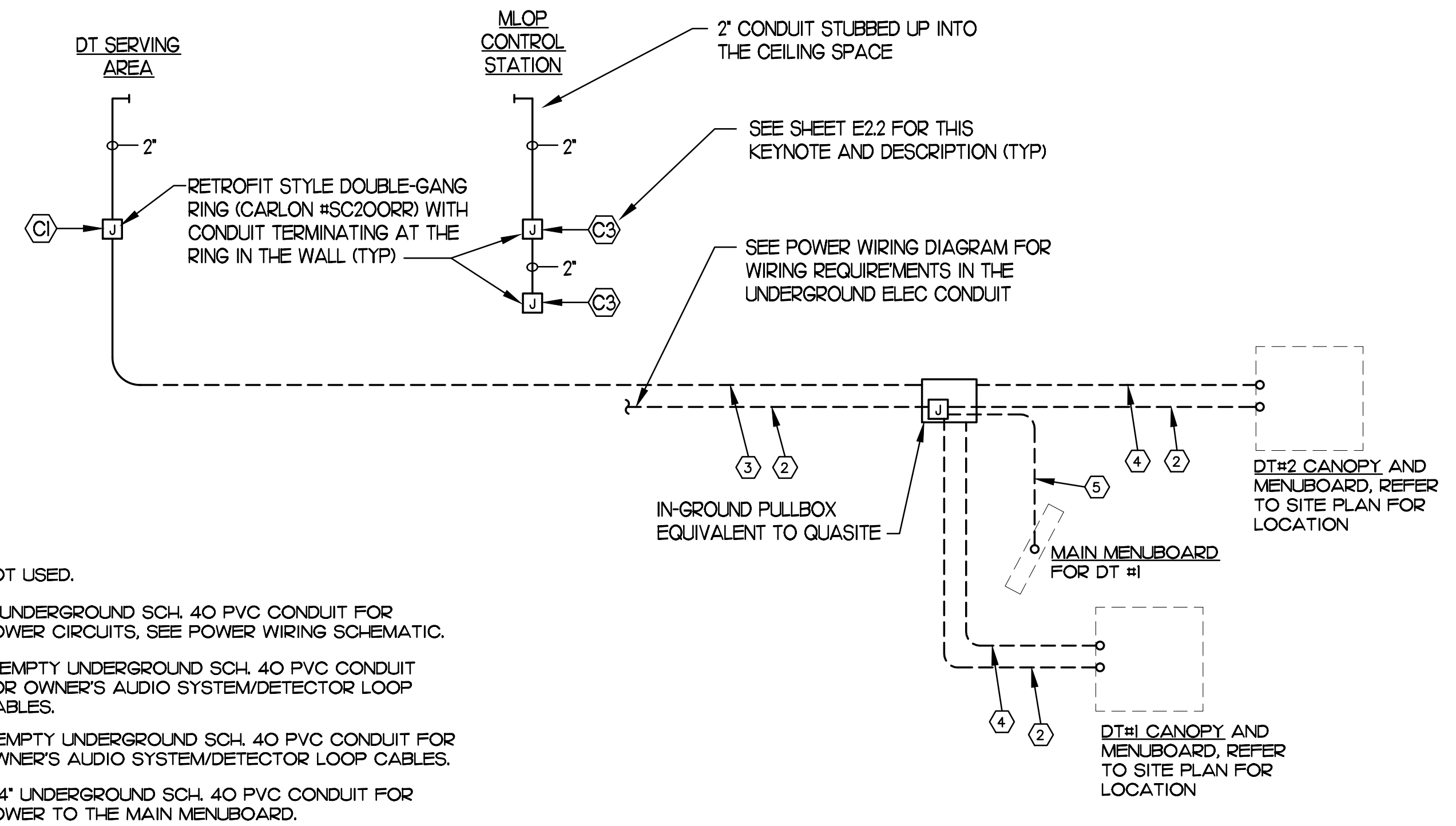
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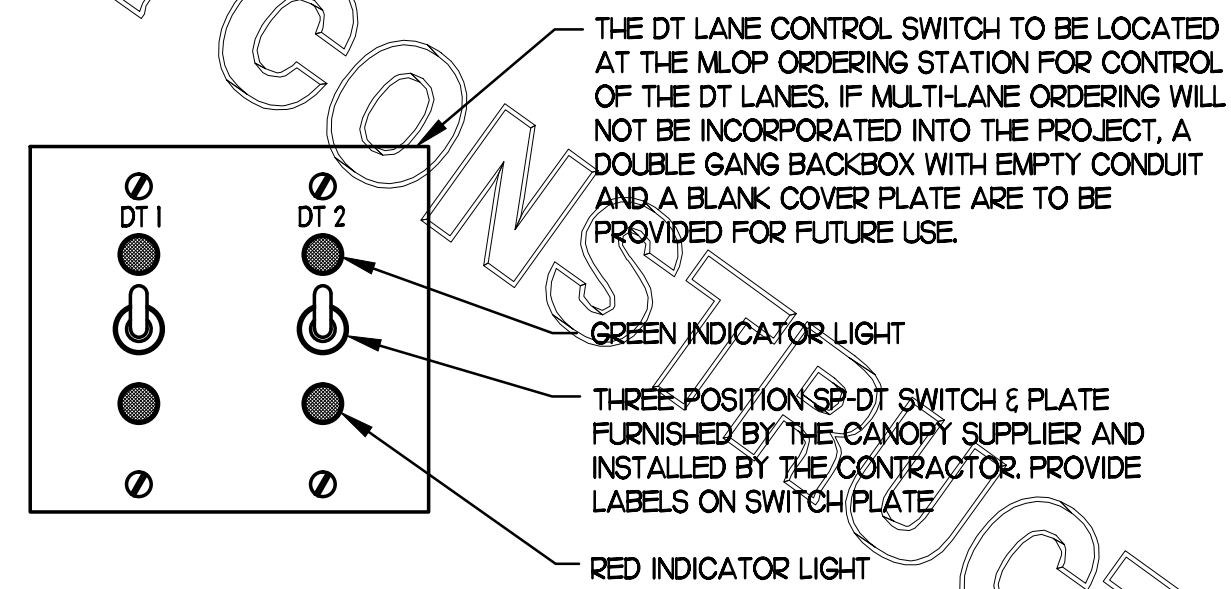
**MULTI-LANE DRIVE-THRU ORDER AREA CANOPY POWER WIRING SCHEMATIC**

NO SCALE



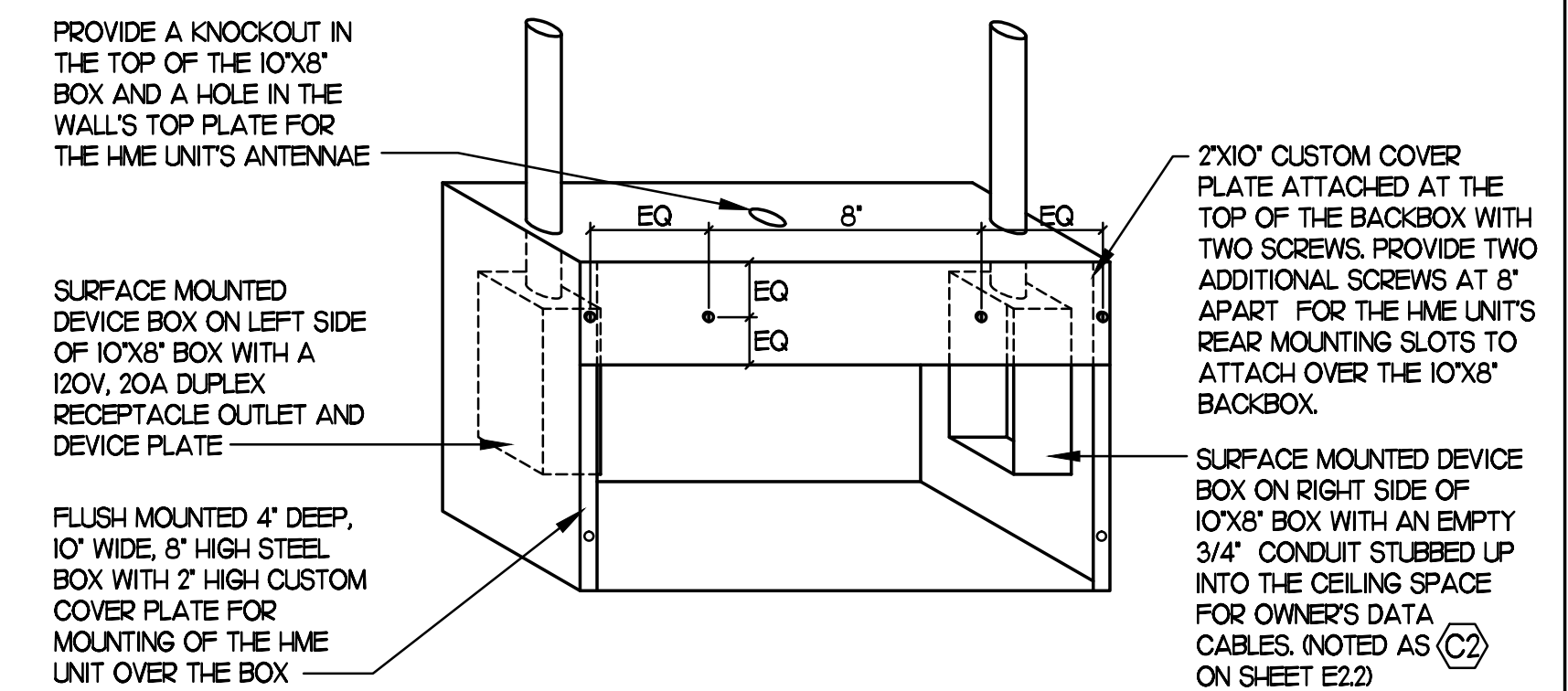
**MULTI-LANE DRIVE-THRU ORDER AREA CONDUIT REQUIREMENTS**

NO SCALE



**3 POSITION DT LANE CONTROL STATION**

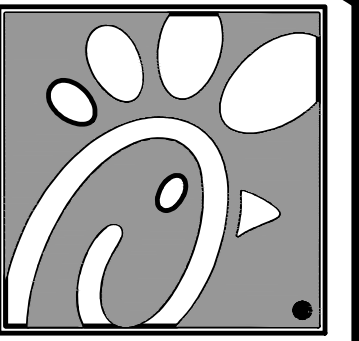
NO SCALE



**HME UNIT'S POWER & DATA BOX DETAIL**

NO SCALE

**MULTI-LANE ORDER POINT (MLOP) DRIVE-THRU REQUIREMENTS**



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SHEET TITLE  
DRIVE-THRU  
ORDER DETAILS

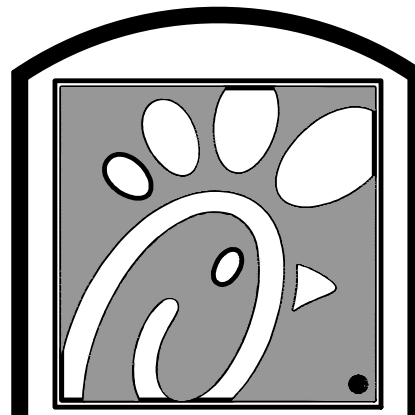
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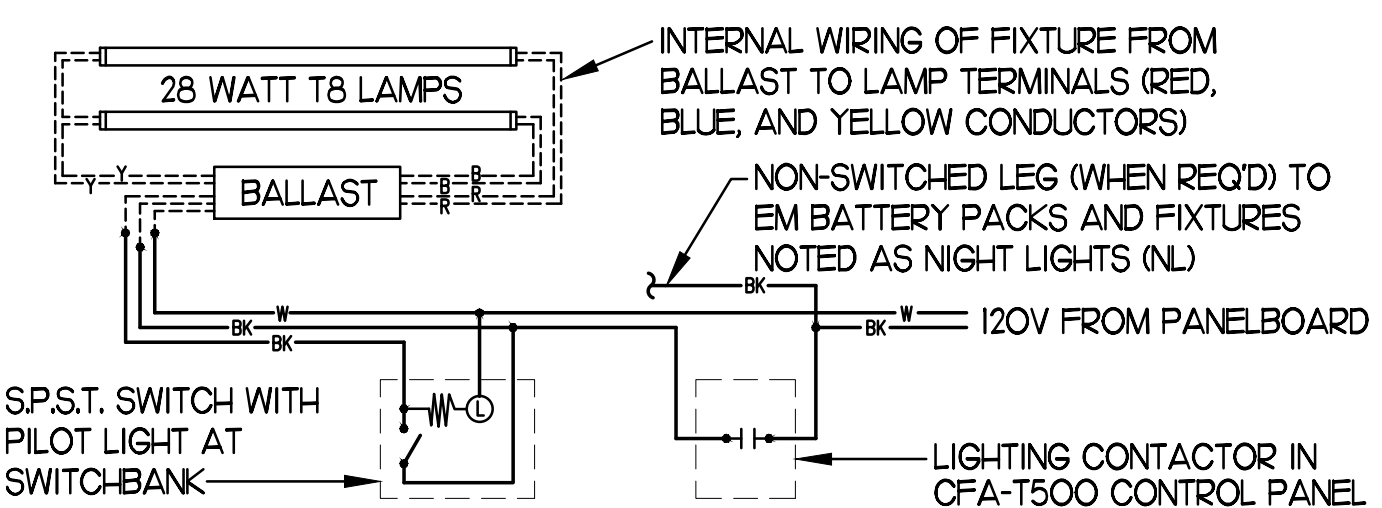
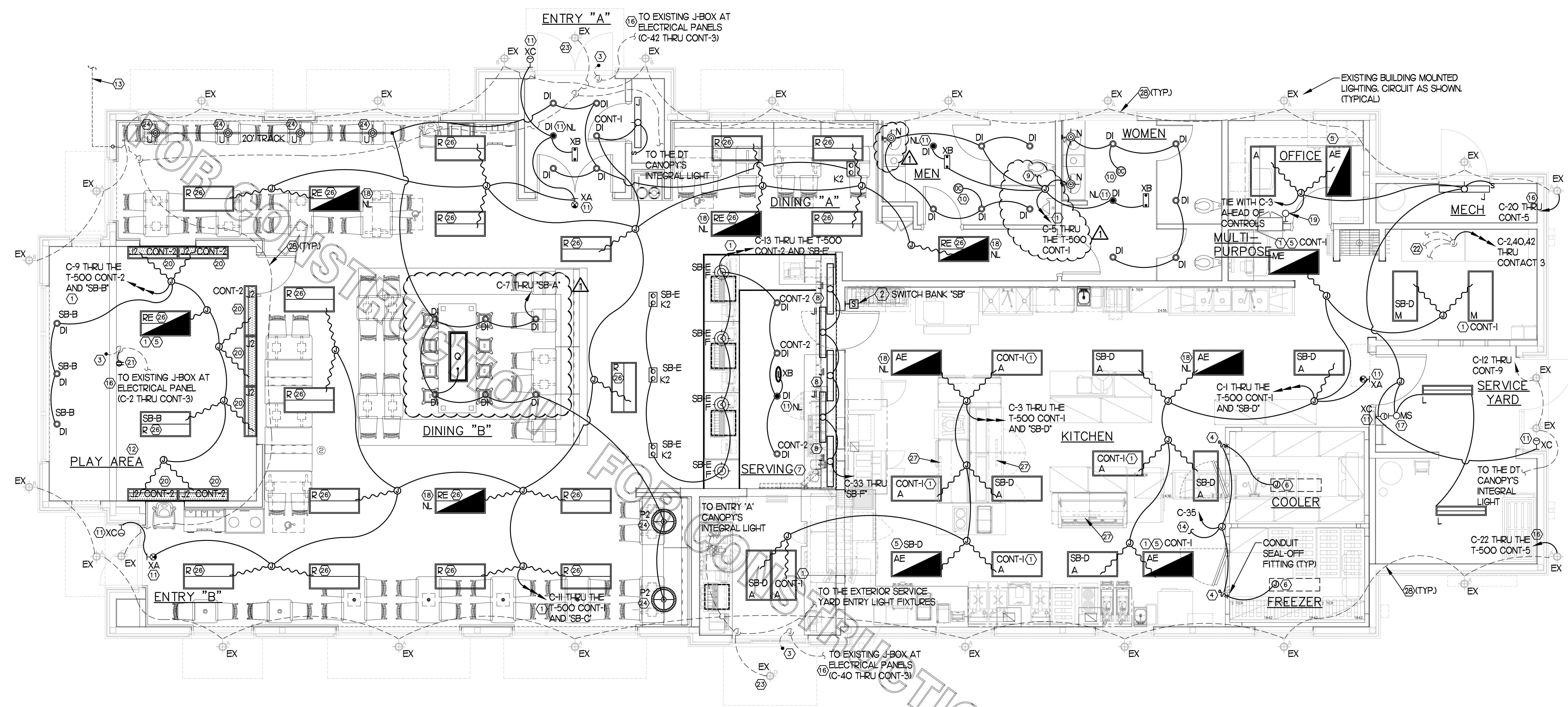
SHEET TITLE  
LIGHTING  
PLAN

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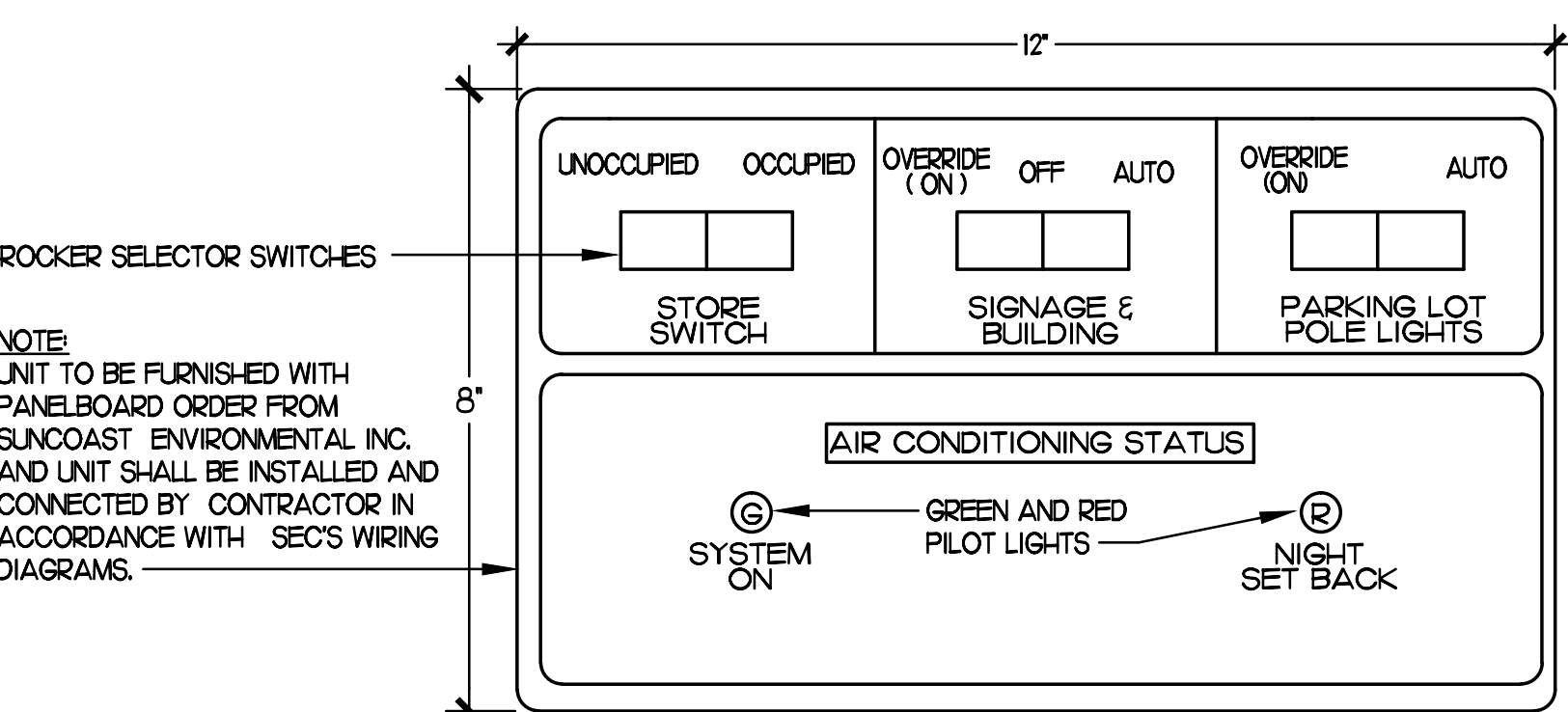
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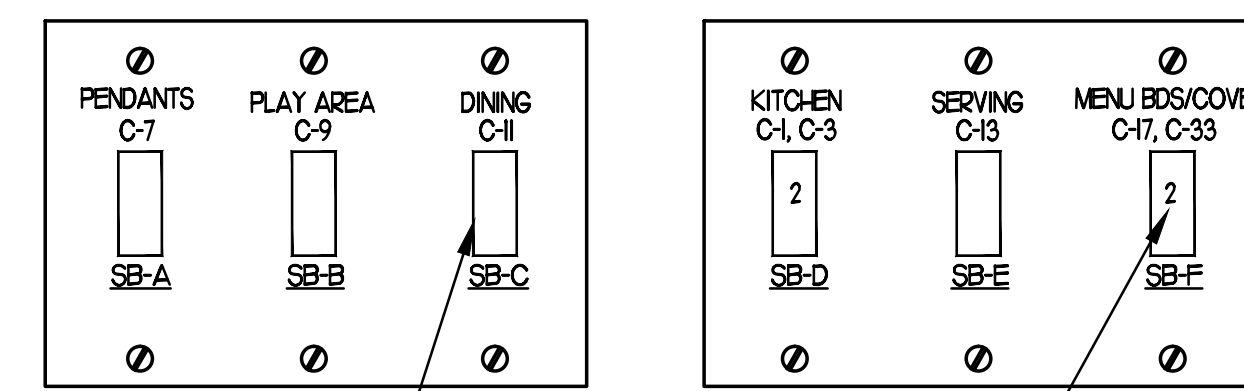


**2 BI-LEVEL CONTROLLED FIXTURES**  
NO SCALE



**3 STORE OPEN-CLOSE CONTROL SWITCH UNIT**  
NO SCALE

**1 LIGHTING PLAN**  
SCALE: 1/4"=1'-0"



NOTE: LOCATE JUNCTION BOXES IN CEILING SPACE ABOVE THE LOCATION OF THE SWITCH-BANK FOR SPLICING OF LINE, LOAD, AND SWITCH CONDUCTORS. PROVIDE GANGED BACKBOX FOR SWITCHES AS REQUIRED AND LABEL ALL CONDUCTORS SO AS TO INDICATE THEIR USE (LINE, LOAD, SWITCH), THE LOAD SERVED, AND THE CIRCUIT NUMBER.

**4 SWITCH BANK "SB" DETAIL**  
NO SCALE

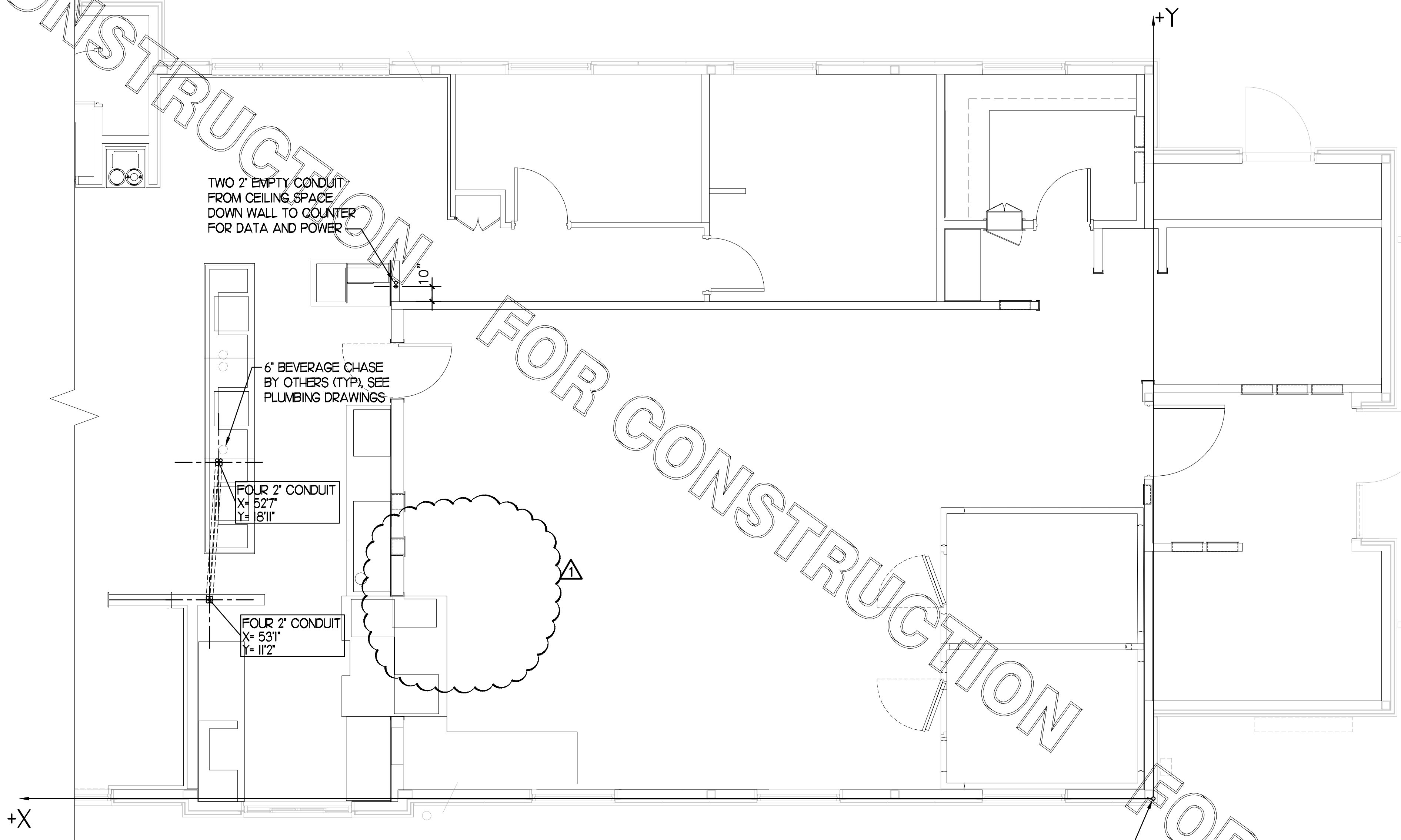
**5 KEYNOTES** (APPLY TO THIS SHEET ONLY)

- ROUTE THROUGH CONTROL PANEL T-500 CONTROLLED BY STORE OCCUPIED SWITCH.
- APPROXIMATE LOCATION OF SWITCH BANK 'SB'. SEE DETAIL #4 THIS SHEET FOR MORE INFORMATION.
- FOR SIGNAGE, CONNECT AS REQUIRED. GROUND ALL LOCATIONS IN ACCORDANCE WITH N.E.C. AND MANUFACTURER'S REQUIREMENTS. SIGN IS FURNISHED WITH INTEGRAL DISCONNECTING MEANS.
- FOR CONTROL OF LIGHTING FIXTURE IN WALK-IN COOLER/FREEZER, FURNISH WITH EQUIPMENT, INSTALLED BY ELECTRICAL CONTRACTOR.
- CONNECT FIXTURE SO THAT BATTERY PACK IS NOT SWITCHED WITH LIGHTS, BUT ALL LAMPS ARE SWITCHED.
- FOR CONNECTION TO LIGHTING FIXTURES IN THE WALK-IN COOLER AND WALK-IN FREEZER WHICH ARE FURNISHED WITH EQUIPMENT, CONTRACTOR SHALL ROUGH-IN AND CONNECT ALL FIXTURES AS REQUIRED BY THE EQUIPMENT MANUFACTURER. PROVIDE FLUORESCENT LAMPS TYPE AS REQUIRED BY EQUIPMENT MANUFACTURER.
- THE LIGHT FIXTURES IN THE SERVING AREA ARE PROVIDED WITH LAMP SHIELDING VIA A LENS.
- PROVIDE TUBE GUARDS ON ALL LAMPS IN TYPE 'J' FIXTURES.
- UP TO TOILET EXHAUST FAN ON ROOF. SEE ROOF ELECTRICAL PLAN.
- PROVIDE A CEILING MOUNTED DUAL TECHNOLOGY LINE VOLTAGE (120V) OCCUPANCY SENSOR EQUIVALENT TO SENSOR SWITCH #CMR-PDT-9 TO CONTROL LIGHTING.
- CONNECT FIXTURE TO CIRCUIT AHEAD OF ALL SWITCHING AND CONTROLS. THIS FIXTURE SHALL NOT BE SWITCHED.
- INSTALL ALL JUNCTION BOXES IN THE PLAY AREA SO THEY WILL BE READILY ACCESSIBLE AFTER THE PLAYGROUND EQUIPMENT IS INSTALLED.
- TO EXISTING GROUND MOUNTED FLAG POLE LIGHT. FIXTURE TO BE TIED WITH CIRCUIT C-12 THRU THE CFA T-500 CONTROL PANEL. REFER TO SHEET ESIU FOR LOCATION.
- TO WALK-IN DOOR FRAME HEATER AND INTERIOR LIGHTS. J-BOX TO BE ABOVE THE UNITS AND EXTEND DOWN ALONG THE FRONT AT 9'-6" AFF. TO HEATERS AND LIGHT SWITCHES.
- NOT USED.
- ROUTE THROUGH CONTROL PANEL CFA T-500 AND CONTROLLED BY PROGRAMMABLE TIMESWITCH AND PHOTOCELL.
- LOCATE MOTION SENSOR AND EMERGENCY LIGHTING UNIT BESIDE DOOR AND BELOW THE OVER-HEAD SHELVING.
- CONNECT FIXTURE SO THAT LAMP BALLAST AND EMERGENCY BALLAST ARE NOT SWITCHED. N.L. ADJACENT TO FIXTURE INDICATES THAT FIXTURE SHALL BE ON 24 HOURS.
- PROVIDE A WALL SWITCH LINE VOLTAGE OCCUPANCY SENSOR EQUIVALENT TO SENSOR SWITCH #WSD-WH
- ASYMMETRIC LIGHTS AROUND THE PERIMETER OF THE PLAY AREA. ORIENTATE TO THROW THE LIGHT TOWARDS THE CENTER OF THE ROOM. FIXTURE DIFFUSER TO BE INSTALLED ADJACENT TO THE WALL.
- LOCATE RECEPTACLE FLUSH IN CEILING FOR CONNECTION TO OWNER FURNISHED INTERIOR NEON SIGN. CIRCUIT AS SHOWN, TIE INTO EXISTING JUNCTION BOX.
- EXISTING CONDUITS FROM EXTERIOR BUILDING SIGNAGE. FIELD COORDINATE LOCATION AND ROUTING.
- EXISTING CANOPY LIGHTS. FIXTURES TO BE TIED WITH CIRCUIT C-12 THRU THE CFA T-500 CONTROL PANEL.
- REFER TO ARCHITECTURAL REFLECTED CEILING PLAN FOR LOCATIONS OF PENDANTS, DOWNLIGHTS, ACCENTS LIGHTS, AND WALL WASHER LIGHT FIXTURES.
- NOT USED.
- THE TYPE 'R' AND 'RE' LIGHTING FIXTURES ARE FURNISHED WITH A DUAL LEVEL BALLAST FOR 50% LIGHT AND 100% LIGHT. THE LIGHTING CONTROL SYSTEM CONTACTOR SHALL INITIATE THE BALLAST TO TURN ON AT 50% LEVEL AND THE SWITCH AT THE SWITCH-BANK WHEN TURNED ON WILL INITIATE THE BALLAST TO TURN THE LIGHTING UP TO 100% LEVEL. FIXTURES NOTED AS 'NL' SHALL HAVE THE 50% LIGHT LEVEL ON 24 HRS AND THE 100% LEVEL WILL BE CONTROLLED BY THE SWITCH.
- PROVIDE A TYPE BI LIGHT FIXTURE. MOUNT LIGHT TO THE UNDERSIDE OF THE WIRE SHELVING. PROVIDE A CORD FROM THE FIXTURE(S) TO A SWITCH IN AN FS BOX MOUNTED TO THE SHELF. FROM FS BOX PROVIDE AN SO CORD WITH PLUG AND CONNECT TO THE GEN RECEPTACLE (WALL OR DROP CORD). SEE SHEET E24 FOR FURTHER INFORMATION.
- DASHED LINES REPRESENT EXISTING CONDUITS. FIELD VERIFY LOCATION AND ROUTING. CONTRACTOR TO EXTEND CONDUITS AS NEEDED AND CIRCUIT AS SHOWN (TYP)

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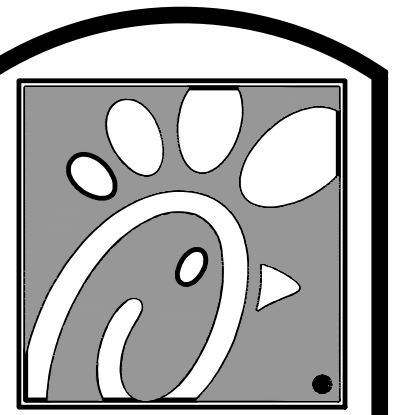
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- 2 UNDERSLAB ROUGH-IN NOTES:**
1. THE ROUGH-IN DIMENSIONS ARE BASED ON THE PROTOTYPICAL CASEWORK AND CURB LOCATIONS. VERIFY WITH THE SPECIFIC SITE THAT THE LOCATIONS HAVE NOT BEEN ALTERED OR CHANGED.
  2. COORDINATE WITH THE PROJECT'S PLUMBING INSTALLER TO AVOID CONFLICTS WITH UNDERSLAB PIPING AND BEVERAGE CHASE LOCATIONS.
  3. ALL UNDERSLAB CONDUITS SHALL HAVE LONG SWEEP ELBOWS.

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



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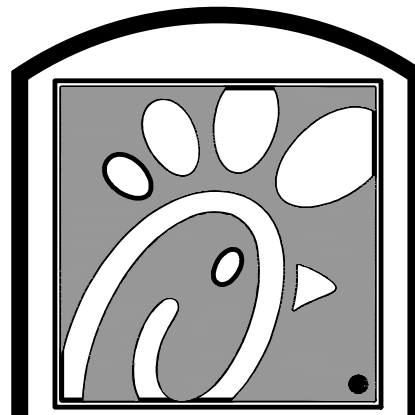
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SHEET TITLE  
ELECT ROUGH-IN  
UNDERSLAB

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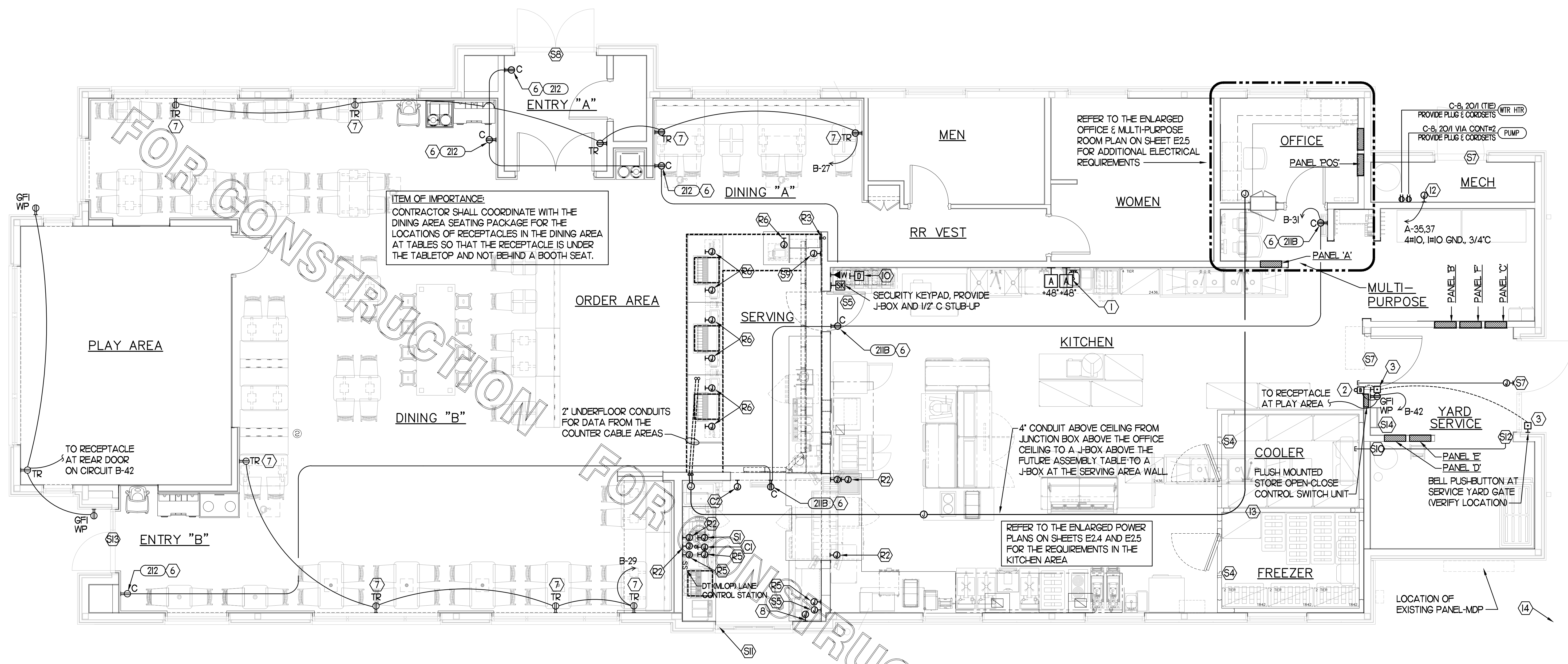
SHEET TITLE  
**POWER & SYSTEMS  
PLAN & NOTES**

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**2 KEY NOTES - POWER:**

- 1 PROVIDE 2 GANG DEEP BOX (2" MIN) FOR ANSLU PULL STATION. EXTEND 1/2" CONDUIT FROM BOX, STUBBED ABOVE CEILING.
- 2 PROVIDE EDWARDS #340-4N5 VIBRATING 4" DIAMETER BELL. BELL SHALL BE RATED AT 120 VOLTS.
- 3 PROVIDE 120 VOLT, STAINLESS STEEL, WEATHER-PROOF DOORBELL. PUSH-BUTTON AT DOOR. PUSH-BUTTON SHALL BE FLUSH MOUNTED. PROVIDE EDWARDS #850 PUSH-BUTTON IN BOX WITH EDWARDS #149-1 STAINLESS STEEL PLATE.
- 4 NOT USED.
- 5 PROVIDE 4" W X 4" X 3" D JUNCTION BOX WITHOUT COVERPLATE. EXTEND 2" RIGID CONDUIT DOWN THROUGH SLAB TO THE TELEPHONE POINT OF DEMARCATION. EXTEND 1" RIGID CONDUIT TO ABOVE ACCESSIBLE OFFICE AREA CEILING. SEE SHEET E2.5 FOR LOCATION.
- 6 PROVIDE DUPLEX NEMA 5-15R CLOCK RECEPTACLE (SEE ELEVATIONS FOR MTG HT) FOR CONNECTION TO FLY SYSTEM EQUIPMENT #212. VERIFY HEIGHT FOR #212. DO NOT CUT THE CORDSET FURNISHED WITH THE UNIT, BUT COIL THE CORD ON THE BACK OF THE UNIT PER MANUFACTURER'S DIRECTIONS.
- 7 TAMPER RESISTANT (TR) DUPLEX RECEPTACLE (IN DINING AREAS) WITH USB CHARGER SHALL BE COOPER/ARROW HART #TR7746-B (BROWN) WITH MATCHING COLOR DECOR' STYLE PLATE.
- 8 JUNCTION BOX WITH 3/4" CONDUIT STUB-UP INTO THE CEILING SPACE FOR OWNER'S AIRPHONE INTERCOM FOR THE MLOP ORDERING CONTROL STATION. PROVIDE BLANK PLATE IF BLDG IS SINGLE LANE DRIVE-THRU.
- 9 NOT USED.
- 10 PROVIDE 2 GANG DEEP BOX (2" MIN) FOR EACH DUCT SMOKE DETECTOR INDICATED ON THE MECHANICAL DRAWINGS FOR INSTALLATION OF DUCT DETECTOR REMOTE ANNUNCIATORS BY MECHANICAL. THE DUCT SMOKE REMOTE ANNUNCIATORS ARE PROVIDED TO THE ELECTRICIAN WITH THE SUNCOAST ELECTRONICS PACKAGE OF GEAR AND CONTROLS. EXTEND 1/2" CONDUIT FROM EACH BOX AND STUB ABOVE CEILING.
- 11 PROVIDE 6" H X 6" W X 3" D INCOMING TELEPHONE SERVICE JUNCTION BOX AT 7' FT AFF. EXTEND 2" CONDUIT WITH PULL STRING FROM THIS BOX TO THE NOTE (5) JUNCTION BOX IN THE OFFICE. ROUTE THE 2" CONDUIT BELOW THE SLAB. PROVIDE #6 AWG INSULATED CU GROUND WIRE IN 3/4" C TO GROUND BUS IN PANEL-MDP.
- 12 PROVIDE JUNCTION BOX AT 8'-0" AFF WITH CONDUIT AND CONDUCTORS TO PANELBOARD FOR FUTURE CONNECTION TO BOOSTER PUMP. REFER TO THE PLUMBING DRAWINGS FOR ADDITIONAL INFORMATION.
- 13 CONNECT STORE OPEN-CLOSE UNIT SWITCH TO CFA T-500' CONTROL PANEL VIA 6#12 IN 1" CONDUIT AND IN ACCORDANCE WITH SUNCOAST ENVIRONMENTAL INC WIRING DIAGRAMS.
- 14 SEE SHEET E1.3 FOR THE DRIVE-THRU ORDER AREA REQUIREMENTS.

**3 KEY NOTES - SECURITY:**

- 53 PROVIDE SINGLE GANG JUNCTION BOX AND STAINLESS STEEL COVER PLATE WITH 7/8" HOLE IN CENTER. EXTEND 1" E.C. UP IN WALL TO ABOVE ACCESSIBLE CEILING.
- 52 PROVIDE 4" W X 4" H X 3" D FLUSH JUNCTION BOX WITHOUT COVERPLATE. EXTEND 2" RIGID CONDUIT UP TO ABOVE ACCESSIBLE OFFICE CEILING AREA. PROVIDE BUSHING ON CONDUIT. CONNECT NOTE (52) JUNCTION BOX TO NOTE (5) JUNCTION BOX VIA 1/2" RIGID CONDUIT.
- 53 PROVIDE 4" W X 4" H X 3" D JUNCTION BOX WITHOUT COVERPLATE. EXTEND 2" RIGID E.C. UP TO ABOVE ACCESSIBLE OFFICE CEILING AREA. PROVIDE SINGLE-GANG J-BOX ADJACENT WITH 2" RIGID E.C. DOWN THROUGH SLAB AND BELOW GRADE TO REMOTE CAMERA LOCATION. USE ONLY LONG SWEEPS, 3 FEET PER 90 DEGREES.
- 54 PROVIDE TWO GANG WEATHER-PROOF JUNCTION BOX AND STAINLESS STEEL PLATE WITH 7/8" HOLE IN CENTER FOR PANIC BUTTON. MOUNT AT APPROXIMATELY 48" AFF. EXTEND 1/2" RIGID CONDUIT OVER TO THE WALL AND THEN UP TO ABOVE ACCESSIBLE CEILING. SEAL PENETRATION AT WIC/WIF CEILING.
- 55 PROVIDE SINGLE GANG BOX WITHOUT COVER PLATE. EXTEND 1/2" CONDUIT UP IN WALL TO ABOVE ACCESSIBLE CEILING AND TURN TOWARD SERVING AREA SIDE OF WALL.
- 56 PROVIDE SINGLE GANG JUNCTION BOX ON INSIDE FACE OF PARAPET WALL APPROX. 12" BELOW TOP OF PARAPET WALL. EXTEND 1/2" CONDUIT DOWN TO ABOVE ACCESSIBLE OFFICE CEILING.
- 57 EXTEND 1/2" RIGID CONDUIT FROM TOP OF STRIKE-SIDE DOOR FRAME CHANNEL TO ABOVE ACCESSIBLE CEILING.
- 58 EXTEND 1/2" RIGID CONDUIT FROM A POINT 3" WITHIN EITHER HINGE-SIDE DOOR VERTICAL FRAME MULLION TO ABOVE ACCESSIBLE CEILING.
- 59 PROVIDE SINGLE GANG JUNCTION BOX WITHOUT COVERPLATE. EXTEND 1/2" CONDUIT UP IN WALL TO ABOVE ACCESSIBLE CEILING AND TURN TOWARD SERVING AREA SIDE OF WALL.
- 510 PROVIDE SINGLE GANG, WEATHER-PROOF JUNCTION BOX WITH STAINLESS STEEL COVER PLATE MOUNTED 18" FROM THE CORNER OF THE SERVICE YARD AND JUST BELOW ROOF DECK MOUNTING BRACKETS. ROUTE 1" EMT CONDUIT FROM THE BOX SURFACE MOUNTED JUST BELOW THE ROOF DECK MOUNTING BRACKETS AND TERMINATE THE CONDUIT AT (510).
- 511 EXTEND 1/2" RIGID CONDUIT FROM A POINT 3" WITHIN STRIKE-SIDE WINDOW FRAME MULLION TO ABOVE ACCESSIBLE CEILING.
- 512 PROVIDE SINGLE GANG, WEATHER-PROOF JUNCTION BOX WITH STAINLESS STEEL COVER PLATE MOUNTED JUST ABOVE THE STRIKE SIDE OF OUTSIDE DOOR ON INSIDE OF SERVICE YARD. ROUTE 1" EMT CONDUIT SURFACE MOUNTED FROM BOX JUST BELOW THE ROOF DECK MOUNTING BRACKETS. TERMINATE CONDUIT IN THE ACCESSIBLE CEILING SPACE INSIDE THE BUILDING.
- 513 EXTEND 1/2" RIGID CONDUIT FROM A POINT 3" INSIDE THE STRIKE-SIDE DOOR FRAME MULLION TO ABOVE ACCESSIBLE CEILING.
- 514 PROVIDE JUNCTION BOX ON THE LATCH SIDE OF THE ROOF ACCESS HATCH WITH 1/2" C ABOVE THE CLG TO THE OFFICE CEILING SPACE FOR A DOOR CONTACT.

**1 POWER & SYSTEM PLAN**  
SCALE: 1/4" = 1'-0"

**4 GENERAL NOTES:**

- 1 ALL SECURITY, POS, MUSIC, COMMUNICATIONS, AND POWER ROUGH-IN SHALL BE INSTALLED DURING THE FRAMING/ROUGH-IN PHASE OF CONSTRUCTION.
- 2 REFER TO KITCHEN EQUIPMENT SHEETS FOR EQUIPMENT ELECTRICAL ROUGH-IN ELEVATIONS ABOVE FINISHED FLOOR.
- 3 ALL EMPTY CONDUITS SHALL BE PROVIDED WITH PULL STRING.
- 4 PROVIDE INSULATED BUSHINGS AT TERMINATION POINTS OF ALL CONDUITS FOR LOW VOLTAGE WIRING.
- 5 THE ELECTRICAL INSTALLER SHALL COORDINATE THE ROUTING OF ALL CONDUIT IN THE BUILDING WITH OTHER TRADES (SPECIFICALLY THE DUCTWORK INSTALLATION) TO AVOID CONFLICTS OF SPACE REQUIREMENTS IN WALLS AND CEILING SPACES.

**5 KEY NOTES - COMMUNICATIONS:**

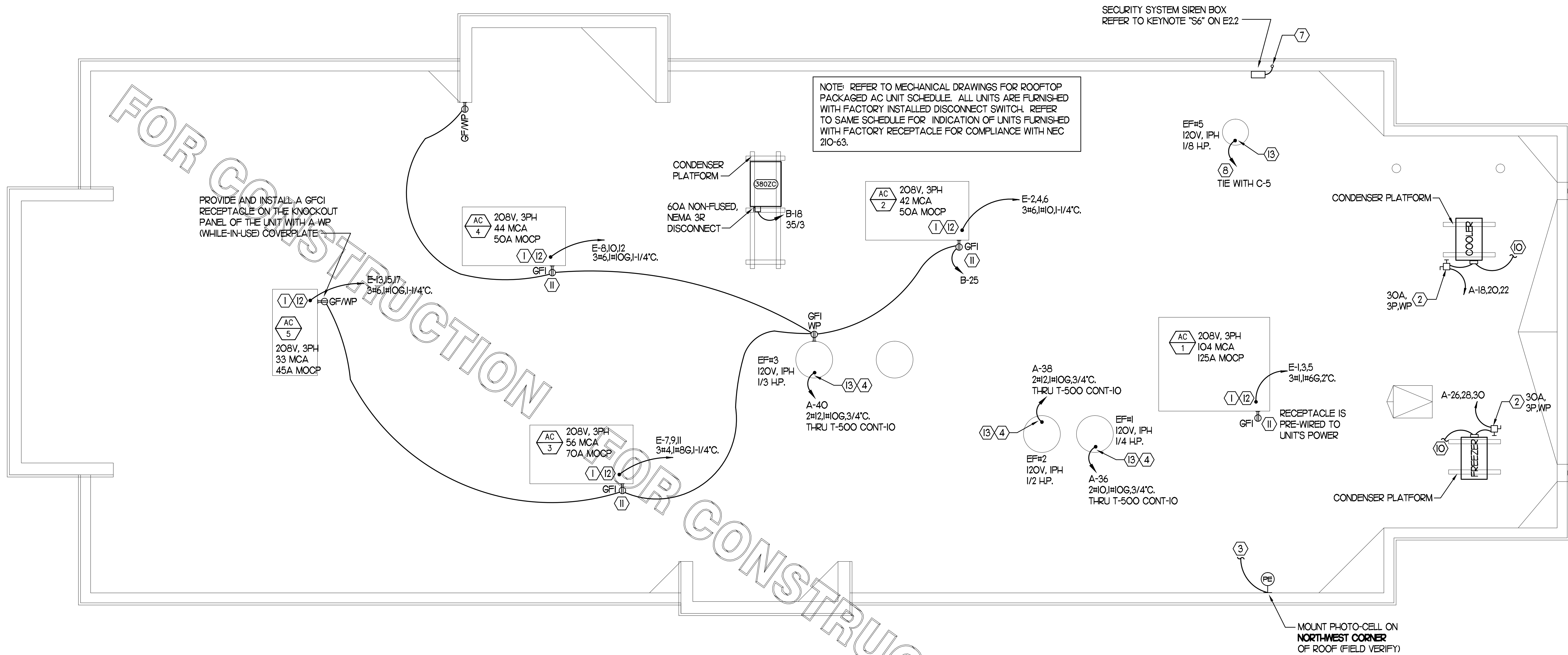
- C1 PROVIDE DOUBLE-GANG RING (CARLON #SC200RR) WITH STAINLESS STEEL COVER PLATE AND HOLE IN PLATE FOR AUDIO WITH 2" CONDUIT UNDERGROUND TO THE DT DUAL-LANE (MLOP) ORDERING AREA AND A 2" CONDUIT STUBBED UP INTO THE CEILING SPACE.
- C2 PROVIDE JUNCTION BOX, LESS COVER PLATE, AND EXTEND 3/4" E.C. UP IN WALL TO ABOVE CEILING FOR INSTALLATION OF WIRELESS COMMUNICATION CONTROL UNIT.
- C3 PROVIDE TWO DOUBLE-GANG RINGS (CARLON #SC200RR) WITH STAINLESS STEEL COVER PLATE AND HOLE IN PLATE FOR AUDIO WITH 2" CONDUIT STUBBED UP INTO THE CEILING SPACE. ONE RING SHALL BE ABOVE THE COUNTER AND ONE BELOW WITH A 2" CONDUIT BETWEEN THE RINGS.
- C4 NOT USED.

**6 KEY NOTES - MUSIC:**

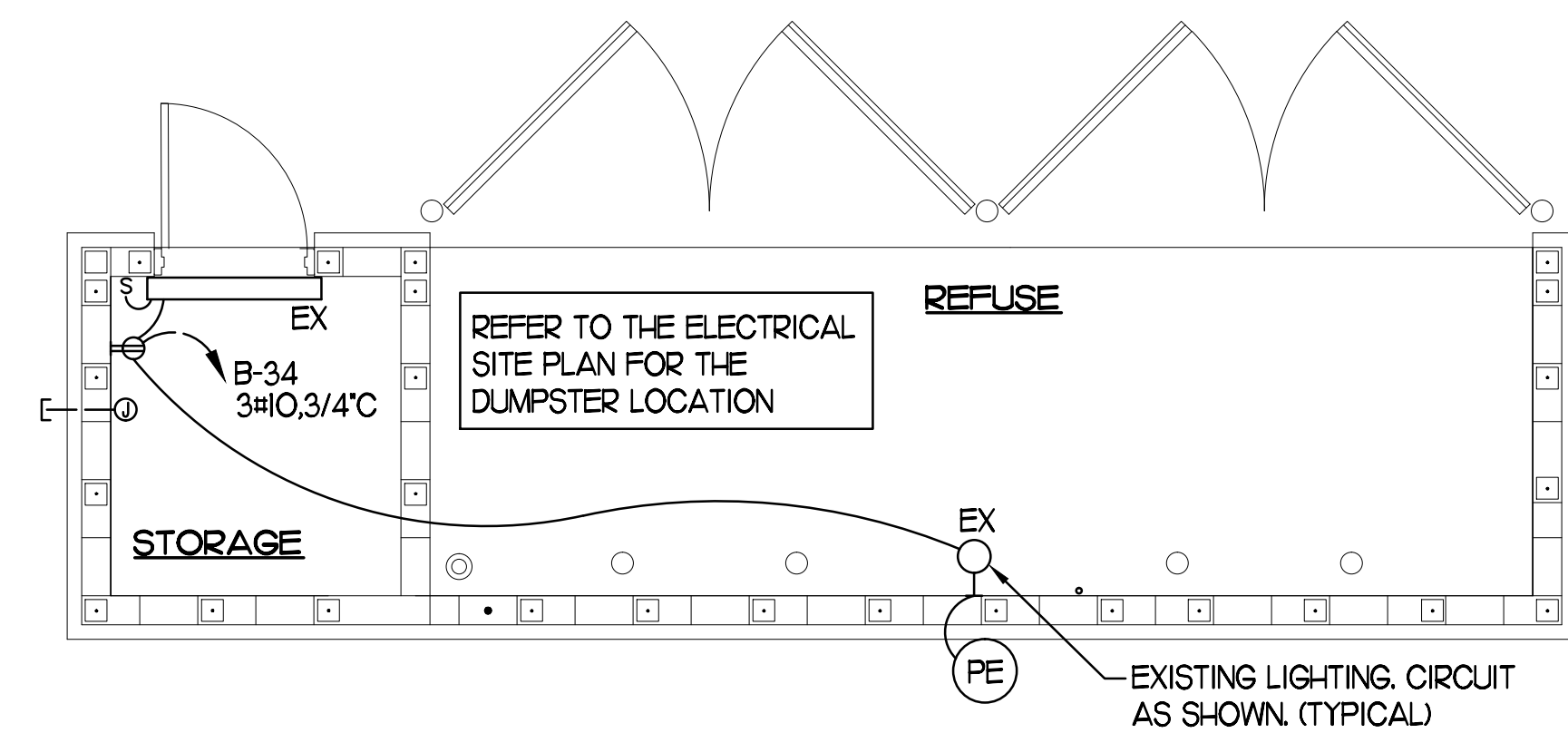
- M1 PROVIDE JUNCTION BOX WITH STAINLESS STEEL COVER PLATE AND 3/4" HOLE IN PLATE WITH GROMMET ON HOLE IN PLATE. EXTEND 3/4" E.C. UP IN WALL TO ABOVE CEILING FOR MUSIC SYSTEM.
- M2 NOT USED.
- M3 PROVIDE THREE SINGLE GANG EXTRA DEEP J-BOXES AT 74" AFF WITH 1/2" CONDUIT FROM EACH TO THE CENTER BOX AND A 1" CONDUIT STUBBED INTO THE CEILING SPACE FOR MUSIC SYSTEM VOLUME CONTROLS.
- M4 PROVIDE A SINGLE GANG EXTRA DEEP JUNCTION BOX AT 74" AFF WITH 1/2" CONDUIT STUBBED INTO THE CEILING SPACE FOR MUSIC SYSTEM VOLUME CONTROLS.

**7 KEY NOTES - POS SYSTEM:**

- P1 PROVIDE A 'RETROFIT' DOUBLE-GANG RING (CARLON #SC200RR) FOR OWNER'S DEVICE PLATE WITH A 3" EMPTY CONDUIT AT THE OPENING IN THE WALL UP TO THE CEILING SPACE FOR OWNER'S DATA CABLES.
- P2 PROVIDE JUNCTION BOX FOR TERMINATION OF 1" CONDUIT. PROVIDE 1" CONDUIT EXTENDING FROM CEILING AND TERMINATED AT JUNCTION BOX ON THE SERVING AREA SIDE OF THE WALL. COVER PLATE PROVIDED BY OWNER'S POS SYSTEM VENDOR.
- P3 PROVIDE A 2" CONDUIT FROM FACE OF WALL AND EXTEND CONDUIT TO JUNCTION BOX IN CEILING SPACE ABOVE SERVING AREA. CONDUIT SHALL TERMINATE FLUSH WITH FACE OF WALL BELOW COUNTER. CUSTOM STAINLESS STEEL COVER PLATE IN WALL WITH GROMMET ON 2" DIAMETER HOLE AT CONDUIT TERMINATION IN WALL.
- P4 PROVIDE A 'RETROFIT' SINGLE GANG RING (CARLON #SC100RR) FOR OWNER'S DEVICE PLATE WITH A 2" EMPTY CONDUIT AT THE OPENING IN THE WALL UP TO THE CEILING SPACE FOR OWNER'S DATA CABLES.
- P5 PROVIDE JUNCTION BOX FOR TERMINATION OF 1" CONDUIT. PROVIDE 1" CONDUIT EXTENDING FROM CEILING AND TERMINATED AT JUNCTION BOX ON THE SERVING AREA SIDE OF THE WALL. POS SYSTEM SUPPLIER WILL PROVIDE COVER PLATE ON BOX.
- P6 PROVIDE SINGLE GANG EXTRA DEEP JUNCTION BOX MOUNTED ON THE MOUNTING PLATE WITHIN THE FRONT SERVING COUNTER CASEWORK. MOUNT BOX ADJACENT TO THE RECEPTACLE FOR EQUIPMENT 201. DO NOT MOUNT BOX BETWEEN EQUIPMENT 201 AND EQUIPMENT 204 RECEPTACLES.

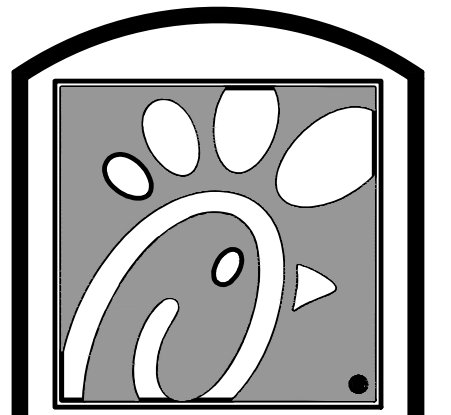


**1 ROOF ELECTRICAL PLAN**  
SCALE: 1/4" = 1'-0"



**2 REFUSE ENCLOSURE PLAN - ELECTRICAL**  
SCALE: 1/4" = 1'-0"

- 3 KEY NOTES - ROOF ELECTRICAL PLAN:**
- ROUTE ELECTRICAL CONDUITS TO UNIT CONNECTIONS THROUGH WEATHERPROOF RACEWAY FURNISHED WITH UNIT. COORDINATE WITH MECHANICAL CONTRACTOR FOR EXACT LOCATIONS.
  - MOUNT DISCONNECT SWITCHES FOR WIC AND WIF CONDENSERS ON UNISTRUT WITH CONDUIT DOWN INTO CEILING SPACE BELOW THRU ROOF PENETRATION DEVICE (NOT THRU ROOF). SEE SHEET A-17. PROVIDE FUSE SIZE PER MANUFACTURER REQUIREMENTS.
  - CONNECT PHOTOCELL TO CONTROL PANEL T-500 TERMINALS AS DIRECTED BY SUNCOAST ENVIRONMENTAL INC. WIRING DIAGRAMS. PHOTO-CELL FURNISHED WITH PANELBOARD ORDER AND INSTALLED BY CONTRACTOR.
  - COORDINATE EXACT LOCATION OF CONDUIT AND DISCONNECT AT EXHAUST FAN. CONDUIT SHALL BE INSTALLED THROUGH ROOF ON OUTSIDE OF FAN CURB. CONDUIT SHALL BE LOCATED AT FAN HINGE SUCH THAT THE FAN HOOD CAN BE FULLY HINGED OPEN AND NOT TOUCH THE CONDUIT. PROVIDE 1/4" DIAMETER LOOP IN THE FLEXIBLE CONDUIT BETWEEN THE ROOF AND THE FAN ELECTRICAL CONNECTION.
  - NOT USED.
  - NOT USED.
  - PROVIDE 1/2" E.C. THROUGH PARAPET FOR SECURITY SYSTEM CABLING. TERMINATE OPEN ENDS APPROXIMATELY 18" BELOW TOP OF PARAPET WALL AND ABOVE OFFICE CEILING. SECURE CONDUIT TO STRUCTURE.
  - COORDINATE EXACT LOCATION OF CONDUIT AND DISCONNECT AT EXHAUST FAN. CONDUIT SHALL BE ROUTED THROUGH DUCTWORK, WITHIN FAN ROOF CURB, AND TO THE FAN WIREWAY. PROVIDE SEALTIGHT FITTINGS AS THE CONDUIT ENTERS AND LEAVES THE DUCTWORK. INTERLOCK WITH LIGHTING CIRCUIT IN RESTROOM. REFER TO E21 FOR CONTINUATION.
  - NOT USED.
  - CONNECT POWER FROM EACH CONDENSING UNIT'S COMPRESSOR CONTRACTOR TO THE EVAPORATOR COIL UNIT'S JUNCTION BOX BELOW. REFER TO E24 FOR LOCATION.
  - CONVENIENCE RECEPTACLE PROVIDED PRE-INSTALLED IN HVAC UNIT. CONNECT TO 120 VOLT CIRCUIT AS REQUIRED AND/OR AS INDICATED.
  - A/C UNIT DISCONNECT IS FURNISHED WITH A/C UNIT AND SHALL BE CONNECTED BY THE CONTRACTOR.
  - EXHAUST FAN IS FURNISHED WITH A PREWIRED DISCONNECT.



Chick-fil-A

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Revisions:

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Seal

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STORE  
CABBAGE PATCH  
CUSTOM - IN-FILL  
25 West Underwood St.  
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SHEET TITLE  
ROOF ELECT.  
PLAN

VERSION: V2  
ISSUE DATE: 11-2014

Job No. : CF1514  
Store : 2913  
Date : 05/14/15  
Drawn By : ES  
Checked By : MK

Sheet

**E2.3**

SECTION C16124  
SUPPORTING DEVICES AND HANGERS

PART 1 - PRODUCTS

1.01 ACCEPTABLE MANUFACTURERS

- A. Supporting devices and hangers shall be manufactured by RACO Fasteners, or approved equivalent.

PART 2 - EXECUTION

2.01 INSTALLATION

- A. Secure conduits to within 3' of each outlet box, junction box, cabinet, fitting, etc., and at intervals not to exceed ten feet (10') and in accordance with the National Electric Code. In seismic zones, support conduits 1" and under at 6' intervals.

- B. Install clamps secured to structure for feeder and other conduits routed against the structure. Use drop rods and hangers or racks to support conduits run apart from the structure.

- C. Provide and install suitable angle iron, channel iron or steel metal framing with accessories to support or brace electrical equipment including safety switches, fixtures, panelboards, outlet boxes, junction boxes, cabinets, etc.

- D. Use of chains, perforated iron, baling wire, or tie wire for supporting conduit runs is not permitted.

- E. For support of low voltage wiring not required to be in conduit, bundle cables together in a neat manner using approved nylon tie wraps. Bundled cables shall be supported with "J" hooks on telephone type bridge rings, a minimum of 6 feet on centers. Clearly identify all differing types of cables being run and tag with tape tags regarding telephone, POS System, music/communication, security, etc. for various system utilizing said cable. Identification tape shall be provided at minimum intervals of 25 feet on center and within each building space.

- F. Provide a system of supporting devices and hangers to insure secure support or bracing for conduit, electrical equipment, including safety switches, fixtures, panelboards, outlet boxes, junction boxes, cabinets, etc.

SECTION C16140  
WIRING DEVICES AND PLATES

PART 1 - PRODUCTS

1.01 WALL SWITCHES

- a. Shall be purchased from the National Accounts Vendor indicated on the plans.

- B. Ratings: 20 amps, 120/277 volts a.c. or as identified on drawings.

- C. Devices: (Cooper/Arrow Hart catalog numbers are listed unless noted otherwise):

1. Single pole toggle switches:  
20 AMP device - #AH1221-GY (Kitchen) or #AH1221-B (Dining)  
20 AMP Pilot lights illuminated with load on - #AH1221-PL  
2. Double pole toggle switches:  
20 AMP device - #AH1222-GY (Kitchen) or #AH1222-B (Dining)

1.02 RECEPTACLES

- A. Shall be purchased from the National Accounts Vendor indicated on the plans.

- B. Devices: (Cooper/Arrow Hart catalog numbers are listed unless otherwise noted):

1. Specification grade devices (grey device color in Kitchen, brown device color in Dining, and orange for IG type) to be 20 amp, 125 volts, a.c. receptacles:  
Single (simplex) device: #1877-GY (Kitchen) or #1877-B (Dining)  
Duplex device: #CR20-GY (Kitchen) or #CR20-B (Dining)  
Tampers Resistant duplex: #TR8200-B (Vestibules & Play Area)  
Tampers Resistant USB Charger duplex: #TR7746-B (Dining)  
GF (ground-fault circuit interrupter) duplex device: #VGF20-GY (Kitchen) or #VGF20-B (Dining)  
IG (isolated ground) duplex device: #IG5362-RN (orange face)

1.03 SPECIAL DEVICES

- A. Manual motor starter switch: SQ. D Class 2510, Type F, for use on motors up to 3/4 horsepower. Provide NEMA 1 enclosure in dry locations; provide NEMA 3R enclosure in wet or exterior locations.

1.04 WALL PLATES

- A. Provide Cooper/Arrow Hart, or approved equal, smooth satin stainless steel 302-SS series for switches and receptacles in the Kitchen areas. All other areas shall be brown Nylon plastic.

- B. Provide blank plates on all outlet boxes for future outlets, or outlets without devices. Plate style shall match device plates.

- C. Provide non-metallic weatherproof covers for duplex GF receptacles located outside or in wet locations that feature "while-in-use" cover equivalent to Arrow Hart #WLU-1.

- D. Where devices installed in exposed boxes or conduit fittings; provide properly designed plates and covers equal to Arrow Hart RS-Series exposed work covers.

- E. Install galvanized steel plates on outlet boxes and junction boxes in unfinished areas, above accessible ceilings, and on surface mounted boxes.

PART 2 - EXECUTION

2.01 INSTALLATION

- A. Mounting  
1. Mount switches and receptacles at height above finished floor as indicated on plans, and legend.  
2. Mount switches on strike side of door maximum 8" from door frame. Outlet box for switch shall be located clear of door frame. Coordinate with architectural plans prior to rough-in.  
3. Install switches with off position down.  
4. Do not use the feed thru feature for the GF Type receptacle, unless required by the plans.  
5. Use jumbo sized plates for outlets installed in masonry walls.  
6. Each receptacle shall be provided with a #12 green grounding jumper between the ground terminal of the receptacle and the outlet box.  
7. The grounding conductor to each receptacle shall be installed such that the removal of the device will not interfere with the continuity of the ground.

- B. Testing  
1. Test each switch and verify proper operation with energized circuit.  
2. Test each receptacle for proper polarity on energized circuit.  
3. Test each GF receptacle with a GF receptacle tester and verify circuit is opened by GF device at milli-ampere ranges established by the manufacturer.

SECTION C16440  
PANELBOARDS

PART 1 - PRODUCTS

1.01 MANUFACTURER

- A. Suncoast Environmental Controls (SEC) thru a National Accounts Program.

1.02 PANELBOARD FEATURES

- A. Panelboards shall have a minimum symmetrical interrupting rating to meet or exceed the available symmetrical interrupting fault current at the device intended to interrupt current.

- B. Bus bars shall be copper or tin plated aluminum.

- C. Provide factory-installed copper ground bus in each panelboard with lugs or connectors on bar.

- D. Provide electrically isolated, factory installed, neutral bus in each 3 phase, 4 wire or 1 phase 3 wire panelboard.

- E. In addition to the ground bus required by paragraph 1.02D (above), provide factory installed, electrically isolated, copper ground bus in each panelboard serving isolated ground receptacles.

- F. Main lugs and main circuit breaker lugs shall be UL Listed for use with both aluminum and copper conductors.

- G. Provide panelboard doors with chrome-plated locks and catches. All locks shall be keyed alike. Provide two keys for each lock.

- H. Provide thermal-magnetic circuit breakers which are rated for 40 degrees C ambient temperature. Breakers shall be quick-make, quick-break type trip with trip indication shown by handle position other than on or off. Multi-pole breakers shall have a common trip handle. Tandem type circuit breakers shall not be permitted.

- I. Provide typed directory card with clear holder for each panelboard.

PART 2 - EXECUTION

2.01 INSTALLATION

- A. Panelboards shall be mounted at height above finished floor such that the height of the top-most breaker in the panel is not more than 6-1/2 feet above finished floor in its highest position per the NEC.

- B. Where multiple panelboards are installed on walls in common areas of buildings, the panelboards shall be installed with the top of all panelboards at the same height.

- C. Provide blank filler plates over all unused spaces in panelboards.

- D. A typed directory card shall indicate devices being served and the space name where the device is located.

- E. Provide minimum of one (1) 3/4" empty spare conduit for every 3 poles of spare breaker or space in the panelboard. Stub conduit to nearest accessible ceiling space. Label conduit as spare at panelboard and termination point.

- F. Non-isolated ground bars shall be grounded to panelboard can and main service entrance ground bus with a code sized grounding conductor installed in the same conduit as the phase and neutral conductors.

- G. Circuits using a common neutral shall be installed in accordance with the National Electrical Code.

- H. Inspect each panelboard for proper installation, physical damage, tightness and installation of overcurrent devices. Verify proper color coding of conductors. Correct or repair all items found in inspection.

- I. Neutral wires, ground wires, and isolated ground wires shall be connected to the appropriate panel bus bar. Do not mix bus wire connections.

SECTION C16441  
ENCLOSED SWITCHES

PART 1 - PRODUCTS

1.01 MANUFACTURERS

- A. Square D.  
B. General Electric.  
C. Siemens

1.02 ENCLOSED SWITCHES

- A. Nonfusible switch assemblies: NEMA KS 1, General Duty Type for 208 volt load interrupter enclosed knife switch with externally operable handle interlocked to prevent opening front cover with switch in on position. Handle lockable in off position. Provide equipment ground lug in each switch.

- B. Enclosures: NEMA KS 1.

1. Interior dry locations: Type 1.  
2. Exterior locations: Type 3R.

SECTION C16442  
UTILITY SERVICE ENTRANCE AND DISTRIBUTION SYSTEM

PART 1 - GENERAL

1.01 SYSTEM DESCRIPTION

- A. The underground electrical system service characteristics shall be 208Y/120 volts, Three Phase, Four Wire service and shall extend from utility company transformer secondary.

- B. Metering of electrical usage shall be located as required by local electrical utility company. Coordinate requirements with local utility company.

- C. Distribution system originates at secondary of utility transformer and includes service entrance conduit and conductors, distribution equipment, lighting panelboards, utilization equipment, overcurrent devices, disconnecting means, controls, branch and feeder circuits, etc.

PART 2 - PRODUCTS

2.01 MATERIALS

- A. Furnish service entrance conduit, cable, and miscellaneous hardware as required by plans and specifications for electrical service entrance and system grounding at main electrical service.

PART 3 - EXECUTION

3.01 EXAMINATION AND PREPARATION

- A. Coordinate exact locations of electrical service utility transformer, metering equipment, service lateral, etc. prior to commencement of installation. Contact engineer with conflicts prior to bid.

- B. Ensure pad mounted transformer is not located within roadway or sidewalk.

- C. Coordinate with local electrical utility for all utility company requirements and provide for the following items and any others required by the utility:  
1. Concrete pad for utility transformer with required dimensions and details.  
2. Primary underground conduit, excavation, and backfill requirements.  
3. Pay for all fees associated with establishment of electrical service.  
4. Furnish list of loads to the electrical utility company serving the facility.  
5. Verify that utility company clearances are provided on all sides of utility equipment.

- D. Ensure proper access to utility equipment is maintained.

- E. Provide pull rope, excavation in accordance with electrical utility company requirements, backfill and concrete envelope for primary in accordance with electrical utility company requirements. Turn conduits up riser pole as required. cap spare conduits 12 inches above grade with plumbers pipe cap.

- F. Provide secondary lugs on utility transformer and perform drilling and installation of lugs in accordance with utility requirements. Type of lugs shall be in accordance with electrical utility company requirements. Connect service conductor to transformer secondary lugs as directed by electrical utility.

SECTION C16500  
LIGHTING FIXTURES (LUMINAIRES)

PART 1 - GENERAL

1.01 ACCEPTABLE MANUFACTURERS AND VENDORS

- A. Lighting fixtures indicated on lighting fixture schedule are to be purchased from the National Account Vendor for the region of the project (verify region designation with Owner's Representative):

1. Accu-Serv Lighting - Atlantic region, Northeast region and Southeast region. Contact at Accu-Serv: Bob Harpring at 877-707-7378, fax - 502-961-0357, email - bharpring@accu-serv.com

2. Villa Lighting - Midwest region, Southwest region, and West region. Contact at Villa Lighting: Dave Christianell at 800-325-0963, fax- 314-531-8720, email - davec@villalighting.com

- B. Ballasts to be electronic ballast provided with lighting fixture by the manufacturer.

- C. Lamps to be Osram-Sylvania and will typically be provided with the luminaire by the lighting manufacturer.

- D. Inspect each panelboard for proper installation, physical damage, tightness and installation of overcurrent devices. Verify proper color coding of conductors. Correct or repair all items found in inspection.

- E. Neutral wires, ground wires, and isolated ground wires shall be connected to the appropriate panel bus bar. Do not mix bus wire connections.

1.02 FIXTURE REQUIREMENTS

- A. Provide regulating, HPF ballasts in all HID lighting fixtures. HID lamp types shall be as indicated on the drawings.

- B. Recessed fluorescent lighting fixture ballasts shall be provided with integral thermal protection.

- C. Provide energy-saving Instant or Rapid Start lamps for all fluorescent fixtures.

- D. All lamps and ballasts shall meet or exceed the requirements of the National Energy Policy Act of 1992 and any other applicable Codes or Criteria.

- E. All components of recessed fixtures shall be accessible without disturbing fixture in or on ceiling.

- F. Energy saving ballasts and energy saving lamps provided shall be compatible for operation together.

- G. Exterior fixtures and poles shall be suitable for exterior use, shall be UL Listed, and shall be a standard design for exterior application.

- H. Exterior poles for fixtures with luminaires installed shall be designed for maximum constant velocity wind load with luminaires installed, applicable to the geographic area.

1.03 CONTROLS

- A. Lighting contactors shall be Square-D, General Electric, Cutler-Hammer or Siemens of types and quantity shown on drawings, except those furnished with the switchgear as part of the National Account Program by Suncoast Environmental Controls (SEC).

1.04 EMERGENCY LIGHTING UNITS

- A. Batteries shall supply emergency power for lighting with minimum operating time of 1-1/2 hours.

- B. Emergency lighting shall be automatically operational upon normal utility power failure.

PART 3 - EXECUTION

3.01 INSTALLATION

- A. Lighting fixtures shall be structurally supported. Fluorescent fixtures mounted in suspended ceilings shall be supported by and attached to ceiling system as required by NEC Article 410. In addition, fluorescent troffers shall be supported at two opposite corners to building structure.

- B. Recessed fixtures in dropped ceiling areas shall be connected to power source using flexible conduit. Flexible conduit shall contain a separate insulated green No. 12 copper ground wire. Flexible conduit shall be connected to junction box and fixture. Green ground wire shall provide ground continuity between conduit system and fixture. Grounding conductors shall be permanently and mechanically connected between fixture and conduit system so as to be electrically continuous.

- C. Fixtures surface mounted on exposed tee bar ceilings shall use grip clamps on tee bars to support fixtures.

- D. Wire shall be continuous from splice in outlet box of building wiring system to lamp socket or ballast terminals.

- E. Maintain the integrity of enclosures on enclosed and gasketed fixtures. Minimize the number of enclosure penetrations and make such penetrations water and dust tight with appropriate gaskets and fittings.

- F. Concrete bases shall be provided for all exterior ground mounted or pole mounted fixtures.

- G. Install accessories furnished with each fixture.

- H. Wiring from pole bases to pole mounted luminaire shall be No. 12 with fuse protection provided by a 30 amp, 600 volt waterproof fuseholder with Bussman 'Limitron' fuse of ampere rating 3 times the load current.

- I. Surface and recessed fixtures on or in plastered or drywall ceilings shall be supported by support channels. Support channels shall span across main support channels and shall not depend upon ceilings for support.

- J. Provide secondary lugs on utility transformer and perform drilling and installation of lugs in accordance with utility requirements. Type of lugs shall be in accordance with electrical utility company requirements. Connect service conductor to transformer secondary lugs as directed by electrical utility.

3.02 FIELD QUALITY CONTROL

- A. Relamp fixtures that have failed lamps at substantial completion.

SECTION C16596  
SPECIAL SYSTEMS

PART 1 - GENERAL

1.01 WORK INCLUDED

- A. Furnish and install raceway system for music/communications security, CCTV, POS, and other owner-furnished systems, consisting of empty conduits, junction boxes, outlet boxes, and device plates, etc., as specified and shown on owner selected vendor wiring schematics. Cable, equipment, and installation of the interior system will be provided by the owner's system vendor.

- B. Interior system equipment will be furnished by Owner's Vendor.

- C. Install special backboxes furnished by Owner's Vendor. Coordinate with the Vendor for the installation. Coordinate with the Vendor if backboxes are to be contractor provided in order to provide and install the appropriate item for the Vendor.

PART 2 - PRODUCTS

2.01 MATERIALS

- A. Provide 4-11/16" square boxes, with plaster rings. Provide device plates for system outlets as specified in Section 16141. Provide separate conduit to nearest accessible ceiling space from each outlet.

- B. Cable shall be in conduit where installed in walls or inaccessible ceilings.

- C. Minimum conduit size shall be 3/4".

PART 3 - EXECUTION

3.01 INSTALLATION

- A. Furnish and install conduits, junction boxes, outlet boxes, and plates.

- B. Provide one #10 equivalent nylon pull wire in each system empty conduit.

- C. Provide a complete raceway system in accordance with interior system vendor requirements. Interior system vendor shall review the drawings. Contractor shall provide for any additional or varying requirements.

- D. Final connections and testing of systems will be provided by the system vendor. Contractor shall contact the owner's vendor and schedule the work so as to complete system installation and testing prior to occupancy of the facility.

- E. Terminate each conduit stub-up or termination with nylon insulated bushings.

SECTION C16597  
TELEPHONE SERVICE

PART 1 - GENERAL

1.01 WORK INCLUDED

- A. Furnish and install telephone system consisting of empty conduits, junction boxes, outlet boxes, device plates, etc., as specified and shown on owner selected vendor wiring schematics. Cable, equipment, and installation of the interior system will be provided by the owner's system vendor.

- B. Provide underground PVC, Schedule 40, service conduit as required by plans.

- C. Telephone Utility Company will provide service entrance cable.

- D. Interior telephone system will be furnished by owner's vendor.

- E. Special backboxes (unless otherwise noted) and faceplates will be furnished by the owner's vendor.

PART 2 - PRODUCTS

2.01 MATERIALS

- A. Provide 4-11/16" square boxes, with plaster rings. Provide device plates for telephone outlets to match those specified in wiring device section. Provide separate conduit to nearest accessible ceiling space from each outlet.

- B. Minimum conduit size shall be 3/4".

- C. Provide lightning arrester for telephone service entrance at main telephone backboard in accordance with UL96A paragraph 11.2 and NFPA 780.

- D. Cable shall be in conduit where installed in walls or above inaccessible ceiling spaces.

- E. Provide lightning arrester for telephone service entrance at main telephone backboard in accordance with UL96A paragraph 11.2 and NFPA 780.

- F. Cable shall be in conduit where installed in walls or above inaccessible ceiling spaces.

- G. Provide lightning arrester for telephone service entrance at main telephone backboard in accordance with UL96A paragraph 11.2 and NFPA 780.

- H. Cable shall be in conduit where installed in walls or above inaccessible ceiling spaces.

- I. Provide lightning arrester for telephone service entrance at main telephone backboard in accordance with UL96A paragraph 11.2 and NFPA 780.

- J. Cable shall be in conduit where installed in walls or above inaccessible ceiling spaces.

- K. Provide lightning arrester for telephone service entrance at main telephone backboard in accordance with UL96A paragraph 11.2 and NFPA 780.

- L. Cable shall be in conduit where installed in walls or above inaccessible ceiling spaces.

- M. Provide lightning arrester for telephone service entrance at main telephone backboard in accordance with UL96A paragraph 11.2 and NFPA 780.

- N. Cable shall be in conduit where installed in walls or above inaccessible ceiling spaces.

- O. Provide lightning arrester for telephone service entrance at main telephone backboard in accordance with UL96A paragraph 11.2 and NFPA 780.

- P. Cable shall be in conduit where installed in walls or above inaccessible ceiling spaces.

- Q. Provide lightning arrester for telephone service entrance at main telephone backboard in accordance with UL96A paragraph 11.2 and NFPA 780.

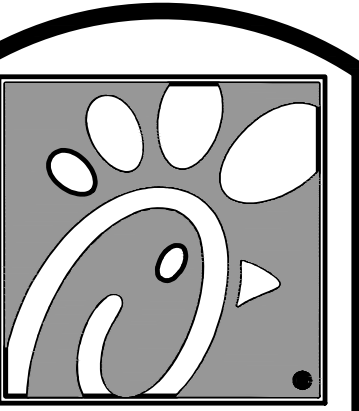
- R. Cable shall be in conduit where installed in walls or above inaccessible ceiling spaces.

- S. Provide lightning arrester for telephone service entrance at main telephone backboard in accordance with UL96A paragraph 11.2 and NFPA 780.

- T. Cable shall be in conduit where installed in walls or above inaccessible ceiling spaces.

- U. Provide lightning arrester for telephone service entrance at main telephone backboard in accordance with UL96A paragraph 11.2 and NFPA 780.

- V. Cable shall be in conduit where installed in walls or above inaccessible ceiling spaces.



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STORE

CABBAGE PATCH

CUSTOM - IN-FILL

25 West Underwood St.  
Cleveland, GA 30528

SHEET TITLE

ELECTRICAL

SPECIFICATIONS

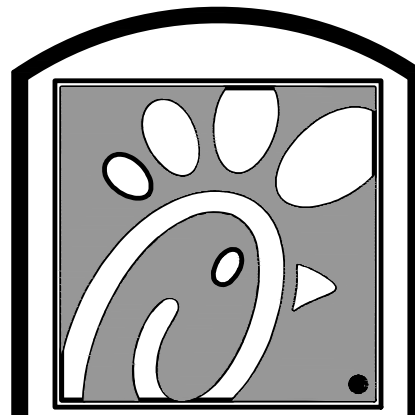
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Job No. : CF1514

Store : 2913

Date : 05/14/15

Drawn By :



5200 Buffington Rd.  
Atlanta Georgia,  
30349-2998

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STORE  
CABBAGE PATCH  
CUSTOM - IN-FILL  
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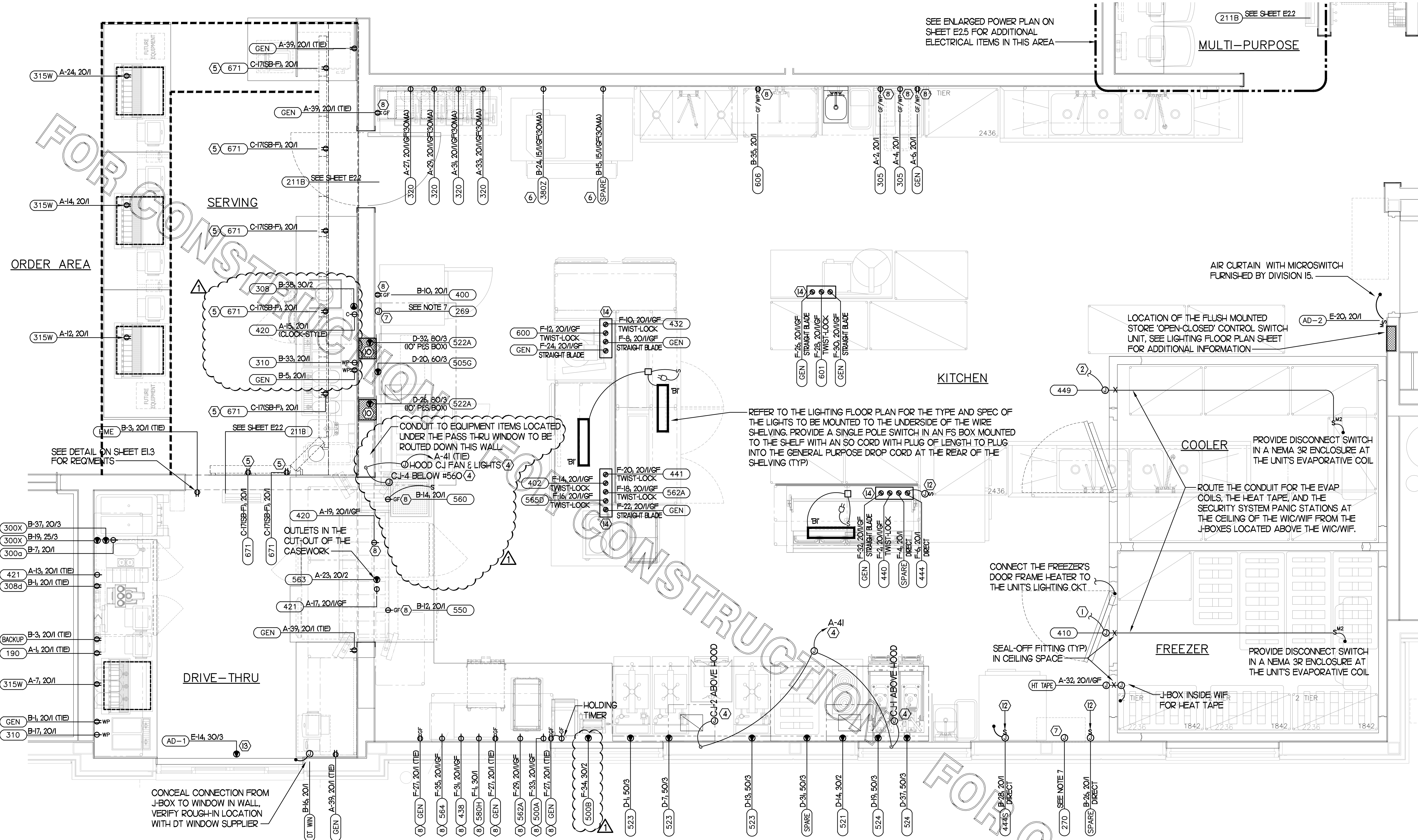
SHEET TITLE  
ENLARGED  
POWER PLAN

VERSION: V2  
ISSUE DATE: 11-2014

Job No. : CF1514  
Store : 2913  
Date : 05/14/15  
Drawn By : ES  
Checked By : MK

Sheet

E2.4



# 1 LARGE SCALE POWER PLAN

- SCALE: 1/2" = 1'-0"
- KITCHEN EQUIPMENT MARK NUMBER, SEE SCHEDULE FOR REQMENTS
  - PANEL AND CIRCUIT NUMBER
  - BRANCH BREAKER SIZE (AMP/POLES), REFER TO THE CONDUIT AND CONDUCTOR SCHEDULE FOR WIRE AND CONDUIT SIZE RELATED TO THE BREAKER (VERIFY)
  - XX X-XX, AMP/POLE
  - REFER TO THE KITCHEN ELEVATIONS FOR THE ROUGH-IN HEIGHT

# 2 KITCHEN EQUIP NOMENCLATURE

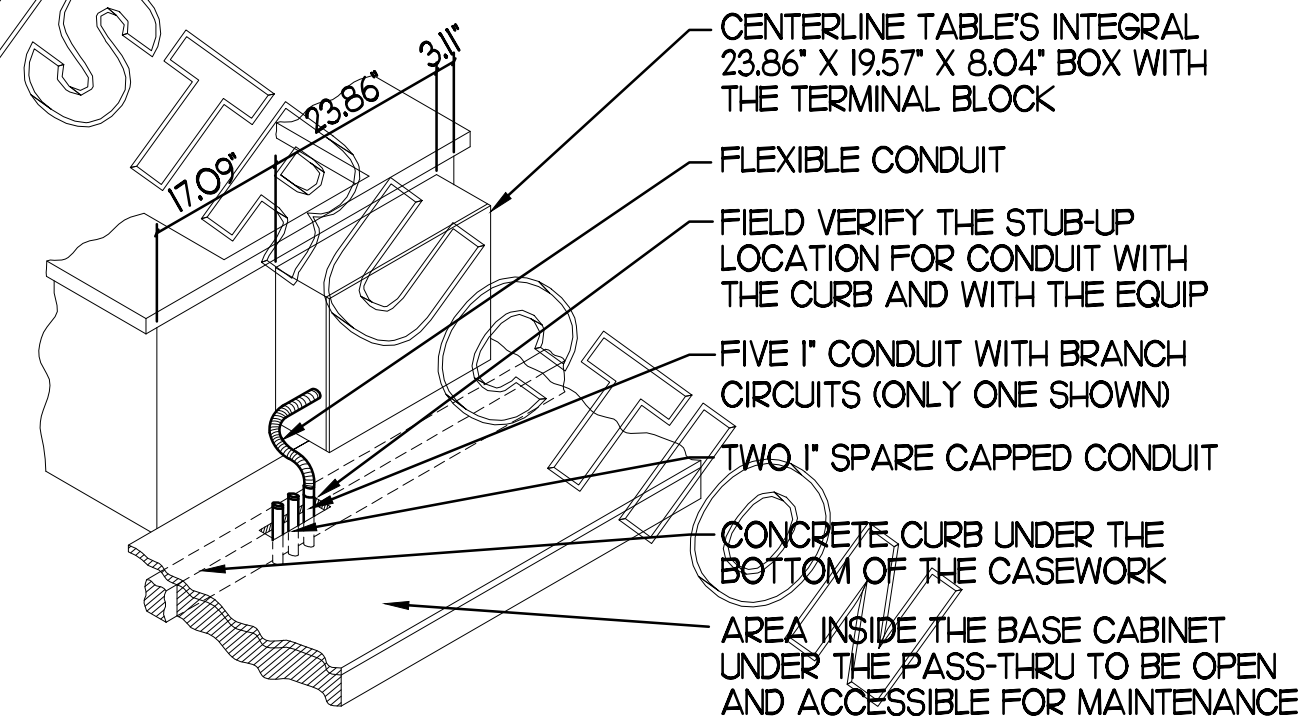
NO SCALE

# 3 KEY NOTES - POWER:

- CONNECT EVAPORATOR UNIT IN FREEZER TO FREEZER CONDENSING UNIT CONTROLS LOCATED ON ROOF. SEE SHEET E2.3.
- CONNECT EVAPORATOR UNIT IN COOLER TO COOLER CONDENSING UNIT CONTROLS LOCATED ON ROOF. SEE SHEET E2.3.
- NOT USED.
- CONNECT AS REQUIRED TO C-J FAN VIA SPEED CONTROLLER. CONNECT HOMERUN VIA RELAY IN "T-500" CONTROL SECTION.
- ROUTE THROUGH LIGHTING CONTROL SWITCH-BANK "SB". CONTROLLED BY SWITCHED "F". REFER TO SHEET E-21.
- SEE SHEET E2.3, ROOF ELECTRICAL PLAN, FOR THE LOCATION OF THE ICE MACHINE'S CONDENSER AND ADDITIONAL REQUIREMENTS.
- PROVIDE 3#12 IN 1/2" CONDUIT BETWEEN THE T-500 CONTROL PANEL AND THE ANSUL SYSTEM PANEL. SEE ANSUL SYSTEM WIRING DIAGRAM, DETAIL 3 ON SHEET E11 FOR ADDITIONAL INFORMATION.
- PROVIDE GROUND FAULT CIRCUIT INTERRUPTER (GFCI) TYPE RECEPTACLE IN CONFORMANCE WITH THE NEC REQUIREMENT FOR KITCHENS. IF NOT NOTED AS GFCI, THEN THE BREAKER IS TO BE GFCI TYPE.
- NOT USED.
- THE OUTLETS FOR THE OPEN FRYERS (ITEM #522) ARE FURNISHED BY THE EXHAUST HOOD SUPPLIER AND INSTALLED BY THE CONTRACTOR.
- NOT USED.
- SINGLE POLE SWITCH SHALL SERVE AS THE LOCAL "IN-SIGHT" MEANS OF DISCONNECT FOR EQUIPMENT ITEM AS NOTED. SEE DETAILS 2 AND 3 ON SHEET E12 FOR FURTHER INFORMATION.
- TWIST-LOCK 208V, 3PHASE, 30 AMP RECEPTACLE ABOVE AD-1 AT THE DT WINDOW. PROVIDE AND INSTALL A 30 AMP CORSET WITH NEMA L14-30 PLUG INTO THE KNOCKOUT ON THE TOP OF AD-1 AND TERMINATE ON THE LUGS IN THE UNIT'S WIRING COMPARTMENT.
- OVER-HEAD EQUIPMENT POWER (OEP) DROP CORD RECEPTACLES FROM A FLUSH MOUNTED CEILING OEP BOX. PROVIDE A-C-S OEP ASSEMBLY #12360-HOOC. ASSEMBLY WILL CONSIST OF A FLUSH CEILING OUTLET BOX, TWIST-LOCK PENDANT RECEPTACLES, STRAIGHT BLADE PENDANT RECEPTACLES, CORDS, STRAIN RELIEF, AND TWISTLOCK PLUGS. CONTACT MR. JIM JACOBSON AT A-C-S AT 800-639-7584 TO PURCHASE OEP BOX AND DROP CORD RECEPTACLES. PROVIDE LIQUID-TIGHT CONDUIT WITH CONDUCTORS FOR DIRECT CONNECTED EQUIPMENT. CONDUIT SHALL NOT TOUCH THE FLOOR WHEN EQUIPMENT IS IN PLACE. USE SUPPORT GRIPS W/ SUPPORT HOOK ATTACHED TO SHELVING ABOVE AS NEEDED. PASS & SETMOUR MODEL #FS075-U-G-6 OR EQUIVALENT.

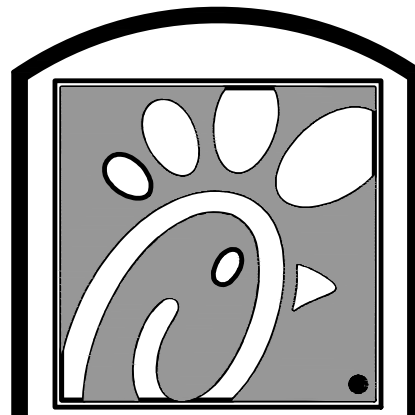
NOTE:  
SEE SHEET E25 FOR THE RECEPTACLES AND CIRCUITS FOR THE POS EQUIPMENT.

NOTE FOR GF TYPE RECEPTACLES:  
THE CONTRACTOR SHALL PROVIDE GROUND FAULT PROTECTION FOR ALL 120 VOLT, 15 AND 20 AMP RECEPTACLE OUTLET BRANCH CIRCUITS IN THE KITCHEN/FOOD PREPARATION AREAS. GROUND FAULT PROTECTION SHALL BE PROVIDED AT THE RECEPTACLE VIA A GROUND FAULT TYPE RECEPTACLE UNLESS OTHERWISE NOTED ON THE PLANS. SEE FLOOR PLAN FOR ADDITIONAL INFORMATION.



# 4 CENTERLINE TABLE ISOMETRIC

NO SCALE



Chick-fil-A

5200 Buffington Rd.  
Atlanta Georgia,  
30349-2998

Revisions:

Mark Date By

△

Mark Date By

△

Mark Date By

△

Seal

Kurzynske & Associates  
CONSULTING ENGINEERS  
825 Third Avenue, South  
Nashville, Tennessee 37210  
Telephone: (615) 255-5203  
Fax: (615) 255-5207  
Email: mail@kurzynske.com

STORE  
CABBAGE PATCH  
CUSTOM - IN-FILL  
25 West Underwood St.  
Cleveland, GA 30528

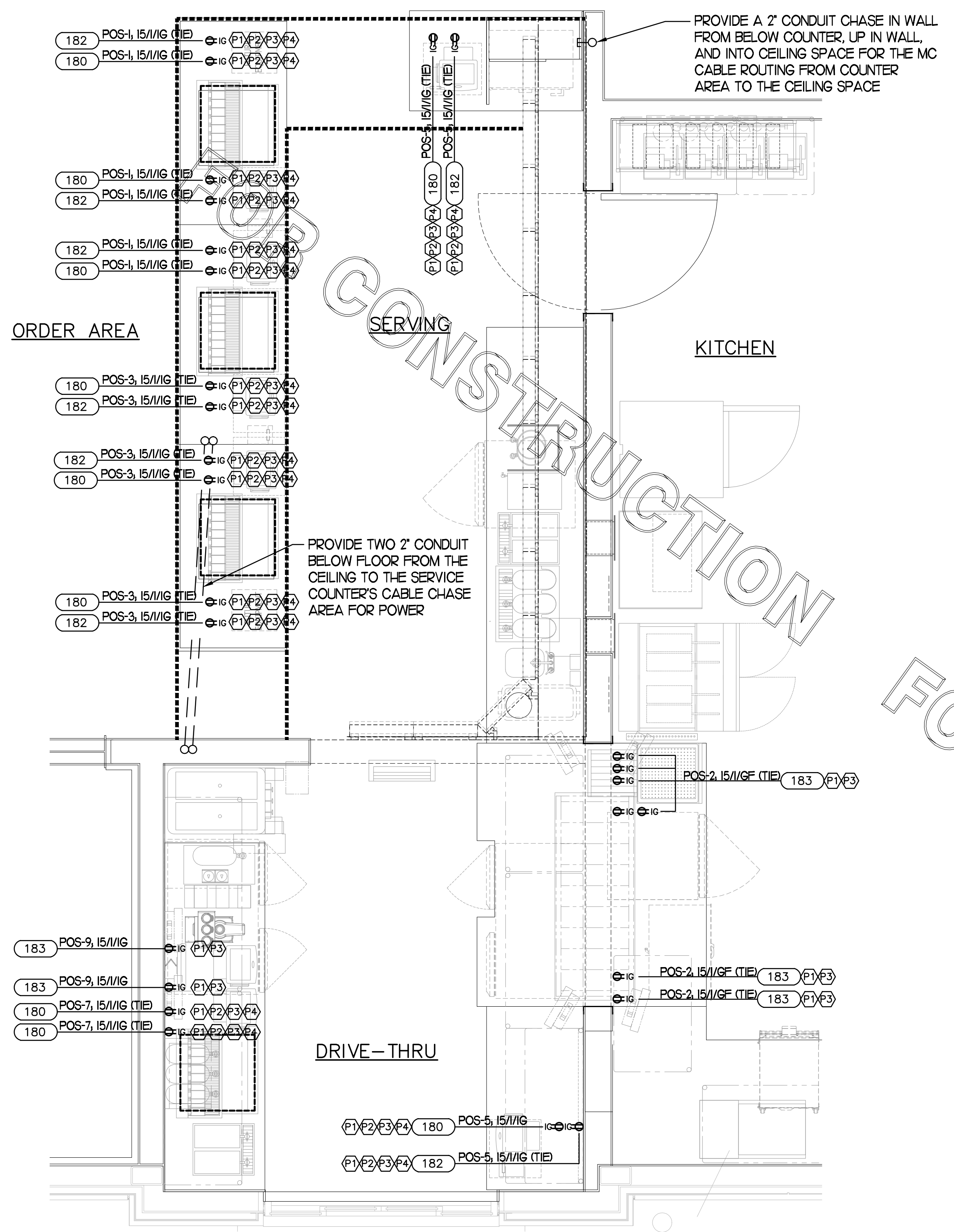
SHEET TITLE  
ENLARGED POS  
POWER PLAN

VERSION: V2  
ISSUE DATE: 11-2014

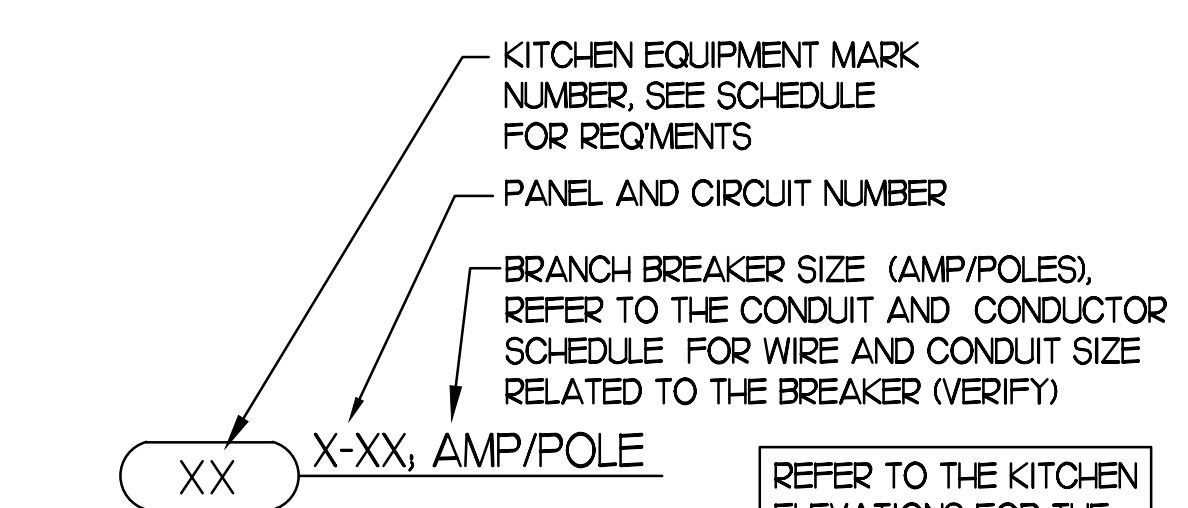
Job No. : CF1514  
Store : 2913  
Date : 05/14/15  
Drawn By : ES  
Checked By : MK

Sheet

E2.5



**1A** LARGE SCALE POS POWER PLAN - SERVING AREA  
SCALE: 1/2" = 1'-0"

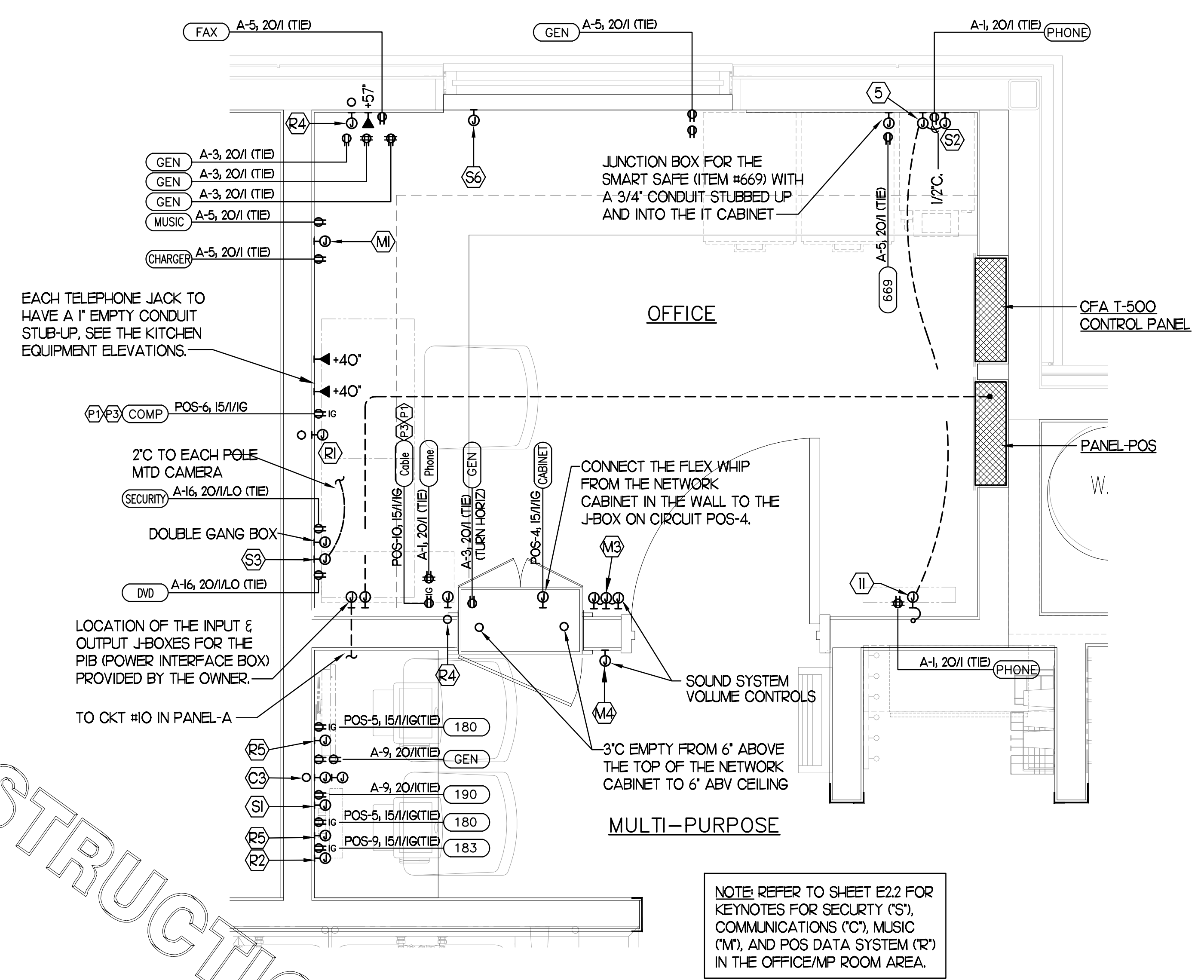


**2** KITCHEN EQUIP NOMENCLATURE  
NO SCALE

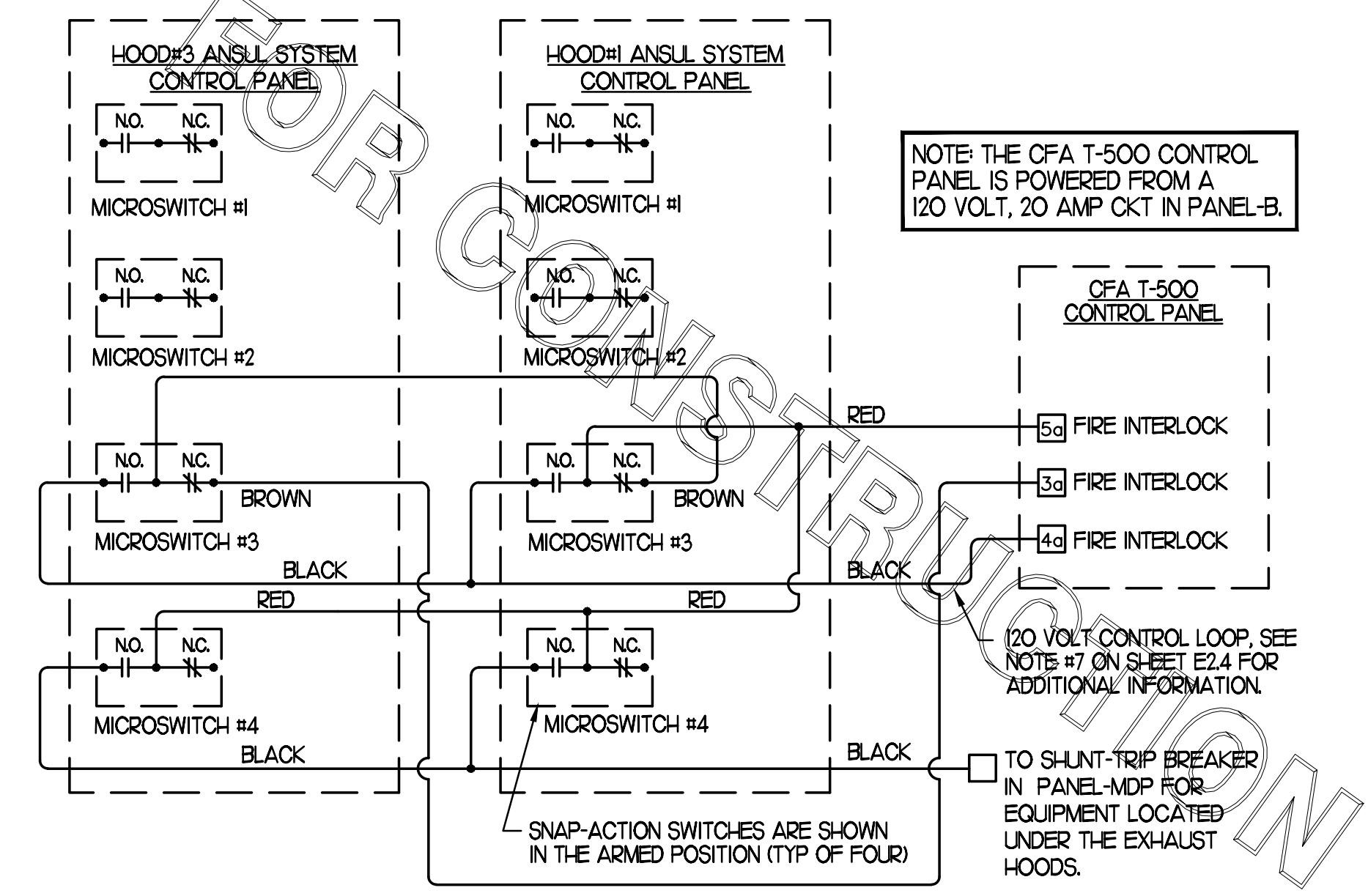
- 3 KEY NOTES - POS:**
- (P1) PROVIDE ORANGE ISOLATED GROUND (IG) DUPLEX RECEPTACLE.
  - (P2) PROVIDE GROUND FAULT PROTECTION FOR THESE DEVICES VIA A GROUND FAULT CIRCUIT BREAKER IF LOCAL CODE DEFINES THIS A FOOD PREPARATION AREA.
  - (P3) USE TYPE MC CABLE FOR THE ISOLATED GROUND CIRCUIT: #12 HOT, NEUTRAL, GREEN GROUND, STRIPED ISO GRD. EACH 15A HOMERUN SHALL BE DEDICATED TO A CIRCUIT BREAKER VIA DEDICATED CONDUCTORS WITHIN A CABLE ASSEMBLY. ALL MC CABLES SHALL BE RUN OVER-HEAD ABOVE THE CEILING AND RACKED TOGETHER ON J-HOOKS. NO SPLICES IN ANY HOMERUN CABLES FROM FIRST RECEPTACLE TO BREAKER.
  - (P4) THE RECEPTACLE BACKBOX AND SYSTEM CABLE JUNCTION BOX FOR ITEMS 180 AND 182 SHALL BE TURNED HORIZONTAL. REFER TO THE KITCHEN EQUIPMENT ROUGH-IN ELEVATIONS FOR ADDITIONAL INFORMATION.

**NOTE:**  
RECEPTACLES FOR THE POS EQUIPMENT SHALL BE THE ONLY ITEMS THAT CONNECT TO PANEL-POS. THERE SHALL BE NO OTHER LOADS CONNECTED TO THIS ISOLATED GROUND PANEL AND, IF SO, SHALL BE REMOVED AND RECONNECTED TO ANOTHER PANELBOARD AT THE EXPENSE OF THE CONTRACTOR.

**NOTE FOR POS GF IN KITCHEN:**  
THE CONTRACTOR SHALL PROVIDE GROUND FAULT PROTECTION FOR ALL 120 VOLT, 15 AND 20 AMP ISOLATED GROUND RECEPTACLE OUTLET BRANCH CIRCUITS IN THE KITCHEN/FOOD PREPARATION AREAS. GROUND FAULT PROTECTION SHALL BE PROVIDED AT THE BREAKER VIA A GROUND FAULT TYPE BRANCH BREAKER. (GFCI TYPE ISOLATED GRD RECEPTACLES ARE NOT AVAILABLE.)



**1B** LARGE SCALE POS POWER PLAN - OFFICE/MP ROOM  
SCALE: 3/4" = 1'-0"



**4** ANSUL SYSTEM PANEL WIRING DIAGRAM  
NOT TO SCALE

HOODS #1 AND #3

PANELBOARD SCHEDULE - PANEL-A												STORE #2913	
PANELBOARD DESCRIPTION				BREAKER OPTIONS				LOADS					
PANELBOARD NAME:		A		ARC-FAULT:		AF		KVA PHASE A		12.71			
MANUFACTURER / TYPE:		SEC/SIEMENS / P1		GROUND FAULT:		GF		KVA PHASE B		10.69			
VOLTS:		208 Y 120		HACR:		HA		KVA PHASE C		12.07			
PHASE / WIRE:		3 / 4		HID LTG RATED:		HD		AMPS PHASE A		105.9			
MAIN TYPE / CU BUS AMPS:		MLO / 250		HIGH MAG LOAD:		HM		AMPS PHASE B		89.04			
AIC SERIES RATING:		65,000		ISOLATED GROUND:		IG		AMPS PHASE C		100.6			
MOUNTING:		FLUSH		LOCK-ON:		LO		KVA CONNECTED		35.46			
NEMA RATING:		1		SHUNT TRIP:		ST		KVA DIVERSIFIED		29.22			
QUANTITY OF SECTIONS:		1		SWITCH RATED:		SW		AMPS CONNECTED		98.43			
PANEL WIDTH:		20 INCHES						AMPS DIVERSIFIED		81.09			
PHI	CIR	LOAD	EQ	LOAD	LOAD	CIR	LOAD	LOAD	EQ	LOAD	CIR	PHI	
Notes	NO.	DESCRIPTION	NO.	TYPE	KVA	*A/P/O	PH	CIR	LOAD	LOAD	EQ	Notes	
	1	TELEPHONE DT-VIDEO	R	0.540	20/1	A	20/1	1.650	K	305	TEA BREWER	2	
	3	OFFICE GEN & MUSIC	R	0.720	20/1	B	20/1	1.650	K	305	TEA BREWER	4	
	5	OFFICE GEN/PRINTER	R	1.080	20/1	C	20/1/GF	0.330	R		GENERAL OUTLET	6	
	7	DRINK TOWER	315W	1.300	20/1	A	20/1				SPARE	8	
	9	GENERAL OUTLETS	R	0.360	20/1	B	20/1/HM	1.702			PANEL-POS THRU PIB	10	
	11	GENERAL OUTLETS	R	0.720	20/1	C	20/1	1.200	K	315W	DRINK TOWER	12	
	H 13	U.C. REFRIG	421	X	0.480	20/1/LO	A	20/1	1.200	K	315W	DRINK TOWER	14
	H 15	U.C. REFRIG	420	X	0.225	20/1/LO	B	20/1/LO	0.360	R	SECURITY SYSTEM	16	
	I 17	U.C. REFRIG	421	X	0.480	20/1/GF	C	20/3/LO	0.794	X	449	COOLING CONDENSER	18
	I 19	U.C. REFRIG	420	X	0.225	20/1/GF	A	20/1	0.794	X		AND EVAP COIL	20
	21	SPARE						0.690	X			22	
	23	SANDWICH SLIDE	563	K	1.258	20/2	A	20/1	1.200	K	315W	DRINK TOWER	24
	25	SPARE						1.258	X			26	
	F 27	CARBONATOR	320	K	0.864	20/1/GF	B	20/1	1.882	X		AND EVAP COIL	28
	F 29	CARBONATOR	320	K	0.864	20/1/GF	C	20/1	1.882	X			30
	F 31	CARBONATOR	320	K	0.864	20/1/GF	A	20/1/GF	0.900	MS	410	FREEZER HEAT TAPE	32
	F 33	CARBONATOR	320	K	0.864	20/1/GF	B	20/1					34
	35	BOOSTER PUMP	M1	1.144	20/2	C	20/1	0.667	MI	EP1	HOOD EXHAUST FAN 1	36	
	37	GENERAL OUTLETS	M1	1.144	20/1	A	15/1	1.127	MI	EP2	HOOD EXHAUST FAN 2	38	
	H 39	GENERAL OUTLETS	R	0.540	20/1	B	15/1	0.828	MI	EP3	HOOD EXHAUST-FAN 3	40	
	A 41	HOOD CU FANS	M1	0.450	20/1	C	15/1			EP4	FUTURE HOOD EX. FAN 4	42	
*A/P/O INDICATES CIRCUIT BREAKER AMPACITY/NO. POLES/OPTIONS WITH OPTIONS AS NECESSARY													
PANELBOARD LOAD SUMMARY													
LOAD DESCRIPTION	TYPE	(KVA) X	DEMAND FACTOR	=	DIVERSIFIED KVA								
RECEPTACLES	R	4.650	PER(>10KVA@50%)	=	4.650								
MISCELLANEOUS	MS	2.202	1.25	=	2.753								
SINGLE PHASE MOTOR	M1	5.360	1.25	=	6.700								
KITCHEN EQUIPMENT	K	14.072	0.65	=	9.147								
KITCHEN REFRIG EQUIPMENT	X	9.178	0.65	=	5.966								
TOTAL					35.462								

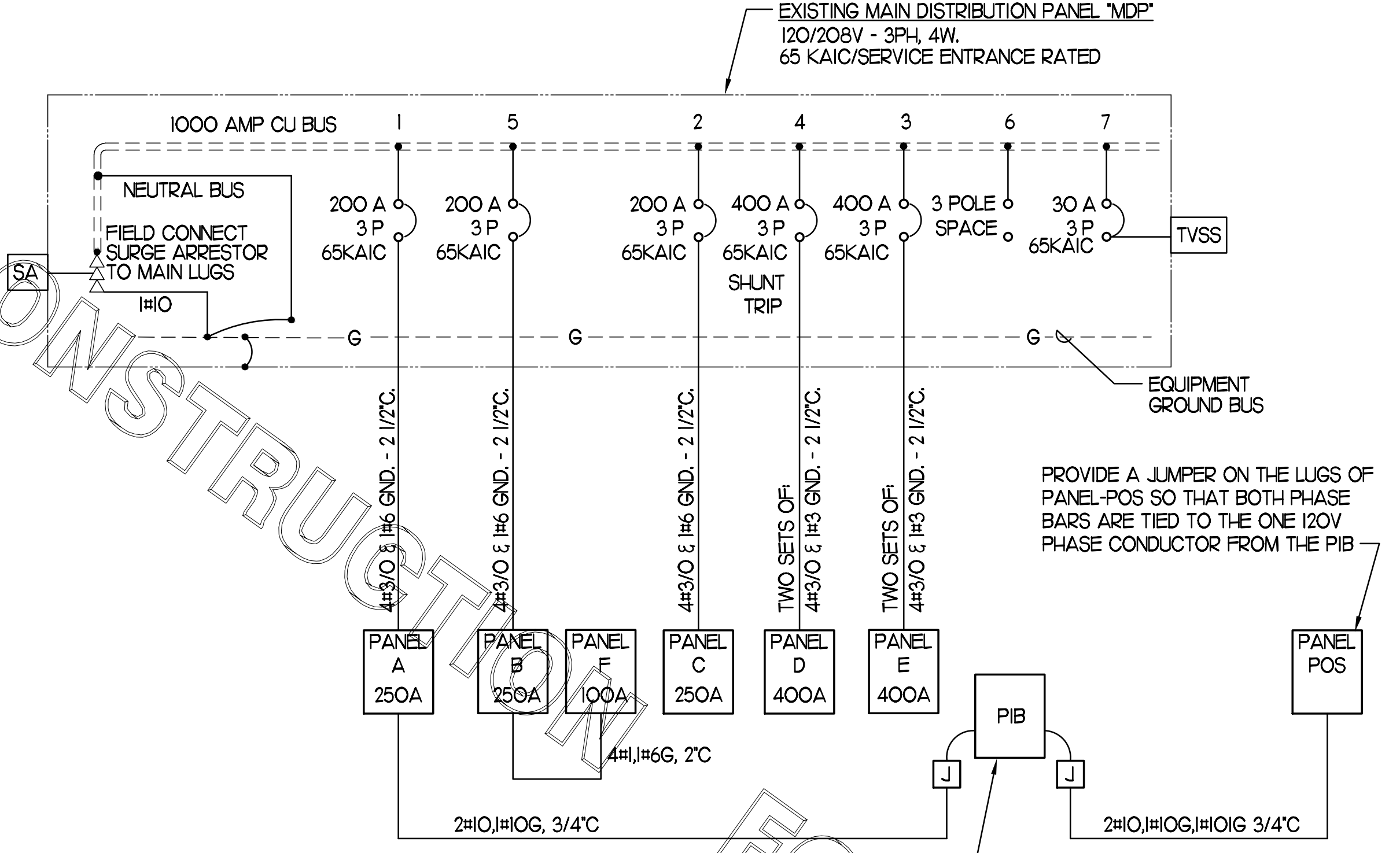
PANELBOARD SCHEDULE - PANEL-B												STORE #2913	
PANELBOARD DESCRIPTION				BREAKER OPTIONS				LOADS					
PANELBOARD NAME:		B		ARC-FAULT:		AF		KVA PHASE A		24.78			
MANUFACTURER / TYPE:		SEC/SIEMENS / P1		GROUND FAULT:		GF		KVA PHASE B		27.81			
VOLTS:		208 Y 120		HACR:		HA		KVA PHASE C		24.93			
PHASE / WIRE:		3 / 4		HID LTG RATED:		HD		AMPS PHASE A		206.5			
MAIN TYPE / CU BUS AMPS:		MLO / 250		HIGH MAG LOAD:		HM		AMPS PHASE B		231.7			
AIC SERIES RATING:		65,000		ISOLATED GROUND:		IG		AMPS PHASE C		207.7			
MOUNTING:		FLUSH		LOCK-ON:		LO		KVA CONNECTED		77.52			
NEMA RATING:		3R		SHUNT TRIP:		ST		KVA DIVERSIFIED		53.93			
QUANTITY OF SECTIONS:		1		SWITCH RATED:		SW		AMPS CONNECTED		215.2			
PANEL WIDTH:		20 INCHES						AMPS DIVERSIFIED		149.7			
PHI	CIR	LOAD	EQ	LOAD	LOAD	CIR	LOAD	LOAD	EQ	LOAD	CIR	PHI	
Notes	NO.	DESCRIPTION	NO.	TYPE	KVA	*A/P/O	PH	CIR	LOAD	LOAD	EQ	Notes	
	1	GENERAL OUTLETS	R	0.540	20/1	A	100/3	7.668				PANEL-F	
	H 3	COMM OUTLETS	R	0.720	20/1	B		9.250				4	
	H 5	GENERAL OUTLET	R	0.180	20/1	C		10.578				6	
	H 7	MILKSHAKE DISPENSER	300g	X	0.120	20/1	A	20/1				8	
	9	FUTURE ICE MAKER	380ZC	X	2.544	35/3	B	20/1/LO	1.128	K	400	SGL. R-I FRY FREEZER	
	11	SPARE						1.000	K	550	WARMING DRAWER	12	
	13	FUTURE ICE MAKER	380Z	X	2.544		A	20/1	1.840	K	560	FRY HOLDING STAT	
	F 15	DOUBLE JUICE DISP.	310	K	0.943	20/1	C	20/1	0.500	MI	25	D.T. WINDOW	
	H 17	DOUBLE JUICE DISP.	310	K	0.943	20/1	C	35/3	2.544	X	380ZC	ROOF MTD ICE MAKER	
	19	ICE DREAM MACHINE	300X	K	2.280	25/3/LO	A		2.544	X		20	
	21	SPARE						2.280	X			22	
	23	SPARE						0.720	X			24	
	25	ROOF RECEPTACLES	R	0.900	20/1	A	20/1	1.920	K			FUTURE THAW CABINET	
	27	DINING AREA OUTLETS	R	1.080	20/1	B	20/1	1.920	K	44AS		THAWING CABINET	
	29	DINING AREA OUTLETS	R	1.080	20/1	C	20/1					SPARE	
	I 31	FLY SYSTEM	211/212	MS	0.624	20/1/GF	A	20/1				SPARE	
	H 33	DOUBLE JUICE DISP.	310	K	0.943	20/1	B	20/1	0.380	EL		REFUSE ENCLOSURE	
	H 35	LEMON JUICER STAND	606	R	0.180	20/1	C	20/1/LO	0.360	MS		T-500/SHUNT TRIP	
	37	ICE DREAM MACHINE	300X	K	1.800	20/3/LO	A	30/2	2.000	K	308	COFFEE MAKER	
	39	SPARE						1.800	X			40	
	41	SPARE						0.720	R			GEN.OUTLET/DOORBELL	
*A/P/O INDICATES CIRCUIT BREAKER AMPACITY/NO. POLES/OPTIONS WITH OPTIONS AS NECESSARY													
PANELBOARD LOAD SUMMARY													
LOAD DESCRIPTION	TYPE	(KVA) X	DEMAND FACTOR	=	DIVERSIFIED KVA								
EXTERIOR LIGHTING & SIGNAGE	EL	0.380		=	0.380								
RECEPTACLES	R	7.200	PER(>10KVA@50%)	=	7.200								
MISCELLANEOUS	MS	0.984	1.25	=	1.230								
SINGLE PHASE MOTOR	M1	0.500	1.25	=	0.625								
KITCHEN EQUIPMENT	K	45.954	0.65	=	29.870								
KITCHEN REFRIG EQUIPMENT	X	22.500	0.65	=	14.625								
TOTAL					77.518								

### PANELBOARD NOTES

- CONTROLLED BY RELAY IN CONTROL PANEL CFA-T500 AND STORE-OPEN EXHAUST FAN SWITCH.
- CONTROLLED BY EXTERIOR SIGN RELAY IN CONTROL PANEL CFA-T500.
- CONTROLLED BY EXTERIOR LIGHTING RELAY CONTROL PANEL CFA-T500.
- CONTROLLED BY EXTERIOR LIGHTING RELAY - DUSK TO DAWN ZONE.
- CONTROLLED BY PARKING LOT LIGHTING CONTROL SWITCH.
- GFCI TYPE BREAKER TO BE 30MA TYPE BREAKER.
- NOT USED.
- THE CONTRACTOR SHALL PROVIDE GROUND FAULT PROTECTION FOR ALL 120 VOLT, 15 AND 20 AMP RECEPTACLES IN THE KITCHEN/FOOD PREPARATION AREA. THE GROUND FAULT PROTECTION SHALL BE PROVIDED AT THE RECEPTACLE AS A GROUND FAULT TYPE RECEPTACLE UNLESS NOTED OTHERWISE. (NOTE THAT THE RECEPTACLES LOCATED IN THE OEP BOX, THE KITCHEN/SERVING AREA RECEPTACLES SERVING POS EQUIPMENT, AND THE CIRCUIT FOR THE FLY SYSTEM SHALL BE PROTECTED BY GROUND FAULT TYPE CIRCUIT BREAKERS RATHER THAN GROUND FAULT TYPE RECEPTACLES SINCE ISOLATED GROUNDING TYPE RECEPTACLES, DROP-CORD RECEPTACLES, AND CLOCK TYPE RECEPTACLES ARE NOT AVAILABLE AS GROUND-FAULT TYPE RECEPTACLES.) GFCI BREAKERS REQUIRE A DEDICATED NEUTRAL (NOT SHARED) TO OPERATE PROPERLY.
- PROVIDE EQUIPMENT GROUND FAULT PROTECTOR TYPE CIRCUIT BREAKER.
- CONTROLLED BY INTERIOR LIGHTING RELAYS IN CONTROL PANEL T-500. LIGHTS SHALL TURN ON WHEN STORE IS OCCUPIED.

PANELBOARD SCHEDULE - PANEL-C												STORE #2913	
PANELBOARD DESCRIPTION				BREAKER OPTIONS				LOADS					
PANELBOARD NAME:		C		ARC-FAULT:		AF		KVA PHASE A		8.995			
MANUFACTURER / TYPE:		SEC/SIEMENS / P1		GROUND FAULT:		GF		KVA PHASE B		6.812			
VOLTS:		208 Y 120		HACR:		HA		KVA PHASE C		8.44			
PHASE / WIRE:		3 / 4		HID LTG RATED:		HD		AMPS PHASE A		74.96			
MAIN TYPE / CU BUS AMPS:		MLO / 250		HIGH MAG LOAD:		HM		AMPS PHASE B		56.76			
AIC SERIES RATING:		65,000		ISOLATED GROUND:		IG		AMPS PHASE C		70.33			
MOUNTING:		FLUSH		LOCK-ON:		LO		KVA CONNECTED		24.25			
NEMA RATING:		3R		SHUNT TRIP:		ST		KVA DIVERSIFIED		26.53			
QUANTITY OF SECTIONS:		1		SWITCH RATED:		SW		AMPS CONNECTED		67.3			
PANEL WIDTH:		20 INCHES						AMPS DIVERSIFIED		73.63			
PHI	CIR	LOAD	EQ	LOAD	LOAD	CIR	LOAD	LOAD	EQ	LOAD	CIR	PHI	
Notes	NO.	DESCRIPTION	NO.	TYPE	KVA	*A/P/O	PH	CIR	LOAD	LOAD	EQ	Notes	
	J 1	KITCHEN LTG	L	0.994	20/1	A	20/1	0.800	EL			BUILDING SIGNAGE	
	J 3	KITCHEN LTG	L	1.203	20/1	B	20/1	0.800	EL			BUILDING SIGNAGE	
	J 5	RESTROOM LTG & EF-5	L	0.881	20/1	C	20/1					SPARE	
	J 7	DINING AREA LTG	L	0.337	20/1	A	20/1	1.440	MS			WATER HEATER	
	J 9	PLAY AREA LTG	L	0.443	20/1	B	20/1					SPARE	
	J 11	DINING AREA LTG	L	0.734	20/1	C	20/1/HD/LO	0.624	EL			SECURITY/FLAGPOLE LTG	
	J 13	SERVING AREA LTG	L	0.184	20/1	A	20/1					SPARE	
	15	SPARE						20/1				SPARE	
	17	MENUBOARDS	671	L	1.740	20/1	C	20/1				SPARE	
	B 19	DIRECTIONAL SIGNS	EL	1.080	20/1	A	20/1/HD					BLDG EXTERIOR LTG	
	E 21	PARKING LOT LTG	EL	0.930	20/1/HD	B	20/1/HD	0.746	EL			BLDG EXTERIOR LTG	
	E 23	PARKING LOT LTG	EL	0.930	20/1/HD	C	20/1					SPARE	
	E 25	PARKING LOT LTG	EL	0.930	20/1/HD	A	20/1					SPARE	
	E 27	PARKING LOT LTG	EL	0.930	20/1/HD	B	20/1					SPARE	
	E 29	PARKING LOT LTG	EL	0.930	20/1/HD	C	20/1					SPARE	
	E 31	PARKING LOT LTG	EL	0.930	20/1/HD	A	20/1					SPARE	
	33	MENUBOARD COVE LTG	L	0.160	20/1	B	20/1					SPARE	
	35	FRZR/COOLER LTG	410/449	L	1.900	20/1/LO	C	20/1				SPARE	
	B 37	MAIN ID SIGN	EL	0.800	20/1	A	20/1	0.780	EL			DRIVE-THRU CANOPY	
	B 39	MAIN ID SIGN	EL	0.800	20/1	B	20/1	0.800	EL			BUILDING SIGNAGE	
	B 41	MAIN ID SIGN	EL	0.800	20/1	C	20/1	0.800	EL			BUILDING SIGNAGE	
*A/P/O INDICATES CIRCUIT BREAKER AMPACITY/NO. POLES/OPTIONS WITH OPTIONS AS NECESSARY													
PANELBOARD LOAD SUMMARY													
LOAD DESCRIPTION	TYPE	(KVA) X	DEMAND FACTOR	=	DIVERSIFIED KVA								
LIGHTING	L	7.676	1.25	=	9.595								
EXTERIOR LIGHTING & SIGNAGE	EL	15.130	1	=	15.130								
MISCELLANEOUS	MS	1.											

FOR CONSTRUCTION



PROVIDE A JUMPER ON THE LUGS OF PANEL POS SO THAT BOTH PHASE BARS ARE TIED TO THE ONE 120V PHASE CONDUCTOR FROM THE PIB.

POWER INTERFACE BOX (PIB) LOCATED UNDER THE OFFICE COUNTER. PROVIDE INCOMING J-BOX AND OUTGOING J-BOX FLUSH IN THE WALL WITH FLEX CONDUIT CONNECTION TO THE PIB. THE CONDUCTORS ARE TO CONNECT TO THE TERMINAL BLOCKS OF THE PIB.

**1 SINGLE LINE DIAGRAM**  
NOT TO SCALE

**3 SINGLE LINE DIAGRAM NOTES**

- VERIFY SERVICE LOCATIONS AND CONFORM TO THE REQUIREMENTS OF THE POWER COMPANY AND/OR DEVELOPER. POWER COMPANY AND/OR DEVELOPER SHALL BE CONTACTED PRIOR TO BEGINNING CONSTRUCTION TO ARRANGE AND VERIFY FOR THE INSTALLATION OF THE POWER COMPANY SERVICE, METER AND OTHER ITEMS.
- GROUND ALL EQUIPMENT AND SERVICES IN ACCORDANCE WITH ARTICLE 250 OF THE NATIONAL ELECTRICAL CODE, LOCAL APPLICABLE CODES, AND ALSO AS INDICATED ON DRAWINGS.
- MAKE THE NECESSARY INSPECTIONS OF EXISTING SITE AND SERVICE LOCATIONS AS REQUIRED FOR THIS WORK AND MAKE ALLOWANCE FOR EXISTING CONDITIONS BEFORE SUBMITTING BID. VERIFY WORK REQUIRED WITH POWER COMPANY AND TELEPHONE COMPANY.
- CUT AND PATCH THE CONSTRUCTION WORK AS REQUIRED FOR PROPER INSTALLATION OF THE ELECTRICAL WORK. ALL PATCHING SHALL MATCH THE SURROUNDING WORK TO THE SATISFACTION OF THE ARCHITECT. ALL CONDUIT SHALL BE INSTALLED CONCEALED UNLESS SPECIFICALLY APPROVED BY THE ARCHITECT. COORDINATE SAW CUTTING WITH LANDLORD'S OR OWNER'S REPRESENTATIVE.
- WIRE AND CABLE:
  - A. CONDUCTORS SHALL BE COPPER, #12 AWG, MINIMUM UNLESS SPECIFICALLY NOTED OTHERWISE.
  - B. CONDUCTORS #10 AWG AND SMALLER SHALL BE SOLID AND #8 AWG AND LARGER SHALL BE STRANDED. INSULATION SHALL BE 600 VOLT, THHN/THWN.
- PROVIDE ENGRAVED LAMINATED PHENOLIC BLACK-ON-WHITE (UNLESS NOTED OTHERWISE) NAMEPLATES SECURED TO EQUIPMENT WITH ADHESIVE AND SCREWS FOR PANELBOARDS, RELAY CABINETS, TRANSFORMERS, DISTRIBUTION BOARDS, AND MAIN PANELBOARD - IDENTIFYING EQUIPMENT DESIGNATION (CORRESPONDING WITH DESIGNATION USED ON DRAWINGS) AND EQUIPMENT VOLTAGE. LETTERING SHALL BE 1/4" HIGH. PROVIDE LABELS FOR CIRCUIT BREAKERS, FUSIBLE SWITCHES AND STARTERS IN PANELBOARDS AND DISTRIBUTION BOARDS FOR EACH DEVICE IDENTIFYING EQUIPMENT CONTROLLED. LETTERING SHALL BE 1/8" HIGH.
- ALL DEVICES SHALL HAVE AN INTERRUPTING CAPACITY NOT LESS THAN THE POWER COMPANY AVAILABLE FAULT CURRENT, OR AS INDICATED ON THE DRAWINGS.
- 120/208 VOLT BRANCH CIRCUIT PANELBOARD BREAKERS SHALL HAVE A MINIMUM UL SERIES RATING OF 65 KAIC WITH UP-STREAM FEEDER BREAKERS AS NOTED.
- AVAILABLE SPACE FOR MAIN PANELBOARD IS LIMITED. PANELBOARD MUST FIT IN ALLOCATED SPACE. COORDINATE WITH CONSTRUCTION AS REQUIRED.
- ALL WIRING SHALL BE IN CONDUIT, E.M.T. OR RIGID. FLEXIBLE CONDUIT MAY ONLY BE USE FOR FINAL CONNECTIONS AND WITH GREEN EQUIPMENT GROUNDING CONDUCTOR.

**4 SWITCHGEAR AND CONTROL EQUIPMENT NOTES:**

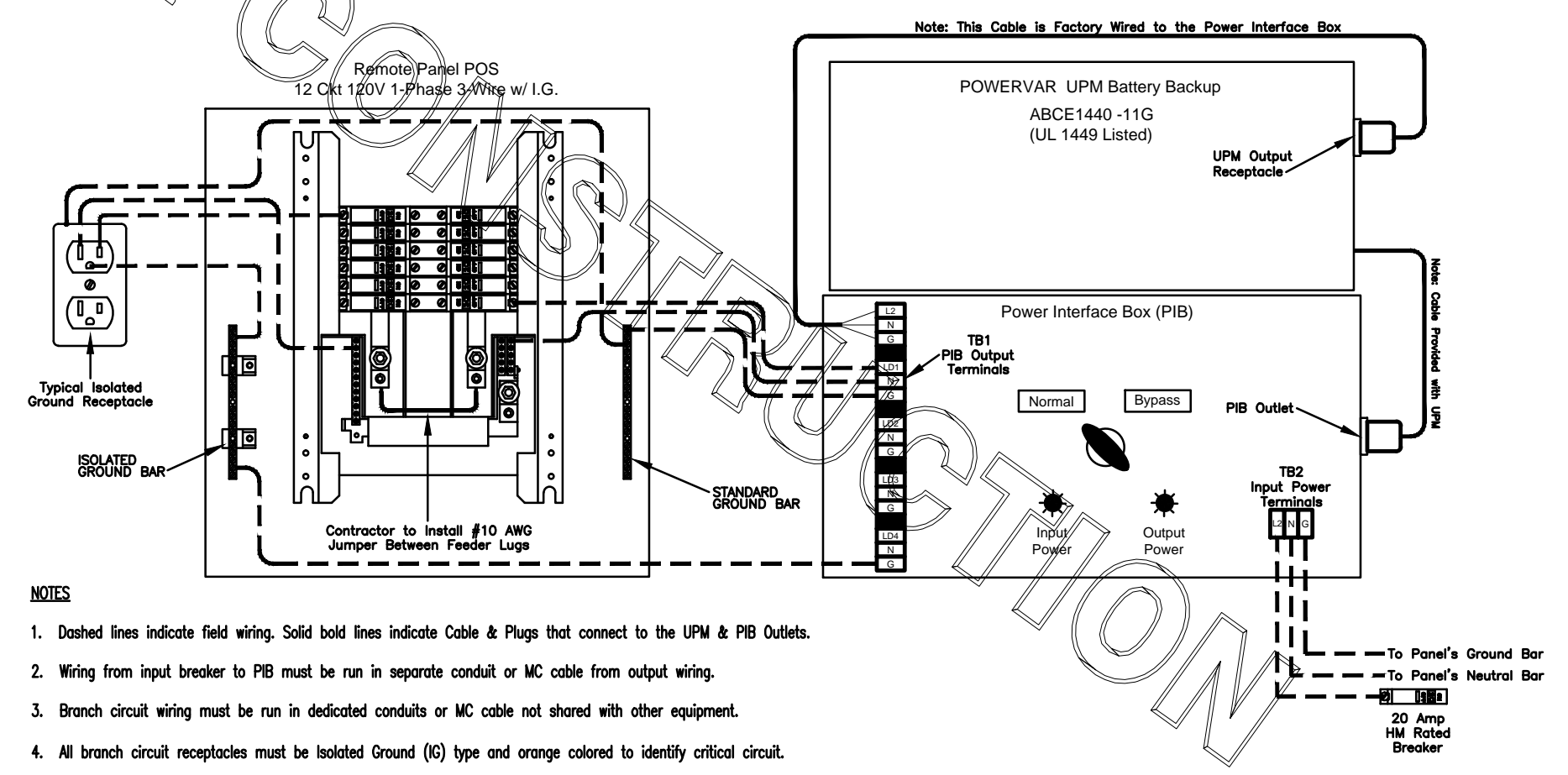
- PURCHASE PANELBOARDS, WIREWAYS, SURGE ARRESTOR, AND TVSS FROM SUNCOAST ENVIRONMENTAL, INC. CONTACT: SCOTT DYER (877)544-6679. NO SUBSTITUTIONS ALLOWED.
- PURCHASE CONTROL PANEL "CFA-T500" FROM SUNCOAST ENVIRONMENTAL, INC. (NO SUBSTITUTIONS ALLOWED) ALL EQUIPMENT IN THE CONTROL PANEL SHALL BE INSTALLED, WIRED AND CONNECTED AT THE FACTORY, INCLUDING: AUTOMATIC LIGHTING CONTROL SYSTEM, LIGHTING RELAYS, HVAC STARTERS, POWER SUPPLIES, MISCELLANEOUS RELAYS AND CONTROLS, AND THERMOSTATS.
- CONTRACTOR SHALL PROVIDE PANEL FEEDERS A, B, C, D, E, F, AND POS, BRANCH CIRCUIT CONDUIT AND WIRE AND INSTALL ALL EQUIPMENT AS REQUIRED.
- ALL BREAKERS AND PANELS SHALL BE SIEMENS AS DESIGNED AND FURNISHED THRU SUNCOAST ENVIRONMENTAL, INC. (NO SUBSTITUTIONS ALLOWED.)
- TVSS AND SURGE ARRESTOR UNITS SHALL BE MOUNTED DIRECTLY ADJACENT TO THE SIDE OF THE MAIN DISTRIBUTION PANEL IN NEMA 3R ENCLOSURES. CLOSE NIPPLE THE UNITS TO THE SIDE OF THE PANEL. PROVIDE CONNECTION OF TVSS UNIT TO BREAKER IN PANEL. CONNECT SURGE ARRESTOR TO MAIN INCOMING LUGS OF THE PANEL. CONNECT BOTH WITH WIRE LENGTH OF MAXIMUM 12" AND WITHOUT BENDS IN WIRING.

ELECTRICAL LOAD SUMMARY - STORE #2913	
(NOT ALL ELECTRIC RESTAURANT)	
THE FOLLOWING IS BASED ON NEC 2014-220.88	
LOAD DESCRIPTION	KVA
LIGHTING	7.68
TRACK LIGHTING AT 75 WATTS/FOOT	3.15
EXTERIOR LIG AND SIGNAGE	15.51
RECEPTACLES	11.85
MISCELLANEOUS	4.63
AIR CONDITIONING	100.44
ELECTRIC HEAT	7.88
SINGLE PHASE MOTORS	6.82
KITCHEN EQUIPMENT	236.44
KITCHEN REFRIGERATION EQUIPMENT	31.68
TOTAL CONNECTED KVA	426.07
IF TOTAL IS 0-200 KVA, THEN TOTAL LOAD 100%	0.00
IF TOTAL IS 201-325 KVA, THEN LOAD OVER 200 AT 50% + 200	0.00
IF TOTAL LOAD IS 326-800 KVA, THEN LOAD OVER 325 AT 45% + 262.5	307.98
IF TOTAL LOAD IS OVER 800 KVA, THEN LOAD OVER 800 AT 20% + 476.3	0.00
DIVERSIFIED AMPS AT 208 VOLT	855.51

**2 CONDUIT AND CONDUCTORS SCHEDULE (Based on 2014 NEC)**

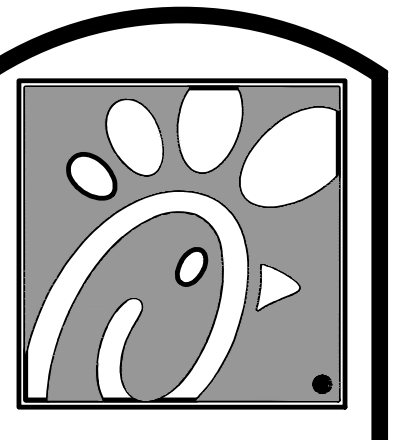
Mark No.	OCP Device (Amp/Poles)	Conductors		Phase & Neutral		Min Eq Qty	Eq Grd Size	No. Sets	Raceway Size (nominal inches)							
		60d C	75d C	Qty	Type				EMT	IMC	RIGID	PVC	EMT	IMC	PVC	
1	20/1	20	-	2	12	THHN	1	12	One	0.75	0.75	0.75	0.75	0.75	0.75	0.75
2	20/2	20	-	3	12	THHN	1	12	One	0.75	0.75	0.75	0.75	0.75	0.75	0.75
3	20/3	20	-	4	12	THHN	1	12	One	0.75	0.75	0.75	0.75	0.75	0.75	0.75
4	25/1	30	-	2	10	THHN	1	10	One	0.75	0.75	0.75	0.75	0.75	0.75	0.75
5	25/2	30	-	3	10	THHN	1	10	One	0.75	0.75	0.75	0.75	0.75	0.75	0.75
6	25/3	30	-	4	10	THHN	1	10	One	0.75	0.75	0.75	0.75	0.75	0.75	0.75
7	30/1	30	-	2	10	THHN	1	10	One	0.75	0.75	0.75	0.75	0.75	0.75	0.75
8	30/2	30	-	3	10	THHN	1	10	One	0.75	0.75	0.75	0.75	0.75	0.75	0.75
9	30/3	30	-	4	10	THHN	1	10	One	0.75	0.75	0.75	0.75	0.75	0.75	0.75
10	40/1	40	-	2	8	THHN	1	10	One	0.75	0.75	0.75	0.75	0.75	0.75	0.75
11	40/2	40	-	3	8	THHN	1	10	One	0.75	0.75	0.75	0.75	0.75	0.75	0.75
12	40/3	40	-	4	8	THHN	1	10	One	0.75	0.75	0.75	0.75	0.75	0.75	0.75
13	50/1	55	-	2	6	THHN	1	10	One	0.75	0.75	0.75	0.75	0.75	0.75	0.75
14	50/2	55	-	3	6	THHN	1	10	One	0.75	0.75	0.75	0.75	1.00	1.00	1.00
15	50/3	55	-	4	6	THHN	1	10	One	1.00	1.00	1.00	1.00	1.00	1.00	1.00
16	60/1	70	-	2	4	THW	1	8	One	1.00	1.00	1.00	1.00	1.00	1.00	1.25
17	60/2	70	-	3	4	THW	1	8	One	1.25	1.00	1.25	1.25	1.25	1.25	1.25
18	60/3	70	-	4	4	THW	1	8	One	1.25	1.25	1.25	1.25	1.25	1.25	1.25
19	70/1	70	-	2	4	THW	1	8	One	1.00	1.00	1.00	1.00	1.25	1.00	1.25
20	70/2	70	-	3	4	THW	1	8	One	1.25	1.00	1.25	1.25	1.25	1.25	1.25
21	70/3	70	-	4	4	THW	1	8	One	1.25	1.25	1.25	1.25	1.25	1.25	1.25
22	80/2	85	-	3	3	THW	1	8	One	1.25	1.25	1.25	1.25	1.25	1.25	1.25
23	80/3	85	-	4	3	THW	1	8	One	1.25	1.25	1.25	1.25	1.50	1.25	1.50
24	90/2	95	-	3	2	THW	1	8	One	1.25	1.25	1.25	1.25	1.50	1.25	1.50
25	90/3	95	-	4	2	THW	1	8	One	1.50	1.25	1.50	1.50	1.50	1.50	1.50
26	100/2	110	-	3	1	THW	1	6	One	1.50	1.50	1.50	1.50	2.00	2.00	2.00
27	100/3	110	-	4	1	THW	1	6	One	2.00	2.00	2.00	2.00	2.00	2.00	2.00
28	110/2	-	115	3	2	THW	1	6	One	1.25	1.25	1.25	1.25	1.50	1.25	1.50
29	110/3	-	115	4	2	THW	1	6	One	1.50	1.25	1.25	1.50	1.50	1.50	1.50
30	125/2	-	130	3	1	THW	1	6	One	1.50	1.50	1.50	1.50	2.00	2.00	2.00
31	125/3	-	130	4	1	THW	1	6	One	2.00	2.00	2.00	2.00	2.00	2.00	2.00
32	150/2	-	150	3	1/0	THW	1	6	One	2.00	1.50	2.00	2.00	2.00	2.00	2.00
33	150/3	-	150	4	1/0	THW	1	6	One	2.00	2.00	2.00	2.00	2.00	2.00	2.00
34	175/2	-	175	3	2/0	THW	1	6	One	2.00	2.00	2.00	2.00	2.00	2.00	2.00
35	175/3	-	175	4	2/0	THW	1	6	One	2.00	2.00	2.00	2.00	2.50	2.50	2.50
36	200/2	-	200	3	3/0	THW	1	6	One	2.00	2.00	2.00	2.00	2.50	2.50	2.50
37	200/3	-	200	4	3/0	THW	1	6	One	2.50	2.50	2.50	2.50	2.50	2.50	2.50
38	225/2	-	230	3	4/0	THW	1	4	One	2.50	2.00	2.50	2.50	2.50	2.50	2.50
39	225/3	-	230	4	4/0	THW	1	4	One	2.50	2.50	2.50	2.50	2.50	3.00	3.00
40	250/3	-	255	4	250	THW	1	4	One	2.50	3.00	3.00	3.00	3.00	3.00	3.00
41A	300/3	-	285	4	300	THW	1	4	One	3.00	3.00	3.00	3.00	3.00	3.00	3.00
41B	300/3	-	310	4	350	THW	1	4	One	3.00	3.00	3.00	3.00	3.00	3.00	3.00
42A	350/3	-	335	4	400	THW	1	4	One	3.00	3.50	3.50	3.50	3.50	3.50	3.50
42B	350/3	-	380	4	500	THW	1	4	One	3.50	3.50	3.50	3.50	3.50	3.50	3.50
43A	400/3	-	380	4	500	THW	1	3	One	3.50	3.50	3.50	3.50	3.50	3.50	3.50
43B	400/3	-	400	4	3/0	THW	2	3	Two	2.50	2.50	2.50	2.50	2.50	2.50	2.50
44A	600/3	-	570	4	300	THW	2	1	Two	3.00	3.00	3.00	3.00	3.00	3.00	3.00
44B	600/3	-	620	4	350	THW	2	1	Two	3.00	3.00	3.00	3.00	3.00	3.00	3.50
45A	800/3	-	760	4	500	THW	2	1/0	Two	3.50	3.50	3.50	3.50	3.50	3.50	3.50
45B	800/3	-	820	4	600	THW	2	1/0	Two	4.00	4.00	4.00	4.00	4.00	4.00	4.00
46	1000/3	-	1005	4	400	THW	3	2/0	Three	3.50	3.50	3.50	3.50	3.50	3.50	3.50
47	1200/3	-	1240	4	350	THW	4	3/0	Four	3.50	3.50	3.50	3.50	3.50	3.50	4.00
48	1600/3	-	1675	4	400	THW	5	4/0	Five	4.00	4.00	4.00	4.00	4.00	4.00	4.00

Notes:  
Conductors are rated at 600 volt or below and are to be copper.  
NEC Table 310.16 (310.15(B)(16) in 2011) is used for the basis of the conductor ampacities, which is not more than three current carrying conductors in a raceway at an ambient temperature of 30 deg C with 60 deg C rated conductors and connectors per 110.14-C-1 for up to 100 amp rated and up to #1 AWG conductors for equipment terminations and 75 deg C rated conductors and termination connectors for larger than 100 amp or above #1 AWG conductors.  
NEC Tables 4, 5, and Appendix C is used for the basis of the conduit sizes. Table C1 for EMT, Table C4 for IMC, Table C8 for Rigid, and Table C10 for PVC (Sch 40).  
All Branch Feeders and Branch Circuits shall include a green Equipment Grounding Conductor.  
Omit Grounding conductor on Service Entrance Feeders.  
Omit Neutral conductor on all Delta primary transformer feeders or 3 phase loads not requiring a neutral.  
The above conductors are not calculated for Voltage Drop. Any circuits that exceed 100 feet shall be calculated by the installer to have less than a three percent voltage drop on feeders and five percent on branch circuits per the NEC.



- NOTES
- Dashed lines indicate field wiring. Solid bold lines indicate Cable & Plugs that connect to the UPM & PIB Outputs.
  - Wiring from input breaker to PIB must be run in separate conduit or MC cable from output wiring.
  - Branch circuit wiring must be run in dedicated conduits or MC cable not shared with other equipment.
  - All branch circuit receptacles must be isolated Ground (IG) type and orange colored to identify critical circuit.
  - POWERVAR UPM Battery Backup is mounted on top of the PIB and connects with cable plugs and outlets.

POWERVAR LACP with POWER INTERFACE BOX (PIB) and Panel POS Wiring Diagram



**Chick-fil-A**

5200 Buffington Rd.  
Atlanta Georgia,  
30349-2998

Revisions:

Mark	Date	By
△		

Mark	Date	By
△		

Mark	Date	By
△		

Seal

**Kurzynske & Associates**  
CONSULTING ENGINEERS  
825 Third Avenue, South  
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STORE  
CABBAGE PATCH  
CUSTOM - IN-FILL

25 West Underwood St.  
Cleveland, GA 30528

SHEET TITLE  
SINGLE LINE  
RISER DIAGRAM

VERSION: V2  
ISSUE DATE: 11-2014

Job No. : CF1514  
Store : 2913  
Date : 05/14/15  
Drawn By : ES  
Checked By : MK

Sheet  
**E3.2**

SECTION C16100  
ELECTRICAL GENERAL PROVISIONS

PART 1 - GENERAL

- 1.01 WORK INCLUDED
- A. Provide all materials, labor and equipment required to furnish and install a complete electrical system as indicated on drawings and as specified herein.
- 1.02 REGULATORY REQUIREMENTS
- A. Equipment furnished shall be UL listed where such label is available. Installation shall conform to UL standards where applicable.
- B. Electrical work shall be installed in accordance with drawings and specifications, NEC and NFPA codes in effect at project location, state and local electrical and building codes and special codes having jurisdiction over specific portions within complete installation.
- C. Obtain permits and certificates of approval from all authorities having jurisdiction over the installation and pay all fees required.
- 1.03 SUBMITTALS
- A. Submit list of materials and equipment prior to manufacture, order or installation and within twenty days after award of contract for approval. Include each item of material and equipment whether or not shop drawings are also required. List shall include name of manufacturer, catalog number and other complete identification as well as dimensions and detailed data. Submittals shall include for the following:
1. Lighting Fixtures
  2. Panelboards/Breakers
  3. Wiring Devices and Device Plates
  4. Enclosed Switches
- B. Certified shop drawings and submittals shall bear stamp of approval of contractor as evidence that drawings have been checked. Drawings submitted without this stamp of approval will not be considered and will be returned for proper resubmission.
- C. If submittals show variances or substitutions from requirements of contract, contractor shall make specific mention of such variation in his letter of transmittal in order that, if acceptable, suitable action may be taken for proper adjustment. Otherwise contractor shall not be relieved of responsibility for executing work in accordance with contract even though such submittals have been approved.
- 1.04 SITE VISIT
- A. Visit job site prior to bid date to determine actual conditions under which work shall be done, to familiarize oneself with project and to verify total scope of work required. Failure to do so shall not constitute a reason for an extra charge.

SECTION C16101  
BASIC MATERIALS AND METHODS

PART 1 - GENERAL

- 1.01 COORDINATION
- A. Obtain and review shop drawings, product data, and manufacturer's instructions for equipment furnished under other sections to determine connection locations and requirements.
- B. Sequence rough-in of electrical connections to coordinate with installation and start-up of equipment furnished under other sections.

PART 2 - PRODUCTS

- 2.01 SUBSTITUTIONS
- A. Where specifications list one or more manufacturers and do not include "or approved equal", furnish materials made by one of manufacturers listed. Where "or approved equal" is included, contractor may substitute equal products by another manufacturer subject to approval by engineer and owner.

PART 3 - EXECUTION

- 3.01 INSTALLATION
- A. Make electrical connections to utilization equipment in accordance with equipment manufacturer's instructions.
- B. Drawings are diagrammatic and shall not be scaled for exact sizes or locations, they are not intended to disclose absolute or unconditional knowledge of actual field conditions.
- C. Protect work and materials from damage by weather, entrance of water and dirt. cap conduit during installation. Avoid damage to materials and equipment in place.
- D. Satisfactorily repair or remove and replace damaged work with new materials. Deliver equipment and materials to job site in original, unopened, labeled containers. Store ferrous materials to prevent rusting. Store finished materials and equipment to prevent staining and discoloring.
- E. Trenches shall be excavated 6" below elevation of bottom of conduit.
- F. Failure to route conduit through building without interfering with other equipment and construction shall not constitute a reason for an extra charge. Equipment, conduit and fixtures shall fit into available spaces in building and shall not be introduced into building at such times and manner as to cause damage to structure. Equipment requiring service shall be readily accessible.

- 3.02 TESTING AND EQUIPMENT SERVICING
- A. Make test to ensure that entire system is in proper operating condition, and that adjustments and apparatus setting of circuit breakers, fuses, control equipment and apparatus have been made. Correct defects discovered during tests.
- 3.03 REMOVAL OF DEBRIS
- A. Remove surplus materials and debris caused by, or incidental to, electrical work. Remove such debris at frequent intervals. Keep job clean during construction.
- 3.04 IDENTIFICATION OF EQUIPMENT
- A. Identify electrical distribution equipment, disconnects, and contactors with black laminated plastic name-plates, attached with two screws, engraved with 1/4" high, white letters.
- 3.05 TEMPORARY LIGHTING AND POWER IN AREAS OF CONSTRUCTION
- A. Provide, maintain and remove after construction is completed, temporary lighting adequate for workman safety and temporary power for all trades including any 3 phase power required.
- B. Provide and maintain barricade lighting where required to adequately protect owner against liability for damage to public or personnel. All lamps used in barricade shall be 60 watt red, installed in weatherproof socket with wire guard. All wiring shall be approved for weatherproof installation.
- 3.06 GUARANTEE WARRANTY
- A. Guarantee work to be free from defects of materials and workmanship for a period of one year from date of final acceptance of building. Repair and replace defective work and other work damaged thereby which becomes defective during term of guarantee-warranty. Furnish owner with three written copies of guarantee-warranty.

SECTION C16120  
RACEWAYS AND CONDUIT SYSTEMS

PART 1 - PRODUCTS

- 1.01 ACCEPTABLE MANUFACTURERS
- A. Rigid IMC, and EMT conduit shall be hot-dipped, galvanized, or electro-galvanized steel by Allied, Republic, Triangle, Wheatland, or approved equal.
- B. PVC conduit shall be Carlon, schedule 40, 90 degrees C. rated, unless otherwise noted.
- C. MC cable shall be manufactured by AFC Cable Systems or approved equal. Type "AC-90" is not allowed. All MC Cables shall have a green equipment ground conductor and an isolated ground (green + yellow stripe) conductor. Cables for data systems power circuits shall be as specified on plans.
- D. Associated couplings, connectors and fittings shall be steel as manufactured by Raco or equivalent. Catalog numbers used below are those of Raco.
- E. Erickson Couplings, Series 1502, shall be used where neither length of conduit can be rotated.
- F. Insulated bushings shall be series 1402.
- G. EMT box connectors shall be compression fittings.
- H. Conduit, connectors, couplings and fittings shall be UL listed and labeled.
- 1.02 ELECTRICAL METALLIC TUBING (EMT)
- A. Use Electrical Metallic Tubing (EMT) where drawings call for conduit to be:
1. Concealed in walls.
  2. Installed above suspended ceilings.
  3. Installed exposed, above 6 feet.

- 1.03 INTERMEDIATE METAL CONDUIT (IMC)
- A. Use Intermediate Metal Conduit (IMC) where drawings call for conduit to be:
1. Installed for panelboard feeders.
  2. Installed in wet locations (interior and exterior).
  3. Installed exposed below 6 feet.

- 1.04 POLYVINYL CHLORIDE (PVC) RACEWAY
- A. Use PVC raceway for:
1. Underground service entrance conduits for telephone and power.
  2. Exterior branch circuits installed underground.
  3. Interior branch circuit conduits installed in or under concrete slab on ground floor.
- 1.05 RIGID STEEL CONDUIT (RSC)
- A. Use Rigid Steel Conduit for:
1. Install underground for power Service Entrance elbows penetrating floor slab.
  2. Exposed to physical damage.

- 1.06 FLEXIBLE METAL CONDUIT
- A. Provide flexible metal conduit for termination at equipment subject to motion and vibration.
- B. Length shall not exceed 6 feet in accessible ceiling areas.
- C. Shall not be concealed in walls.
- D. Where exposed to continuous or intermittent moisture, conduit shall be UL Type EF liquidtight or type as indicated.
- E. For connection to ceiling mounted lighting fixtures from outlet boxes.

- 1.07 MC (METAL-CLAD) CABLE
- A. MC Cable may be used, concealed above ceiling and in walls, when allowed by local codes and article 330 of the national electrical code for the connection of the Point Of Sales (POS) system equipment only.
- PART 2 - EXECUTION
- 2.01 INSTALLATION
- A. Minimum size of conduits shall be 1/2 inch.
- B. Run concealed conduits in direct line with long sweep bends or offsets. Run exposed conduits parallel to and at right angles to building lines. Group multiple conduit runs in bunks.
- C. Cap ends of conduits to prevent entrance of water and other foreign material during construction.
- D. Provide No. 12 AWG copper pull wires or nylon cord in all empty conduits. Steel wire not acceptable as pull wire.
- E. Where IMC enters a cabinet, junction box, or pull box conductors shall be protected by an insulated bushing. Locknuts shall be installed on conduit outside and inside enclosure.
- F. In areas where enclosed and gasketed fixtures and weatherproof devices are specified, where Rigid Conduit enters a sheet metal enclosure, junction box and outlet box, and not terminated in a threaded hub, a steel, or malleable iron nylon insulated hub, complete with recessed sealing "O" ring or sealing locknut shall be used.
- G. Provide seal-off fitting in all conduits entering a cold temperature area such as freezers and dry refrigerators.
- H. In concrete slabs, block up conduit from forms and securely fasten in place. All conduits in slabs shall have a minimum of 4" inches concrete coverage above.
- I. Failure to route conduit through building without interfering with other equipment, and construction shall not constitute a reason for an extra charge. Equipment, conduit, and fixtures shall fit into available spaces in building and shall not be introduced into building at such times and manner as to cause damage to structure or equipment. Equipment requiring servicing shall be readily accessible.
- 2.02 EMT (ELECTRICAL METALLIC TUBING) RACEWAY
- A. Do not use Electrical Metallic Tubing in cinder concrete or cinder fill or where conduit system is in contact with dissimilar metals or in wet locations.
- 2.03 PVC RACEWAY
- A. Use threaded fittings for all connectors and adapters.
- B. Provide 1/4-inch nylon pull rope in all primary power and incoming telephone service entrance conduits.
- C. PVC conduit shall convert to galvanized rigid metal per detail on drawings.
- 2.04 FLEXIBLE METAL CONDUIT
- A. Where fittings for liquid tight flexible conduit are brought into an enclosure with a knock-out, a gasket assembly, consisting of one piece "O" ring, with Buna-N sealing material, series 3400, shall be installed on outside of box. Fittings shall be made of either steel or malleable iron only, and shall have insulated throats or insulated bushings.
- B. In dry locations, where final connections to motors and other equipment may be made with Flexible Metal Conduit, fittings shall be of steel or malleable iron only with insulated throats or insulated bushings, and shall be of wedge and screw type having an angular wedge fitting between convolutions of conduit.

- PART 1 - GENERAL
- 1.01 PROJECT CONDITIONS
- A. Verify field measurements are as shown on drawings.
- B. Verify locations of floor boxes and outlets in work areas prior to rough-in.
- PART 2 - PRODUCTS
- 2.01 OUTLET BOXES
- A. Sheet metal outlet boxes: galvanized steel.
- B. Cast boxes: type FS, cast fer alloy. Provide gasketed cover by box manufacturer.
- C. Manufacturers: National, Appleton, General Electric, RACO, OR Steel City.
- D. Provide boxes for fixtures with fixture studs in center.
- E. Outlet boxes for lighting, switches and receptacles in interior areas with exposed conduit shall be pressed steel and in exterior areas with exposed conduit shall be cast metal with threaded hubs, "FS" type. Use galvanized steel for concealed boxes. Boxes shall be 1-1/2" deep minimum.
- 2.02 PULL AND JUNCTION BOXES
- A. Sheet metal boxes: galvanized steel.
- B. Surface-mounted cast metal box: type 4; flat-flanged, surface-mounted junction box.
1. Material: galvanized cast iron.
  2. Cover: furnish with ground flange, neoprene gasket, and stainless steel cover screws.
- C. In-ground cast metal box: inside flanged, recessed cover box for flush mounting.
1. Material: galvanized cast iron.
  2. Cover: nonskid cover with neoprene gasket and stainless steel cover screws.
  3. Cover legend: electric.
- D. Manufacturers: National, Appleton, General Electric, RACO, Oz-Gedney or Steel City.

SECTION C16121  
CONDUCTORS

PART 1 - PRODUCTS

- 1.01 CONDUCTORS
- A. Provide 98% conductivity copper conductors with 600-volt insulation. For conductors No. 12 AWG and No. 10 AWG, provide solid type. For all conductors No. 8 AWG and larger, provide stranded type. All conductors shall have THHN/THWN insulation unless noted otherwise.
- B. Conductors shall be manufactured by Triangle, American, Rome, Southwire or approved equal.
- C. Provide No. 14 AWG type THHN fixture conductors, for conductors entering lighting fixtures.
- D. Branch circuit conductors shall be minimum #12 AWG, copper.

PART 2 - EXECUTION

- 2.01 INSTALLATION
- A. Install pull boxes in circuits or feeders over 100 feet long.
- B. Make all splices or connections only at outlet, pull or junction boxes.
- C. All conductors and connections shall test free of grounds, shorts, and opens prior to energizing circuit.
- D. Provide No. 10 wire in lieu of No. 12 wire for any branch circuit in excess of 100 feet linear length to prevent excessive voltage drop.
- E. Use Ideal wing nuts, Scotchlok Type Y, R, G, or B, or approved equivalent connectors for fixture connections at outlet boxes.

- F. Make feeder taps and joints with OZ Type T, PT, PM or PTS, or approved equivalent clamp connectors as manufactured by Kupler, or with approved compression sleeves. Wrap connectors with No. 10 Electro-Seal or approved equivalent plastic filler and vinyl tape.
- G. Leave a minimum of 8" slack wire in every outlet box.
- H. Provide color coded wire and with a different color for each phase and neutral and ground as follows: Phase A, B, C: Black, Red and Blue respectively; Neutral: White; Isolated Ground: Green with Yellow Stripes. Approved color tape is acceptable for feeders using larger than #6 conductors.
- I. All conductors shall be continuous from origin to panel or equipment termination without splices where possible. Where splices and taps are necessary or are required, they shall be made in splice boxes with suitable connectors.
- J. Tighten all electrical connectors and terminals, including screws and bolts, in accordance with manufacturer's published torque tightening values. Where manufacturer's torquing requirements are not indicated, tighten connectors and terminals to comply with tightening torques specified in UL486A and UL486B.

SECTION C16122  
OUTLET AND JUNCTION BOXES

- PART 1 - GENERAL
- 1.01 PROJECT CONDITIONS
- A. Verify field measurements are as shown on drawings.
- B. Verify locations of floor boxes and outlets in work areas prior to rough-in.
- PART 2 - PRODUCTS
- 2.01 OUTLET BOXES
- A. Sheet metal outlet boxes: galvanized steel.
- B. Cast boxes: type FS, cast fer alloy. Provide gasketed cover by box manufacturer.
- C. Manufacturers: National, Appleton, General Electric, RACO, OR Steel City.
- D. Provide boxes for fixtures with fixture studs in center.
- E. Outlet boxes for lighting, switches and receptacles in interior areas with exposed conduit shall be pressed steel and in exterior areas with exposed conduit shall be cast metal with threaded hubs, "FS" type. Use galvanized steel for concealed boxes. Boxes shall be 1-1/2" deep minimum.
- 2.02 PULL AND JUNCTION BOXES
- A. Sheet metal boxes: galvanized steel.
- B. Surface-mounted cast metal box: type 4; flat-flanged, surface-mounted junction box.
1. Material: galvanized cast iron.
  2. Cover: furnish with ground flange, neoprene gasket, and stainless steel cover screws.
- C. In-ground cast metal box: inside flanged, recessed cover box for flush mounting.
1. Material: galvanized cast iron.
  2. Cover: nonskid cover with neoprene gasket and stainless steel cover screws.
  3. Cover legend: electric.
- D. Manufacturers: National, Appleton, General Electric, RACO, Oz-Gedney or Steel City.

PART 3 - EXECUTION

- 3.01 INSTALLATION
- A. Install electrical boxes as shown on drawings, and as required for splices, taps, wire pulling, equipment connections and compliance with regulatory requirements.
- B. Install pull boxes and junction boxes above accessible ceilings.
- C. Inaccessible ceiling areas: Install outlet and junction boxes no more than 6 inches from ceiling access panel or from removable recessed light fixture.
- D. Use flush mounting outlet boxes in finished areas.
- E. Use stamped steel bridges to fasten flush mounting outlet box between studs.
- F. Install flush mounted box without damaging wall insulation or reducing its effectiveness.
- G. Use adjustable steel channel fasteners for hung ceiling outlet box.
- H. Do not fasten boxes to ceiling support wires.
- I. Support boxes independently of conduit, except cast box that is connected to two Rigid Metal Conduits both supported within 12 inches of box.
- J. Use gang box where more than one device is mounted together. Do not use sectional box.
- K. Use gang box with plaster ring for single device outlets.

- L. Use cast outlet box in exterior locations and wet locations.
- 3.02 OUTLET BOXES
- A. Select boxes according to intended use and type of outlet. Ceiling outlet boxes shall be 4" octagon and 1-1/2" deep. Use 2-1/8" deep octagon boxes or 4" square boxes required. All ceiling outlet boxes shall have a fixture stud of no bolt self-locking type installed if required to hang the fixture specified at the outlet.
- 3.03 JUNCTION BOXES
- A. Junction boxes shall be sized according to number of conductors in box or type of service to be provided. Minimum junction box size 4-11/16" square and 2-1/8" deep. Provide screw covers for junction boxes.
- B. Use code gauge steel with screw covers for pull boxes with prime coat and provide with screw cover. Size pull boxes according to the NEC.
- C. Provide pull box every 100 feet of conduit run or where excessive number of bends necessitates a box for ease of wire installation.

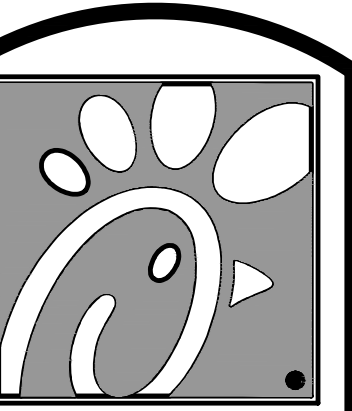
SECTION C16123  
GROUNDING AND BONDING

PART 1 - PRODUCTS

- 1.01 ROD ELECTRODES
- A. Material: copper-clad steel.
- B. Diameter: 3/4 inch.
- C. Length: 10 feet.
- 1.02 MECHANICAL CONNECTORS
- A. Material: bronze.
- 1.03 GROUNDING CONDUCTOR (WIRE)
- A. Material: stranded copper, sized to meet NFPA 70, Article 250 requirements.

PART 2 - EXECUTION

- 2.01 INSTALLATION
- A. Install rod electrodes at locations indicated. Install additional rod electrodes as required to achieve resistance to ground of less than 25 ohms.
- B. Provide grounding electrode conductor and connect to reinforcing steel in foundation footing.
- C. Provide bonding to meet regulatory requirements.
- D. Bond together each metallic raceway, pipe, duct and other metal objects.
- E. Provide isolated grounding conductor for circuits supplying all isolated ground outlets. Insulation shall be green with yellow stripe. Size per NEC Table 250.66. This isolated grounding conductor shall run in addition to equipment grounding conductor and along with the branch circuit conductors.
- 2.02 GROUNDING
- A. Ground electrical system in accordance with NEC Article 250 and local authorities having jurisdiction.
- B. Install a #3/0 bare copper wire bond across the water meter attached to ground clamps on water line on each side of meter. Arrangements shall be made to do this work at the time the water meter is installed.
- C. From the point of entrance of the water main into the building and on the meter side of the main inside water valve and union install a stranded copper cable #3/0 in 1-1/4" conduit to the main distribution panel. Connect the cable to the equipment ground bus.
- D. Install a green equipment grounding conductor in each raceway, sized per NEC Table 250.122. Terminate on equipment ground bus within panelboard serving load.
- E. Install #6 awg copper grounding conductor from ground bar in main telephone box to grounded neutral bus in main distribution panel.
- F. All separate grounding electrode conductors shall be bonded together to limit potential differences between them and between their associated wiring systems. This includes the power system, telephone system, etc.
- 2.03 FIELD QUALITY CONTROL
- A. Inspect grounding and bonding system conductors and connections for tightness and proper installation.



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STORE  
CABBAGE PATCH  
CUSTOM - IN-FILL

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SHEET TITLE  
ELECTRICAL  
SPECIFICATIONS

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