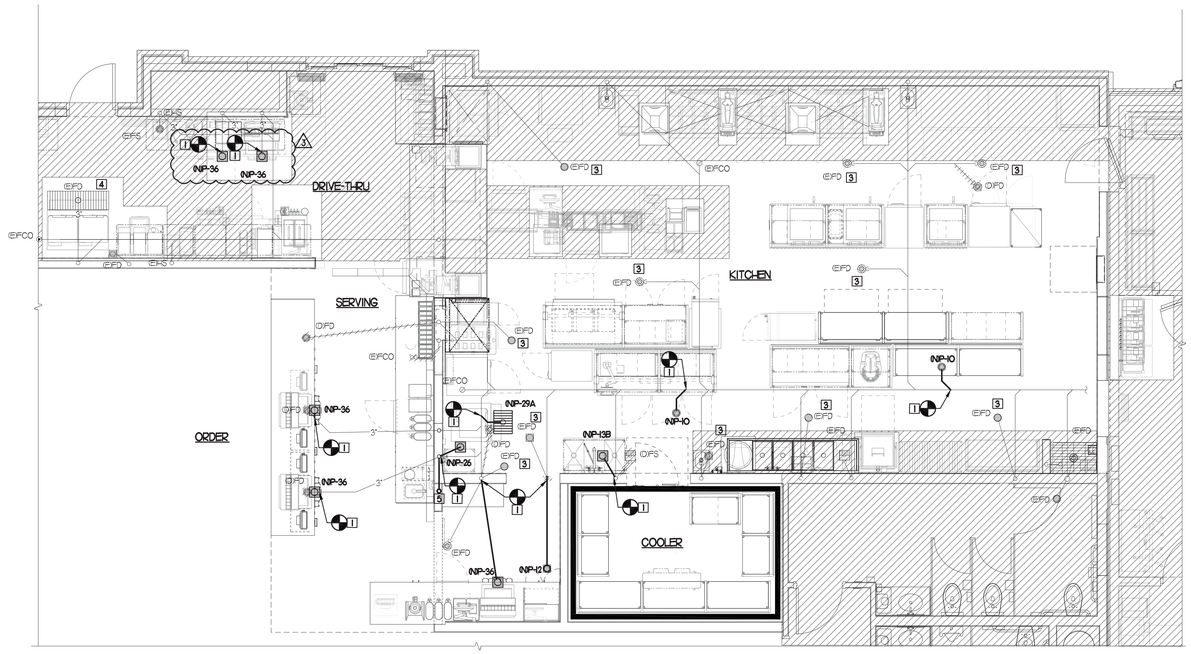

1 BELOW SLAB PLUMBING PLAN

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

PLUMBING KEY NOTES

1. CONNECT TO EXISTING WASTE LINE AS INDICATED, VERIFY FALL, FLOW DIRECTION AND CONNECTING INVERTS.
2. NOT USED
3. GENERAL CONTRACTOR TO CHECK EXISTING FLOOR DRAIN FOR PROPER CONNECTION TO AND FUNCTION OF EXISTING TRAP PRIMER AND TRAP PRIMER CONNECTING VALVE. IF PROPER WORKING CONDITIONS ARE NOT MET, OWNER TO PROVIDE NEW, SNAKE DRAIN TO REMOVE ANY EXISTING BLOCKAGES RESPONSIBLE FOR BACKUP/ODOR ISSUES.
4. GC TO REUSE EXISTING PLUMBING @FLOOR DRAIN FOR INSTALLATION OF NEW EQUIPMENT.
5. PROVIDE NEW 2" VENT IN WALL, MAKE FINAL PLUMBING MODIFICATIONS.

SHEET NOTES

1. COORDINATE INSTALLATION OF SANITARY PIPING WITH FOOTINGS IN THE FIELD. SLEEVE PENETRATIONS IN FOOTINGS WITH PVC.
2. WHERE REQUIRED BY LOCAL AUTHORITY HAVING JURISDICTION, PROVIDE SAFE-WASTE SYSTEM AS OUTLINED IN STATE AND LOCAL CODE AMENDMENTS.
3. ALL VENT PIPING TO BE 1-1/2" DIAMETER U.N.O. SEE I/P5.1 FOR VENT LAYOUT.

LEGEND

(E)	EXISTING		PIPING TO BE REMOVED
(N)	NEW		
(R)	RELOCATED		POINT OF DISCONNECTION
(D)	DEMOLISHED		
FS	FLOOR SINK		POINT OF CONNECTION
HS	HAND SINK	XXX	KITCHEN EQUIPMENT TAG
FD	FLOOR DRAIN		
HD	HUB DRAIN		

FIELD VERIFY ALL CONDITIONS

NOTE! AS NOTED IN THE SPECIFICATIONS, ALL WIRING LAYOUTS, PIPING LAYOUTS AND DUCT LAYOUTS ARE SCHEMATIC. EXACT LOCATIONS SHALL BE DETERMINED BY THE CONSTRUCTION AND STRUCTURE OF THE BUILDING AND SHALL BE VERIFIED AND COORDINATED IN THE FIELD. EACH TRADE CONTRACTOR SHALL VERIFY WITH THE GENERAL CONTRACTOR THAT HE HAS THOROUGHLY REVIEWED AND COORDINATED ALL LOCATIONS AND ROUTINGS WITH ALL OTHER TRADES PRIOR TO FABRICATION OF CONDUITS, DUCTS, OR PIPING, AND START OF INSTALLATION OF SAME (INCLUDING SPRINKLER PIPING WHEN PRESENT ON JOB). ANY INSTALLATION OR CONSTRUCTION CONFLICTS WHICH OCCUR IN THE FIELD SHALL BE RESOLVED BY THE TRADE CONTRACTOR TO THE SATISFACTION OF THE OWNER AND ARCHITECT AND AT NO EXPENSE TO THE OWNER, ARCHITECT AND/OR GENERAL CONTRACTOR.

THE CONTRACTOR SHALL CONTACT THE ARCHITECT, ENGINEER OR OWNER PRIOR TO BIDDING FOR INTERPRETATIONS AND CLARIFICATIONS OF THE DESIGN AND INCLUDE IN HIS BID ALL COSTS TO MEET THE DESIGN INTENT. CLARIFICATIONS MADE BY THE ARCHITECT, ENGINEER OR OWNER AFTER BIDDING WILL BE FINAL AND SHALL BE IMPLEMENTED AT CONTRACTORS COST.

BIDDING CONTRACTORS SHALL HAVE A WORKING KNOWLEDGE OF LOCAL CODES AND ORDINANCES AND SHALL INCLUDE IN THEIR BIDS THE COSTS FOR ALL WORK INSTALLED IN STRICT ACCORDANCE WITH GOVERNING CODES, THE PLANS AND SPECIFICATIONS NOT WITHSTANDING. THE CONTRACTOR SHALL ALERT ARCHITECT, ENGINEER OR OWNER OF ANY APPARENT DISCREPANCIES BETWEEN GOVERNING CODES AND DESIGN INTENT.

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FSR#01815

BUILDING TYPE / SIZE: S03D-136
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NO.	DATE	DESCRIPTION
2	02/16/24	OWNER REVISIONS
3	04/16/24	COORD. REVISIONS

CONSULTANT PROJECT # 2023.0412
DATE DECEMBER 2023
DRAWN BY SE
CHECKED BY DAK

SHEET
BELOW SLAB PLUMBING PLAN

SHEET NUMBER
P1.1

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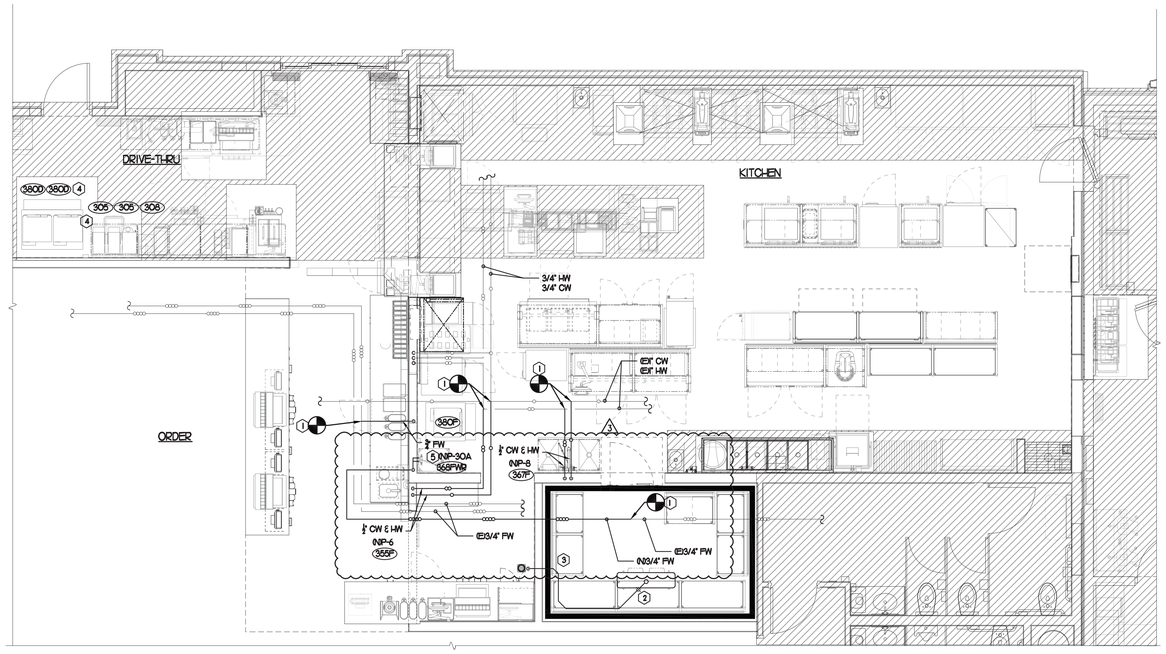


1 WATER PIPING PLAN

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

KEY NOTES

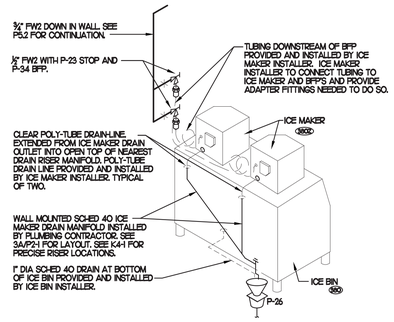
1. CONNECT TO EXISTING PIPING. MAKE FINAL PLUMBING MODIFICATIONS. FIELD VERIFY ALL CONDITIONS PRIOR TO BID & CONSTRUCTION.
2. TURN 3/4" CONDENSATE PIPING OUT OF COOLER AND EXTEND OUTLET TO FLOOR SINK. SECURE PIPING TO COOLER WALL WITH RUBBER INSULATED PIPE CLAMPS TO PREVENT GALVANIC CORROSION. SEAL ALL PENETRATIONS IN WALLS WITH PERMAGUM CORD. TERMINATE ABOVE FUNNEL WITH ELBOW AND AIR GAP.
3. ¾" TYPE L COPPER. PROVIDE 12" OF FALL BEFORE PENETRATING WALL PANEL. COVER WITH 1-⅜" I.D. X ¾" ARMACELL A/P ARMAFLEX OVER HEAT TRACE CABLE.
4. GC TO REUSE EXISTING PLUMBING FOR INSTALLATION OF NEW EQUIPMENT.
5. ½" FW DROP TO TWO-HANDLE FAUCET, P-30A. MOUNT FAUCET ON WALL. SEE K-SHEETS FOR EXACT LOCATION. PIPE ½" FW TO EACH FAUCET INLET WITH 6" SPREAD. PROVIDE BALL VALVE ABOVE CEILING. (2)

SHEET NOTES

1. COORDINATE VENT TERMINAL LOCATIONS WITH FRESH AIR HOODS ON ROOFTOP EQUIPMENT SO AS TO MAINTAIN MINIMUM 10'-0" CLEARANCE.
2. HOLD ALL PIPING ABOVE THE CEILING TIGHT TO STRUCTURE. DUCT LOCATIONS TAKE PRIORITY. SEE DRAWING M1.1 FOR DUCT LAYOUT. COORDINATE CONFLICTS WITH GC.
3. SEE K-SHEET ELEVATIONS FOR KITCHEN EQUIPMENT LOCATIONS.
4. SEE SHEET P-2.2 FOR BEVERAGE CONDUIT PIPING.
5. SEE RISER DIAGRAM 1/P5.1 FOR VENT PIPING. SEE ROOF PLAN 1/P4.1 FOR VENT THRU ROOF (VTR) LOCATION.
6. 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 CONTRACTORS EXPENSE IF PIPING OBSTRUCTS THE M-SHEET DUCT LAYOUT AS SHOWN OR PREVENTS ACCESS TO GREASE DUCT CLEANOUT OPENINGS.

PIPING LEGEND

- CW - COLD WATER
- HW - HOT WATER
- TW - TEMPERED WATER
- FW - FILTERED WATER, TO P-30, CARBONATORS, COFFEE, TEA, AND ICE MAKERS
- EXISTING PIPING



2 ICE MACHINE PIPING

NO SCALE

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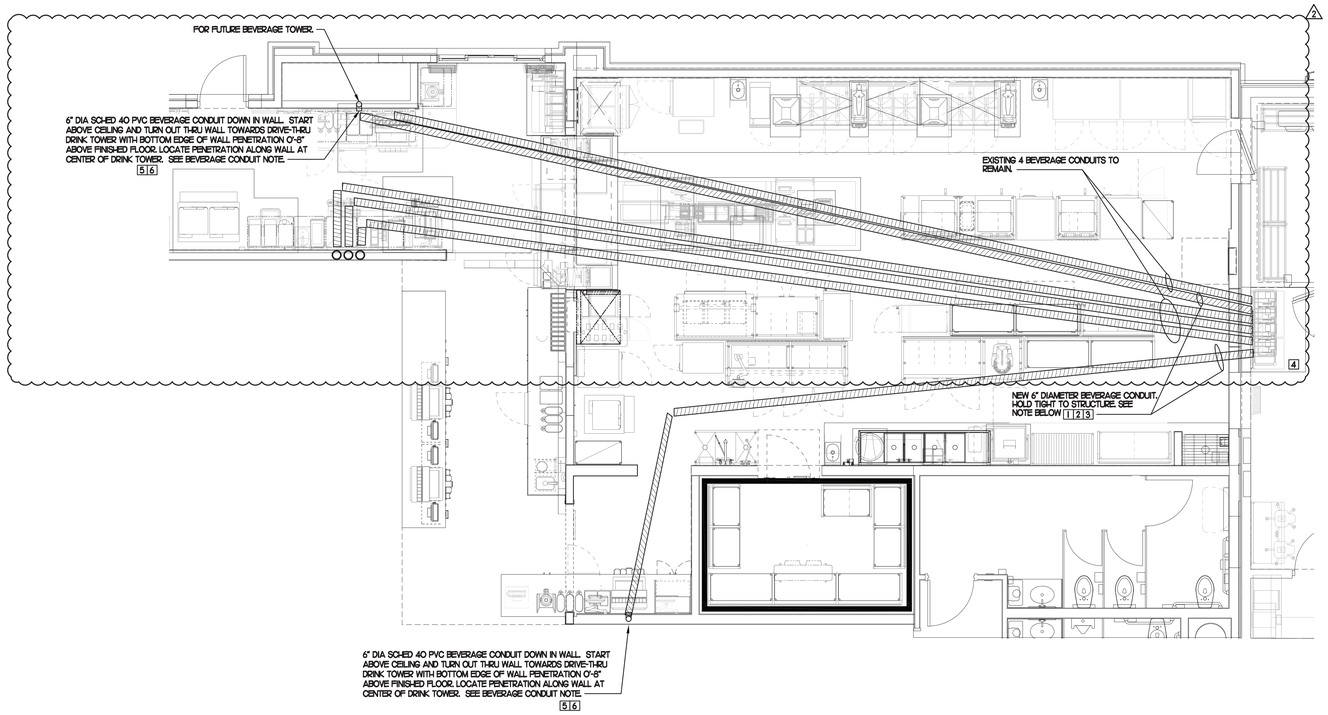
CONSULTANT PROJECT # 2023.0412
DATE DECEMBER 2023
DRAWN BY SE
CHECKED BY DAK

SHEET
WATER PIPING PLAN AND DETAILS

SHEET NUMBER
P2.1



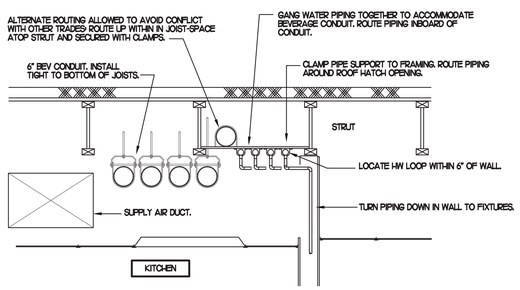
1 BEVERAGE CONDUIT PLAN

1/4"=1'-0"

BEVERAGE CONDUIT NOTES

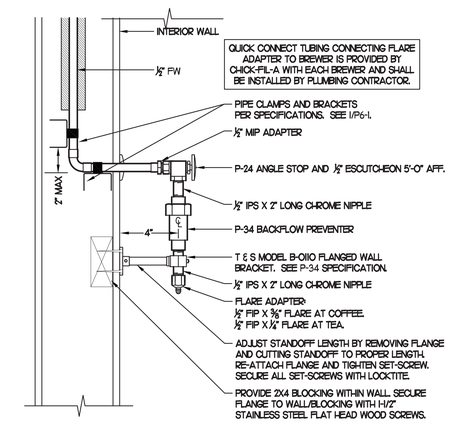
1. ROUTE BEVERAGE SYSTEM PIPING OVERHEAD FROM THE BEVERAGE RACK TO DRINK TOWERS IN 6" DIA. SCH. 40 PVC CONDUITS. ALL CONDUIT SHALL BE HELD TIGHT TO STRUCTURE AND SUPPORTED WITH THREADED ROD AND CLEVIS HANGERS AT INTERVALS SHOWN IN SPECIFICATIONS FOR HORIZONTAL OVERHEAD PIPING. COORDINATE ROUTING WITH THE GENERAL CONTRACTOR TO AVOID MECHANICAL AND ELECTRICAL SYSTEMS.
2. COORDINATE ROUTING OF ALL CONDUITS WITH HVAC DUCT IN KITCHEN. SEE SHEET M-1.1 FOR LOCATION OF AC UNITS AND DUCT ROUTING.
3. TURN THE 6" DIA. CONDUIT DOWN THROUGH THE CEILING AT THE BEVERAGE RACK AND PROVIDE CHROMED ESCUTCHEONS AT CEILING PENETRATIONS. TERMINATE OPPOSITE END ABOVE CEILING WHERE SHOWN ON PLANS.
4. EXISTING BIB RACK WITH NEW CARBONATORS AND PUMPS.
5. AT CONDUIT DROPS IN DRIVE-THRU AND SERVING AREA, PROVIDE 1/8TH BEND FITTINGS WITH SHORT PIPE STUB AT BASE OF DROP. CUT STUB AND FITTING FLUSH WITH FINISHED WALL.
6. FOR BEVERAGE CONDUIT DROPS AT WALLS WITH SHEATHING, PROVIDE APPROPRIATE FITTING TO EXTEND TOP OF PIPE DROP BEYOND FACE OF SHEATHING.

NOTE:
ALL BEVERAGE CONDUIT LAYOUTS ARE SCHEMATIC. EXACT LOCATIONS SHALL BE DETERMINED BY THE CONSTRUCTION AND STRUCTURE OF THE BUILDING AND SHALL BE VERIFIED AND COORDINATED IN THE FIELD TO REVIEW ALL NEW & EXISTING EQUIPMENTS. EACH TRADE CONTRACTOR SHALL VERIFY WITH THE GENERAL CONTRACTOR THAT HAS THOROUGHLY REVIEWED AND COORDINATED ALL LOCATIONS AND ROUTINGS WITH ALL OTHER TRADES PRIOR TO INSTALLATION & FABRICATION OF CONDUITS, DUCTS, OR PIPING. RUN BEVERAGE CONDUITS AS STRAIGHT AS POSSIBLE AVOIDING EXISTING STRUCTURE, PIPING, DUCTS, & ALL EQUIPMENTS. ANY INSTALLATION OR CONSTRUCTION CONFLICTS WHICH OCCUR IN THE FIELD SHALL BE RESOLVED BY THE TRADE CONTRACTOR TO THE SATISFACTION OF THE OWNER AND ARCHITECT AND AT NO EXPENSE TO THE OWNER, ARCHITECT AND/OR GENERAL CONTRACTOR.



2 SECTION AT WET WALL

SCALE: NONE



3 COFFEE & TEA BREWER STOP & BFP

SCALE: NONE

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DATE DECEMBER 2023
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SHEET
PLUMBING DETAILS & BEVERAGE CONDUIT

SHEET NUMBER
P2.2

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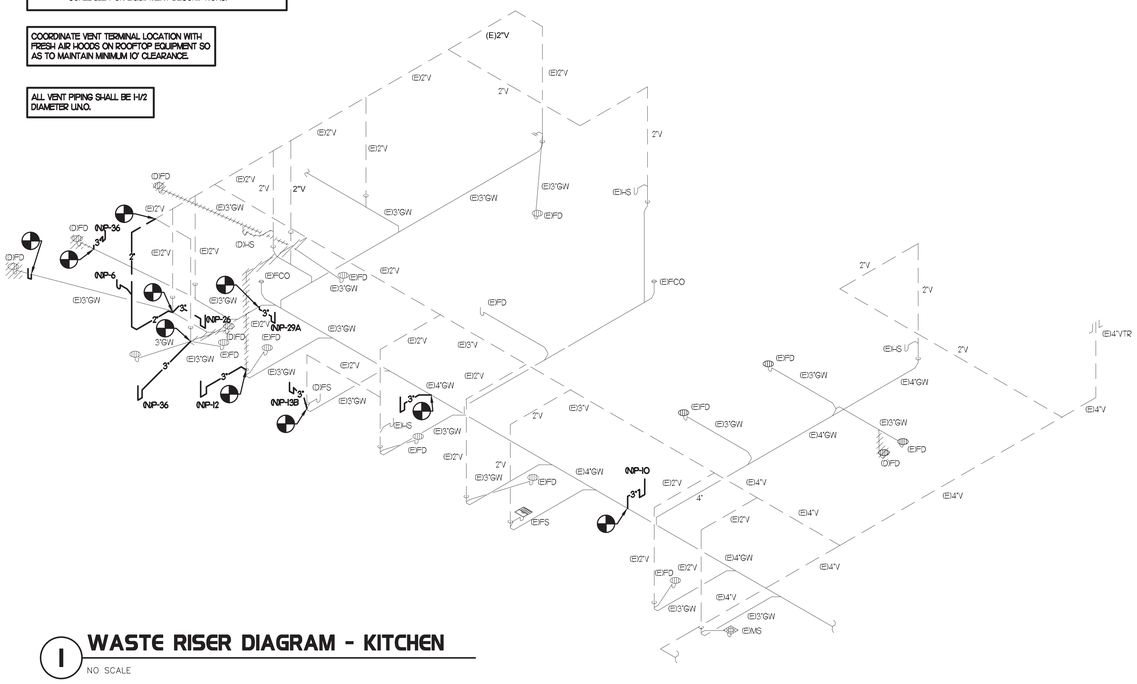
PIPING LEGEND

EXISTING BELOW SLAB PIPING	
VENT	
SANITARY, GREASE WASTE	

(XX) KITCHEN EQUIPMENT NO. SEE KITCHEN EQUIPMENT SCHEDULE FOR EQUIPMENT DESCRIPTIONS.

COORDINATE VENT TERMINAL LOCATION WITH FRESH AIR HOODS ON ROOFTOP EQUIPMENT SO AS TO MAINTAIN MINIMUM 10' CLEARANCE.

ALL VENT PIPING SHALL BE 1-1/2 DIAMETER U.N.O.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(NP-36)
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(NP-26)
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1. SECTION C15100 - PLUMBING SPECIFICATIONS

PART I - PRODUCTS (C15100)

1.01 GENERAL REQUIREMENTS

A. THE FOLLOWING SPECIFICATIONS ARE THE MINIMUM REQUIREMENT. WHERE FEDERAL, STATE OR LOCAL REQUIREMENTS DIFFER FROM THIS SPECIFICATION, THE MORE RESTRICTIVE OF THE TWO SHALL BE FOLLOWED.

1.02 SCOPE

A. HOT AND COLD 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. FILTERED WATER PIPING SHALL BE FLOWGUARD GOLD CPVC. HOT AND COLD 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 MANUFACTURERS RECOMMENDATIONS. FOR CPVC PIPING INSTALLATION, WALL STUBS AT FIXTURES AND EQUIPMENT SHALL BE COPPER AND SHALL BE SERIES 630-C. CPVC-TO-COPPER STUB OUT ELBOWS BY SIOUX CHIEF.

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 WASTE, VENT, STORM DRAINAGE PIPING AND FITTINGS INSIDE THE BUILDING, ABOVE AND BELOW GRADE, AND FOR ROOFTOP CONDENSATE, 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 ½" 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 ½" 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. FOR SCREWED PIPING, PIPING SHALL BE JOINED WITH BLACK 150 POUND MALLEABLE IRON SCREWED FITTINGS AS ALLOWED BY LOCAL AUTHORITY. CONTRACTOR SHALL VERIFY THE NEED FOR WELDED PIPING AS REQUIRED BY THE LOCAL GAS CODE AND/OR APPLICABLE LOCAL ORDINANCES AND AMENDMENTS.

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".

PART II -EXECUTION (C15100)

2.01 TRENCHING (C15100)

A. EXCAVATION, BACKFILLING, AND TRENCH WORK SHALL BE DONE IN ACCORDANCE WITH LATEST O.S.H.A. AND APPLICABLE SAFETY STANDARDS.

B. PROVIDE NECESSARY SHORING AND CLEANING TO KEEP TRENCHES IN GOOD WORKING CONDITION, INCLUDING PUMPING OUT WATER.

C. IN MOSTLY ROCK MATERIAL, TRENCHES SHALL BE EXCAVATED TO 6" BELOW THE ELEVATION OF THE BOTTOM OF THE PIPES. AFTER EXCAVATION, TRENCH SHALL THEN BE FILLED TO THE PROPER ELEVATION WITH CRUSHED LIMESTONE. GRAVEL SHALL BE REMOVED FROM UNDER PIPE BELLS SO THE PIPE RESTS FIRMLY ON THE TRENCH BOTTOM.

D. IN MOSTLY EARTH OR SAND MATERIAL, TRENCHES SHALL BE EXCAVATED TO 6" BELOW THE ELEVATION OF THE BOTTOM OF THE PIPES. AFTER EXCAVATION, TRENCH SHALL THEN BE FILLED TO THE PROPER ELEVATION WITH FINE SAND OR GRAVEL. TRENCH BOTTOM SHALL BE REMOVED AT PIPE BELLS SO THE PIPE RESTS FIRMLY ON THE TRENCH BOTTOM.

E. BACKFILLING AND TAMPING SHALL BE CAREFULLY DONE BY HAND SIMULTANEOUSLY ALONG BOTH SIDES OF THE PIPE USING ROCK FREE EARTH, CRUSHED STONE OR SAND UNTIL THE PIPE IS COVERED TO A DEPTH OF AT LEAST 12". BACKFILL SHALL BE ACCOMPLISHED IN SUCCESSIVE 6" LAYERS. THE REST OF THE FILL-UP TO THE TOPSOIL LAYER MAY BE GRAVEL OR ROCK FREE EARTH.

F. ACCEPTABLE SOIL MATERIALS FOR BACKFILL AND FILL SHALL BE FREE OF CLAY, ROCK OR GRAVEL LARGER THAN 2" IN ANY DIMENSION, DEBRIS, WASTE, FROZEN MATERIALS AND OTHER DELETERIOUS MATTER HAVING A PLASTICITY INDEX LESS THAN 30. BACKFILL SHALL BE ACCOMPLISHED IN LAYERS OF NOT MORE THAN 6" AND EACH LAYER SHALL BE COMPACTED. THE LAST 12" OF BACKFILL SHALL BE ROCK FREE 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.

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 SERVICING 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 ¼" 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, WATTS 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.

F. FLOOR SINKS: ZURN WITH ALUMINUM SEDIMENT BUCKETS. NO SUBSTITUTIONS ALLOWED.

NATIONAL ACCOUNTS

I. TOTO VALVES AND FIXTURES (NO SUBSTITUTIONS). HAINES, JONES & CADBURY LLC. (HJC DISTRIBUTORS). PLEASE CONTACT HJC-CFA CUSTOMER SERVICE REPRESENTATIVE AT (800) 459-7099 OR VIA E-MAIL AT: CF@HJCINC.COM FOR NATIONAL ACCOUNT PRICING AND DELIVERY FOR ALL ITEMS ON PLUMBING FIXTURE SCHEDULE.

2. PLUMBING FIXTURES

RESTROOM FIXTURES (C15405)

P-1 WATER CLOSET: TOTO MODEL CT705ULN#01 BOWL WITH 1.28 GPF TET-1-LNC # 320P ECO-POWER FLUSH VALVE AND SC534 SEAT, NO SUBSTITUTIONS. WHITE, FLOOR MOUNTED, FLUSH VALVE TYPE, VITREOUS CHINA, 1-1/2" TOP SPUD, ELONGATED BOWL, ELECTRONIC SENSOR OPERATED HANDS-FREE FLUSH VALVE, WHITE OPEN FRONT SEAT WITH CHECK HINGE. CHICK-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 CT705ULN#01 BOWL WITH 1.28 GPF TET1LA320#CP ECO-POWER FLUSH VALVE AND SC534 SEAT. NO SUBSTITUTIONS. H.C. ACCESSIBLE, WHITE, FLOOR MOUNTED, 17-1/2" HIGH, FLUSH VALVE TYPE, VITREOUS CHINA, 1-1/2" TOP SPUD, ELONGATED BOWL, ELECTRONIC SENSOR OPERATED HANDS-FREE FLUSH VALVE, WHITE OPEN FRONT SEAT WITH CHECK HINGE. CHICK-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 1/4 I2#CP .0.125 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 105 -D10ET # CP ECO-POWER SENSOR HOT/COLD FAUCET WITH THERMOSTATICALLY CONTROLLED ASSE 1070 MIXING VALVE FAUCET. 0.02 GALLONS PER CYCLE, NO SUBSTITUTIONS. PROVIDE MCGUIRE LF775 SUPPLY AND STOP, MCGUIRE 155-WC GRID DRAIN WITH OFFSET TAILPIECE, MCGUIRE 8872 POLISH-ED CHROME P-TRAP. P-TRAP SHALL BE PARALLEL WITH BACK WALL. PROVIDE A TRUEBRO INC., HANDI LAV-GUARD INSULATION KITS MODELS 103E-2 AND 103E-Z. CHICK-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: 0.5 GPM, SINK: BY TMS, FAUCET: TOTO MODEL=TEL105-C30E#CP - PROVIDED BY HJC WITH THP5094 NOZZLE. CONTRACTOR SHALL INSTALL WALL HUNG, STAINLESS STEEL SINK AND FAUCET SET AND MAKE FINAL CONNECTIONS. MCGUIRE LF175 SUPPLIES WITH STOPS AND A MCGUIRE 8912C POLISHED CHROME P-TRAP (PROVIDED BY HJC). ADJUST FAUCET OUTLET TEMPERATURE TO 110 DEGREES F OR HIGHER AS REQUIRED BY LOCAL JURISDICTION.

P-5A KITCHEN DUMP SINK: ROUGH IN: 0.5 GPM, SINK: BY TMS, FAUCET: T&S MODEL=B-1146-CFA-VF05 - PROVIDED BY HJC WITH THP5094 NOZZLE. CONTRACTOR SHALL INSTALL WALL HUNG, STAINLESS STEEL SINK AND FAUCET SET AND MAKE FINAL CONNECTIONS. MCGUIRE LF175 SUPPLIES WITH STOPS AND A MCGUIRE LF175 SUPPLIES WITH STOPS AND

P-6 SERVING COUNTER DROP IN SINK: ROUGH IN: (SINK PROVIDED BY CLAYTON FIXTURE, FAUCET: TOTO T24TS#ET WITH 1.0 GPM AERATOR PROVIDED BY HJC.CONTRACTOR SHALL INSTALL SINK AND FAUCET SET AND MAKE FINALCONNECTIONS. MCGUIRE 8912C POLISHED CHROME P-TRAP AND MCGUIRE LF175220 STOPS WITH 20" CHROME PLATED 3/8" COPPER RISERS (PROVIDED BY HJC). ADJUST FAUCET OUTLET TEMPERATURE TO 110 DEGREES F OR HIGHER AS REQUIRED BY LOCAL JURISDICTION.

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, LESS HEAD SPOUT OUTLET, TOP BRACE, ADJUSTABLE INLET SPREAD FROM 3" TOP 8". INCLUDE T&S BRASS MODEL 43-072 HOSE THREAD X ¾" FEMALE NPT CHROME ADAPTOR. NO SUBSTITUTIONS. SEE ALSO P-16.

P-8 VEGETABLE PREP SINK: ROUGH-IN (SINK: PROVIDED BY TMS, FAUCET: T&S B-0152-14-C2#BCT WITH 0.65 GPM SPRAY HEAD BY HJC) CONTRACTOR SHALL INSTALL SINK AND MAKE FINAL CONNECTIONS. MCGUIRE LF5708 STOPS AND BRASSCRAFT 36" CHROME PLATED 1/2" OD COPPER RISERS MODEL 3-36AC (PROVIDED BY HJC). ASSEMBLE AND MOUNT TWO HANDLE FAUCET WITH PRE-RINSE SPRAY ARM. INSTALL ADD-ON FAUCET WITH SPOUT AT BASE OF PRE-RINSE RISER. SEE K-SHEET ELEVATIONS. PROVIDE H/2" SCHED 80 PVC (PIPE AND FITTINGS) INDIRECT WASTE LINES FROM SINK BASINS TO FLOOR SINK P-13B, NO P-TRAPS REQUIRED. HJC TO PROVIDE FISHER #22209 DRAINS WITH FLAT STRAINERS.

P-9 FOUR COMPARTMENT POT SINK: ROUGH-IN (SINK: PROVIDED BY TMS, FAUCET: T&S B-0152-14-C2#BCT & B2299-C2 WITH 0.65 GPM SPRAY HEAD PROVIDED BY HJC) CONTRACTOR SHALL INSTALL SINK, ASSEMBLE & MOUNT TWO FAUCETS, AND MAKE FINAL CONNECTIONS. MCGUIRE LF5708 STOPS AND BRASSCRAFT 36" CHROME PLATED 1/2" OD COPPER RISERS MODEL 3-36AC (PROVIDED BY HJC). ASSEMBLE AND MOUNT ONE TWO-HANDLE FAUCET WITH PRE-RINSE SPRAY. INSTALL ADD-ON FAUCET WITH 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 H-1/2" SCHED .80 PVC (PIPE AND FITTINGS) INDIRECT WASTE LINES FROM EACH SINK BASIN TO FLOOR SINK P-13A, NO P-TRAPS REQUIRED. HJC TO PROVIDE FISHER #22209 DRAINS WITH FLAT STRAINERS.

P-10 FLOOR DRAIN (3"): ZURN EZ1-PV3-R8 PVC BODY, BRONZE SPUD WITH 8" DIAMETER NICKEL BRONZE STRAINER (PROVIDED BY HJC). ALT: JONES STEPHENS CORP D53-144.

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/P2-1 FOR WALL THICKNESS AT WALL HYDRANTS. ALT: (WTS) HY-42.

P-12 FUNNEL DRAIN (3"): ZURN MODEL ZN415-3NL-6S-4 FLOOR DRAIN W/FUNNEL. INDIRECT WASTE RECEIVER WITH NICKEL BRONZE STRAINER AND FUNNEL. PROVIDE 6" SQUARE STRAINER WITH 4" ROUND FUNNEL AT ICE MACHINE & WALK-IN COOLER (PROVIDED BY HJC). 4" ROUND FUNNEL (ZURN) ZN328-4.

P-13A FLOOR SINK (POT SINK): ZURN MODEL Z19OI-4NL-1-23-KC CAST IRON INDIRECT WASTE RECEIVER WITH 12" SQUARE BODY, FLASHING CLAMP, 8" DEEP, ALUMINUM SEDIMENT BUCKET, AND NO GRATE. NO SUBSTITUTIONS (PROVIDED BY HJC).

P-13B FLOOR SINK (VEGETABLE SINK): ZURN MODEL Z19IO-KC-2-23 CAST IRON INDIRECT WASTE RECEIVER WITH FLASHING CLAMP, 8" SQ. BODY, ALUMINUM SEDIMENT BUCKET, AND NO GRATE (PROVIDED BY HJC). NO SUBSTITUTIONS.

P-13C FLOOR SINK(DUMP SINK 3" WASTE CONNECTION): ZURN MODEL Z19IO-NL-KC-2-23 CAST IRON BODY WITH INDIRECT WASTE RECEIVER, NEO-LOC OUTLET, ANCHOR FLANGE WITH SEEPAGE HOLES AND CLAMP COLLAR, WITH HALF GRATE, AND ALUMINUM BUCKET. (PROVIDE BY HJC) NO SUBSTITUTIONS.

P-14 CLEANOUTS INSIDE BUILDING: ZURN ZN1400-XN,-T-BP CLEANOUT WITH 6" SQUARE NICKEL BRONZE TOP AND TAPER THREAD BRONZE PLUG. SEE PLAN FOR SIZE. (X=PIPE DIA) (PROVIDED BY HJC).

P-15 CLEANOUTS OUTSIDE BUILDING: ZURN Z1474-NX EXTRA HEAVY DUTY CAST IRON CLEANOUT, "C.O." CAST IN COVER, ABS PLUG, NEO-LOOCK OUTLET. (X=PIPE DIA) (PROVIDED BY HJC). ALT: (ZURN) Z1474-X-N.

P-16 3-WAY DIVERTER VALVE ASSEMBLY: WATTS MODEL LFB 6780 ROUGH BRASS LEAD-FREE DIVERTER BALL VALVE WITH ¾" FIP INLET AND OUTLETS AND QUARTER TURN LEVER HANDLE. PROVIDE WITH TWO (2) FORGED BRASS ¾" MIP X ¾" 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/P2-1. PROVIDE ALSO TWO ¾" CLOSE CHROME PLATED BRASS NIPPLE AND ¾" 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 MODEL CSB 82 IFE, 80 GALLON ELECTRIC WATER HEATER, 18 KW INPUT, 74 GPH MINIMUM RECOVERY AT 100 DEGREE RISE, WITH THREE YEAR MANUFACTURER WARRANTY. CONTRACTOR TO PROVIDE HEAT TRAPS AT INLET AND OUTLET.

P-20 THERMOMETER: PROVIDE TRERICE MODEL 6834 - 04 - 04 3" DIAL TYPE THERMOMETER WITH BOTTOM 1/2" N.P.T. CONNECTION, 4" STEM AND 0 DEG F TO 200 DEG 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. LFU007M1QT 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. ALT: (ZRN) 112-350XL.

REDUCED PRESSURE ZONE (RPZ) TYPE:
WATTS NO. LFU009M2 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. ALT: (ZRN) 112-975XL,2L).

P-22 MOP SINK CHECK VALVES: T&S BRASS 1/2" MODEL B-CVVI-2 BALL CHECK.

P-23 UTILITY CONNECTION (ICEMAKER): PROVIDE A MCGUIRE MODEL LFH-ST06SB LEAD-FREE CHROME WHEEL ANGLE STOP, 1/2" FIP INLET AND OUTLET. PROVIDE CHROME WALL ESCUTCHEON. INSTALL WITH BFP P-34. SEE DETAIL 3/P2-1 FOR PIPING AT ICE MAKERS.

P-24 UTILITY CONNECTION (COFFEE & TEA BREWERS): PROVIDE A MCGUIRE MODEL LFH-ST06SB 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: ZURN Z1700-1QQ THRU Z1700-3QQ AS NEEDED, SIZE AS RECOMMENDED BY MANUFACTURER (PROVIDED BY HJC). ALT: (WTS) SSA + SSB, (JRS 5005 THROUGH 5050)

P-26 FUNNEL DRAIN (3"): ZURN ZN415-3NL-6S-OF FLOOR DRAIN W/FUNNEL. INDIRECT WASTE RECEIVER WITH NICKEL BRONZE STRAINER AND FUNNEL. PROVIDE 8"x6" SQUARE STRAINER WITH 3.25"X 8.25" OBLONG FUNNEL (DRAIN AND STRAINER PROVIDED BY HJC). ALT: (JRS) 35IOL03-FI2INB.

P-26A TRAP SEAL PROTECTOR: PROVENT TRAP GUARD MODEL TG3-H 3" TRAP SEAL INSERT FOR INTERIOR INSTALLATION AND REPLACEMENT ACCESS THROUGH STRAINER. PROVIDE AT P-35 FLOOR DRAINS IN RESTROOMS, P-37 FLOOR DRAINS IN DINING ROOM, AND P-10/P-26 DRAINS IN SERVICE ROOM. PROVIDE PROSET MODEL TG33-ZURN WHEN USING ZURN FLOOR FIXTURES.

P-27 WATER PRESSURE GAUGE: TRERICE MODEL 800B, 2-1/2" ROUND, BOTTOM OUTLET WITH 1/4" N.P.T. CONNECTION AND 0 TO 100 PSI RANGE.

P-28 BALL VALVE: NIBCO MODEL 4660-T, 3/4", WITH IPS INLET AND OUTLET.

P-29A ICE MACHINE TRENCH DRAIN: ZURN/STAINLESS DRAINS TR12-CFA-48 STAINLESS STEEL TRENCH DRAIN, 14.5" X 18", STAINLESS STEEL SEDIMENT CUP AND STAINLESS STEEL SERRATED LADDER GRATE (PROVIDED BY HJC). NO SUBSTITUTIONS.

P-29B ICE MACHINE TRENCH DRAIN: ZURN/STAINLESS DRAINS TR12-CFA-36 STAINLESS STEEL TRENCH DRAIN, 14.5" X 36", STAINLESS STEEL SEDIMENT CUP AND STAINLESS STEEL SERRATED LADDER GRATE (PROVIDED BY HJC). NO SUBSTITUTIONS.

P-29C ICE MACHINE TRENCH DRAIN: ZURN/STAINLESS DRAINS TR12-CFA-48 STAINLESS STEEL TRENCH DRAIN, 14.5" X 48", STAINLESS STEEL SEDIMENT CUP AND STAINLESS STEEL SERRATED LADDER GRATE (PROVIDED BY HJC). NO SUBSTITUTIONS.

P-30 FILTERED WATER FAUCET: (FAUCET PROVIDED BY OWNER) TWO-HANDLE WALL MOUNT FAUCET WITH 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-30A FILTERED WATER FAUCET: (FAUCET: T&S B-0599-CR PROVIDED BY HJC) TWO-HANDLE WALL MOUNT FAUCET WITH 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. 22B0C03 3" FLOOR DRAIN WITH 7-1/2" HINGED CAST IRON SLOTTED GRATE AND SEDIMENT BUCKET. PROVIDED AND INSTALLED BY SITE CONTRACTOR. ALT: (ZRN) Z56O-3NL-Y.

P-33 TRAP PRIMER (MECHANICAL TYPE): PRECISION PRODUCTS PR-500. PROVIDE DISTRIBUTION UNIT WHERE SERVING MULTIPLE DRAINS. PROVIDE SCREWDRIVER STOP AT PRIMER INLET. ALT: (WTS) TP-300A-DR.

P-34 DISPENSER BACKFLOW PREVENTER: WATTS MODEL =WLF7RLI22

(1) LIGHTING FIXTURE (LUMINAIRE) SCHEDULE - CHICK-FIL-A

MARK	MANUFACTURER	CATALOG NUMBER	NO. LAMPS/TYPE	SYL LAMP NO.	WATTS	VOLTS	MOUNTING	REMARKS
A	LITHONIA	2GTL-472L-A12I25V-EZI-LP840	INTEGRAL WITH FIXTURE	-	52.3	120	RECESSED	2'X4' STATIC LED TROFFER RATED 7200 LUMENS, 4000K COLOR TEMP
AE	LITHONIA	2GTL-472L-A12I25V-EZI-LP840-ELI4L	INTEGRAL WITH FIXTURE	-	52.3	120	RECESSED	SAME AS 'A' WITH EMERGENCY BATTERY PACK. SEE PLAN NOTES ABOUT LAMP SWITCHING
XA	LITHONIA	LHQM-S-W-I-R-120	INTEGRAL WITH FIXTURE	-	4	120	WALL	EXIT SIGN WITH BATTERY PACK AND TWO INTEGRAL ADJUSTABLE LAMP-HEADS
D3	LITHONIA	LDN6-30/20-L06A-LSS-MVOLT	INTEGRAL WITH FIXTURE	-	22.6	120	RECESSED	LED DOWNLIGHT WITH CLEAR REFLECTOR & TRIM RATED 2000 LUMENS, 3000K COLOR TEMP
D3E	LITHONIA	LDN6-30/20-L06AR-LSS-MVOLT-EL	INTEGRAL WITH FIXTURE	-	22.6	120	RECESSED	SAME AS 'D3' WITH EMERGENCY BATTERY PACK. SEE PLAN NOTES ABOUT LAMP SWITCHING
F	COOPER	SLDS6069SIEMWR	INTEGRAL WITH FIXTURE	-	8	120	RECESSED	
W	HOWARD LIGHTING	EVSL44040MVS	INTEGRAL WITH FIXTURE	-	40	120	SURFACE	50" VAPOR-TIGHT LED FIXTURE PROVIDED BY THERMO-KOOL

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.

NEW PANEL K (5)

LOCATION: SEE PLANS — VOLTAGE: 208Y/120V — TRIM: FLUSH — MAIN: 400A MLO — SYSTEM: 3Φ, 4W — BUS RATING: 400A — CONN. LOAD: 134.3 KVA — FEED: TOP — GROUND BUS: YES

CKT	LOAD SERVED	COND	PHASE	NEUT	GND	BKR	CMD	L1	L2	L3	CMD	BKR	COND	PHASE	NEUT	GND	LOAD SERVED	CKT
1	GENERAL OUTLETS	1/2"	#12	#12	#12	20/1	B	720			B	20/1	1/2"	#12	#12	#12	DROP CORD GDN OUTLETS	2
3	DROP CORD GDN OUTLETS	1/2"	#12	#12	#12	20/1	B		1080		K	20/1	1/2"	#12	#12	#12	SINGLE LEMONADE BUBBLER	4
B 5	SINGLE ULC REFRIGERATOR	1/2"	#12	#12	#12	20/1	K			564	K	20/1	1/2"	#12	#12	#12	DOUBLE LEMONADE BUBBLER	6
B 7	ICE MACHINE	1/2"	#12	#12	#12	15/1	K	2232		1320	N	60/3-1-1/4"	#3	#3	#8		FUTURE OPEN FRYER	8 SB
SB 9	OPEN FRYER	1-1/4"	#3	#3	#8	60/3	N		2232		N	-	-	#3	-	-	"	10
11	"	-	#3	-	-	-	N			2232	N	-	-	#3	-	-	"	12
13	"	-	#3	-	-	-	N	2232			N	-	-	-	-	-	SHUNT TRIP SPACE	14
15	SHUNT TRIP SPACE	-	-	-	-	-	K		1300		K	20/2	1/2"	#12	#12	#12	EGG STATION	16 B
B 17	EGG STATION	1/2"	#12	#12	#12	20/2	K	1300			K	-	-	-	-	-	"	18
19	"	-	#12	-	-	-	K		1300		K	20/1	1/2"	#12	#12	#12	DOUBLE REFRIG WORK TABLE	20 B
B 21	MIXER	1/2"	#12	#12	#12	20/1	K	180			R	20/1	1/2"	#12	#12	#12	TIMER	22 B
B 23	TIMER	1/2"	#12	#12	#12	20/1	R		1125		K	20/1	1/2"	#12	#12	#12	SINGLE THAWING CABINET	24 B
25	ICE MAKER CONDENSER	1/2"	#10	#10	#10	30/3	K	897			-	-	-	-	-	-	ROOF RECEPTACLE	26
27	"		#10				K		897		-	-	-	-	-	-	SPARE	28
29	"		#10				K			897	M	20/1	1/2"	#12	#12	#12	EF-4	30
31	EXIST A/C 3	1"	#4	-	#8	70/3	A	5500			K	20/1	1/2"	#12	#12	#12	TMS	32 B
33	FROM CIRCUIT 33-40-42	-	#4	-	-	-	A		5500		K	20/1	1/2"	#12	#12	#12	TMS	34 B
35	IN EXIST. PANEL B	-	#4	-	-	-	A			5500	K	20/1	1/2"	#12	#12	#12	TMS	36 B
37	EXIST. PANEL B	SEE RISER DIAGRAM				225/3	SF	17820			K	20/1	1/2"	#12	#12	#12	TMS	38 B
39	"					-	SF		17300		K	20/1	1/2"	#12	#12	#12	TMS	40 B
41	"					-	SF			16520	K	20/1	1/2"	#12	#12	#12	TMS	42 B
43	SPARE	-	-	-	-	20/1	-	-	-	-	-	20/1	-	-	-	-	SPARE	44
45	SPARE	-	-	-	-	20/1	-	-	-	-	-	20/1	-	-	-	-	SPARE	46
47	SPARE	-	-	-	-	20/1	-	-	-	-	-	20/1	-	-	-	-	SPARE	48
49	SPARE	-	-	-	-	20/1	-	-	-	-	-	20/1	-	-	-	-	SPARE	50
51	SPARE	-	-	-	-	20/1	-	-	-	-	-	20/1	-	-	-	-	SPARE	52
53	SPARE	-	-	-	-	20/1	-	-	-	-	-	20/1	-	-	-	-	SPARE	54

INTERRUPT RATING: SERIES RATED PER MANUFACTURER'S LABEL — 45259 | 43305 | 45721 — FROM: A 400A BREAKER IN MDP

LOADS (IN VA)	CONNECTED	DEMAND FACTOR	MINIMUM FEEDER
LIGHTING	380	1.25	475
RECEPTS TO 10 KVA	7140	1.0	7140
RECEPTS REMAINING	0	0.5	0
SPACE HEATING	0	0.0	0
AIR CONDITIONING	24840	1.0	24840

LOADS	CONNECTED	DEMAND FACTOR	MINIMUM FEEDER
NON-SEASONAL MOTORS	1784	1.0	1784
LARGEST MOTOR	864	0.25	216
WATER HEATING	0	1.0	0
KITCHEN EQUIP.	56143	0.65	36493

REMAINING CONTINUOUS LOADS	0	1.25	0
REMAINING NON-CONTINUOUS LOADS	43998	1.0	43998
MISC. DEMAND LOADS	0	1.0	0
TOTAL CONNECTED LOAD	134.3 KVA		373 AMPS
TOTAL DEMAND LOAD	114.9 KVA		319.3 AMPS

Note 1. Feeder size: SEE RISER DIAGRAM

EXIST. PANEL B

LOCATION: ELECTRICAL ROOM — VOLTAGE: 208Y/120V — TRIM: FLUSH — MAIN: 200A MLO — SYSTEM: 3Φ, 4W — BUS RATING: 200A — CONN. LOAD: 51.8 KVA — FEED: TOP — GROUND BUS: YES

CKT	LOAD SERVED	COND	PHASE	NEUT	GND	BKR	CMD	L1	L2	L3	CMD	BKR	COND	PHASE	NEUT	GND	LOAD SERVED	CKT
1	ICE MACHINE	1/2"	#12	#12	#12	15/1	K	1500				L	20/1	1/2"	#12	#12	REFUSE ENCLOSURE	2
3	ICE CREAM MACHINE	1/2"	#12	#12	#12	20/3	K		1800		R	20/1	1/2"	#12	#12	#12	IRRIGATION	4
5	"		#12				K			1800	K	20/1	1/2"	#12	#12	#12	FOOD WARMER	6
7	"		#12				K	1800			K	20/1	1/2"	#12	#12	#12	FRY HOLDING STATION	8
9	ICE CREAM MACHINE	1/2"	#10	#10	#10	30/3	K	1320			K	15/1	1/2"	#12	#12	#12	SQL REACH-IN FREEZER	10
11	"		#10				K		1800		K	20/1	1/2"	#12	#12	#12	FRY HOLDING STATION	12
13	"		#10				K	1320			K	20/1	1/2"	#12	#12	#12	HOT HOLDING CABINET	14
15	HOT HOLDING TOWER	1/2"	#12	#12	#12	20/1	K		1320		M	20/1	1/2"	#12	#12	#12	D.T. SLIDING DOOR	16
17	HOT HOLDING TOWER	1/2"	#12	#12	#12	20/1	K	1320			K	15/1	1/2"	#12	#12	#12	HOT HOLDING CABINET	18
19	VERTICAL TOASTER	1/2"	#12	#12	#12	15/1	K		1320		K	20/1	1/2"	#12	#12	#12	REF. BREAD TABLE	20
21	VERTICAL TOASTER	1/2"	#12	#12	#12	15/1	K	1320			K	20/1	1/2"	#12	#12	#12	REF. BREAD TABLE	22
23	COFFEE WARMER	1/2"	#12	#12	#12	20/1	K		1320		R	20/1	1/2"	#12	#12	#12	GENERAL RECEPT	24
25	DOUBLE LEMONADE DISPENSER	1/2"	#12	#12	#12	20/1	K	1320			K	20/1	1/2"	#12	#12	#12	REF. WORK TABLE	26
27	ROOF RECEPTACLES	1/2"	#12	#12	#12	20/1	R		540		K	15/1	1/2"	#12	#12	#12	REF. EQUIP. STAND	28
29	GENERAL RECEPTS	1/2"	#12	#12	#12	20/1	R			1080	K	20/1	1/2"	#12	#12	#12	RADIANT TOASTER	30
31	FLY SYSTEM	1/2"	#12	#12	#12	20/1	M	900			K	15/1	1/2"	#12	#12	#12	SALAD PREP TABLE	32
33	DOUBLE LEMONADE DISPENSER	1/2"	#12	#12	#12	20/1	K		1320		K	15/1	1/2"	#12	#12	#12	REF. WORK TABLE	34
35	LEMON JUICER	1/2"	#12	#12	#12	20/1	K			1320	R	20/1	1/2"	#12	#12	#12	T-500/SHUNT TRIP	36
37	A/C 5	3/4"	#8	-	#10	45/3	A	4720			-	20/1	-	-	-	-	SPARE	38
39	"		#8				A		2730		-	20/1	-	-	-	-	SPARE	40
41	"		#8				A			2730	-	20/1	-	-	-	-	SPARE	42

INTERRUPT RATING: EXISTING — 17970 | 17300 | 16520 — FROM: A 125 BREAKER IN NEW PANEL K

LOADS (IN VA)	CONNECTED	DEMAND FACTOR	MINIMUM FEEDER
LIGHTING	380	1.25	475
RECEPTS TO 10 KVA	3300	1.0	3300
RECEPTS REMAINING	0	0.5	0
SPACE HEATING	0	0.0	0
AIR CONDITIONING	8190	1.0	8190

LOADS	CONNECTED	DEMAND FACTOR	MINIMUM FEEDER
NON-SEASONAL MOTORS	920	1.0	920
LARGEST MOTOR	0	0.25	0
WATER HEATING	0	1.0	0
KITCHEN EQUIP.	39000	0.65	25350

REMAINING CONTINUOUS LOADS	0	1.25	0
REMAINING NON-CONTINUOUS LOADS	0	1.0	0
MISC. DEMAND LOADS	0	1.0	0
TOTAL CONNECTED LOAD	51.8 KVA		143.6 AMPS
TOTAL DEMAND LOAD	38.2 KVA		106.2 AMPS

PANELBOARD NOTES:

B. GFCI TYPE BREAKER TO BE 5MA TYPE BREAKER.

SB. THRU (1) SB6100-020-O GFCI PROTECTION DEVICE IN SB6000 PANEL ENCLOSURE OR (1) SB6100-021-O GFCI PROTECTION DEVICE. SB5000 PANEL ENCLOSURE WITH 3 LITTLE FUSE SHOCK GFCI PROTECTION DEVICES.

PER INFORMATION RECEIVED FROM THE FIELD AT TIME OF DESIGN, ALL EXISTING PANELS ARE SQUARE D.

EXIST. PANEL POS

LOCATION: ELECTRICAL ROOM — VOLTAGE: 208Y/120V — TRIM: FLUSH — MAIN: 100A MLO — SYSTEM: 3Φ, 4W — BUS RATING: 100A — CONN. LOAD: 1.8 KVA — FEED: TOP — GROUND BUS: YES

CKT	LOAD SERVED	COND	PHASE	NEUT	GND	BKR	CMD	L1	L2	L3	CMD	BKR	COND	PHASE	NEUT	GND	LOAD SERVED	CKT
B 1	CASH REGISTER	1/2"	#12	#12	#12	15/1	R	675			R	15/1	1/2"	#12	#12	#12	PRINTER/CREDIT CARD	2
3	CASH REGISTER	1/2"	#12	#12	#12	15/1	R		720		R	15/1	1/2"	#12	#12	#12	PRINTER/CREDIT CARD	4
5	CASH REGISTER	1/2"	#12	#12	#12	15/1	R			720	R	15/1	1/2"	#12	#12	#12	PRINTER/CREDIT CARD	6
7	CASH REGISTER	1/2"	#12	#12	#12	15/1	R	720			R	15/1	1/2"	#12	#12	#12	PRINTER/CREDIT CARD	8
9	CASH REGISTER	1/2"	#12	#12	#12	15/1	R		720		R	15/1	1/2"	#12	#12	#12	PRINTER/CREDIT CARD	10
11	CASH REGISTER	1/2"	#12	#12	#12	15/1	R			720	R	15/1	1/2"	#12	#12	#12	PRINTER/CREDIT CARD	12
13	CASH REGISTER	1/2"	#12	#12	#12	15/1	R	720			-	15/1	-	-	-	-	SPARE	14
15	CASH REGISTER	1/2"	#12	#12	#12	15/1	R		720		-	15/1	-	-	-	-	SPARE	16
17	1-PAD	1/2"	#12	#12	#12	15/1	R			1200	R	15/1	1/2"	#12	#12	#12	PRINTER/CREDIT CARD	18
19	SPARE	-	-	-	-	15/1	-	720			R	15/1	1/2"	#12	#12	#12	VIDEO MONITOR	20
21	OFFICE COMPUTER	1/2"	#12	#12	#12	15/1	R		1200		R	15/1	1/2"	#12	#12	#12	VIDEO MONITOR	22
23	OFFICE COMPUTER	1/2"	#12	#12	#12	15/1	R			1200	R	15/1	1/2"	#12	#12	#12	VIDEO MONITOR	24

INTERRUPT RATING: EXISTING — 715 | 500 | 550 — FROM: A 100A BREAKER IN EXIST. PANEL MDP

LOADS (IN VA)	CONNECTED	DEMAND FACTOR	MINIMUM FEEDER
LIGHTING	0	1.25	0
RECEPTS TO 10 KVA	1785	1.0	1785
RECEPTS REMAINING	0	0.5	0
SPACE HEATING	0	0.0	0
AIR CONDITIONING	0	1.0	0

LOADS	CONNECTED	DEMAND FACTOR	MINIMUM FEEDER
NON-SEASONAL MOTORS	0	1.0	0
LARGEST MOTOR	0	0.25	0
WATER HEATING	0	1.0	0
KITCHEN EQUIP.	0	0.65	0

REMAINING CONTINUOUS LOADS	0	1.25	0
REMAINING NON-CONTINUOUS LOADS	0	1.0	0
MISC. DEMAND LOADS	0	1.0	0
TOTAL CONNECTED LOAD	1.8 KVA		4.9 AMPS
TOTAL DEMAND LOAD	1.8 KVA		4.9 AMPS

Note 1. Feeder size: SEE RISER DIAGRAM

(2) ELECTRICAL LEGEND

SYMBOL	DESCRIPTION	MTG HT AFF TO CL
	LIGHTING FIXTURES	
	SURFACE MTD FLUORESCENT LIGHTING FIXTURE	
	RECESSED FLUORESCENT LIGHTING FIXTURE	
	SURFACE MTD FLUORESCENT OR HID LIGHTING FIXTURE	
	RECESSED FLUORESCENT OR HID LIGHTING FIXTURE	
	WALL MOUNTED LIGHTING FIXTURE. SEE LIGHTING FIXTURE SCHEDULE (FLUORESCENT OR H.I.D. FIXTURE)	AS NOTED
	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
	CEILING MOUNTED EXIT SIGN, SHADING INDICATES FACES. PROVIDE WITH CHEVRON DIRECTIONAL ARROWS WHERE INDICATED ON PLANS PROVIDED WITH BATTERY PACK.	
	COMBO EXIT WITH TWO LAMP-HEADS, SEE LIGHTING FIXTURE SCHEDULE	
	WALL MOUNTED EMERGENCY BATTERY PACK LIGHTING FIXTURE	AS NOTED
	CEILING MOUNTED EMERGENCY BATTERY PACK LIGHTING FIXTURE	
	FLUORESCENT STRIP LIGHTING FIXTURE	
	WALLWASHER STYLE RECESSED DOWNLIGHT, AIM LIGHT TOWARD WALL	
	RECESSED LIGHTING FIXTURE WITH EMERGENCY BATTERY PACK	
	PENDANT LIGHTING FIXTURE	AS NOTED
	LIGHTING TRACK WITH TRACK HEADS	
	WIRING DEVICES	
	120 VOLT DUPLEX RECEPTACLE, 20 AMPS U.O.N.	18"
	120 VOLT DUPLEX AT SPECIAL MOUNTING HEIGHT, 20 AMPS U.O.N.	44" U.O.N
	120 VOLT QUADRAPLEX RECEPTACLE, 20 AMPS U.O.N.	18" U.O.N
	120 VOLT QUADRAPLEX AT SPECIAL MOUNTING HEIGHT, 20 AMPS U.O.N.	44"
	120 VOLT SIMPLEX RECEPTACLE, 20 AMPS U.O.N.	18" U.O.N
	SINGLE SPECIAL PURPOSE RECEPTACLE WITH VOLTS, AMPS, AND PHASE AS NOTED, NEMA CONFIGURATION AS REQUIRED BY EQUIPMENT	18" U.O.N
	RECEPTACLE MOUNTED ON CORD DROP, 120 VOLT, 20 AMP, U.O.N., OUTLET BOX FLUSH WITH CEILING	
S	SINGLE POLE TOGGLE SWITCH	48"
S_2	DOUBLE POLE TOGGLE SWITCH	48"
S_3	THREE WAY TOGGLE SWITCH	48"
S_M	MANUAL MOTOR STARTER SWITCH (WP-NEMA 3R)	48"
S_P	SWITCH WITH PILOT LIGHT (ON WHEN SWITCH IS ON)	48"
S_K	KEY OPERATED SWITCH	48"
	CEILING OCCUPANCY SENSOR	
	WALL OCCUPANCY SENSOR	
M	MUD RING	

NOTE: 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.

	DESCRIPTION
	CONDUIT/RACEWAYS
	CONDUIT CONCEALED ABOVE CEILING OR IN WALL
	CIRCUIT HOMERUN TO PANELBOARD WITH MINIMUM 2#12, 1#12G, 3/4"C
	CONDUIT TURNING UP
	CONDUIT TURNING DOWN
	CONDUIT CONCEALED IN OR BELOW SLAB (OUTSIDE + UNDERGROUND)
	FLEXIBLE LIGHT FIXTURE WHIP, SIX FOOT MAXIMUM LENGTH
MC	METAL CLAD CABLE ASSEMBLY - ONLY WHERE INDICATED ON DWGS OR SPECS

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 1PH 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.

	DISTRIBUTION EQUIPMENT	6'-6" *
	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" *
	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" *
	FLUSH MOUNTED LIGHTING PANELBOARD	6'-6" *
	SURFACE MOUNTED LIGHTING PANELBOARD	
T	TRANSFORMER, PROVIDE SECONDARY GROUNDING PER NEC	6'-6" *
ECB	ENCLOSED CIRCUIT BREAKER, SIZE AND TYPE AS NOTED (AMPS/POLES/ ENCLOSURE) NEMA 1 ENCLOSURE IF NOT NOTED, WP-NEMA 3R	
	* 6'-6" DISTANCE IS TO TOP-MOST DISCONNECTING DEVICE OR HIGHEST POSITION OF OPERATING HANDLE OF DISCONNECTING DEVICE	

SYMBOL	DESCRIPTION	MTG HT AFF TO CL
	MISCELLANEOUS SYMBOLS	
	GROUND	
M	MOTOR	
EF	EXHAUST FAN MOTOR	
J	JUNCTION BOX	
1	CONDUIT AND WIRE 'MARK' NUMBER, REFER TO CONDUCTORS AND CONDUIT SCHEDULE FOR SIZE	
101	KITCHEN EQUIPMENT 'MARK' NUMBER, REFER TO KITCHEN EQUIPMENT SCHEDULE FOR REQUIREMENTS	
1	NOTE NUMBER	
A	HOOD EXTINGUISHING ANSUL PULL STATION	
D	SMOKE DETECTORS REMOTE STATUS INDICATOR W/ 1/2" CONDUIT STUB-UP	
•	PUSHBUTTON	
B	BELL, TYPE AS NOTED ON PLANS	
PE	PHOTO-ELECTRIC CELL	
	ABBREVIATIONS	
AFF	ABOVE FINISHED FLOOR	
AFG	ABOVE FINISHED GRADE	
AHU	AIR HANDLING UNIT	
C	CONDUIT	
CL	CENTER-LINE	
ETR	EXISTING TO REMAIN	
EF	EXHAUST FAN	
FLA	FULL LOAD AMPS	
GF/GFI	GROUND FAULT CIRCUIT INTERRUPTER	
GND/GRD	GROUND	
HT	HEIGHT	
IG	ISOLATED GRD, PROVIDE ORANGE DEVICE WHEN ADJACENT TO WIRING DEVICE	
MOCP	MAXIMUM OVER-CURRENT PROTECTION	
MUA	MAKE UP AIR UNIT	
NEC	LOCALLY ADOPTED EDITION OF THE NATIONAL ELECTRICAL CODE (NFPA 70)	
NL	NIGHT LIGHT (ON 24 HOURS)	
OC	ON CENTER	
POS	POINT OF SALE EQUIPMENT	
RTU	ROOF TOP UNIT	
TL	TWIST-LOCK TYPE DEVICE	
TR	TAMPER-RESISTANT	
UON	UNLESS OTHERWISE NOTED	
WP	WEATHERPROOF (NEMA 3R)	
	TELEPHONE	
	TELEPHONE OUTLET	18" UON
	TELEPHONE OUTLET AT SPECIAL MOUNTING HEIGHT	60" UON
	NOTE: EACH TELEPHONE OUTLET (FLOOR OR WALL MOUNTED) SHALL BE PROVIDED WITH A 3/4" EMPTY CONDUIT, WITH PULL WIRE, TO ACCESSIBLE CEILING SPACE.	
	CCTV / SECURITY SYSTEM	
C	CLOSED CIRCUIT TELEVISION CAMERA	
SK	SECURITY ALARM KEYPAD	
HU	SECURITY ALARM HOLD-UP BUTTON	
S1	SECURITY SYSTEM KEY NOTE	

(3) 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.

Chick-fil-A
5200 Buffington Road
Atlanta, Georgia
30349-2998

INTERPLAN
INTERPLAN LLC
AR99238
CA 8660

ARCHITECTURE
ENGINEERING
PERMITTING

220 E. CENTRAL PKWY, STE 4000
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SEAL:

ALABAMA LICENSED PROFESSIONAL ENGINEER SYLVIA NASSIF No. PE53814

CHICK-FIL-A
PHENIX CITY

3711 US HIGHWAY 280
PHENIX CITY, AL 36837

FSR#01815

BUILDING TYPE / SIZE: S03D-136
RELEASE: -
PRINTED FOR: CONSTRUCTION

REVISION SCHEDULE

NO.	DATE	DESCRIPTION
05	08/15/24	FIELD REVISIONS

CONSULTANT PROJECT # 2023.0412
DATE DECEMBER 2023
DRAWN BY RZ
CHECKED BY MI

SHEET: PANEL SCHEDULE AND DETAILS

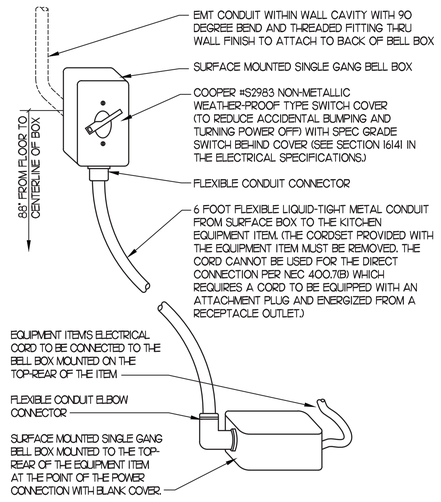
SHEET NUMBER: **E1.1**

(1) KITCHEN EQUIPMENT SCHEDULE - CHICK-FIL-A S08-V8.2 EDITION1

REQUIRES IG/GF WIRING	ITEM NO.	EQUIPMENT	MANUFACTURER	ELECTRICAL VOLT	PH	WIRES	KW	AMP	NEMA CONFIG	COOPER/ARROW HART (UON) RECEP CAT. NO.	WIRE/CONDUIT MARK NO.	(ALL ITEMS BY CHICK-FIL-A UNLESS OTHERWISE NOTED)
	182LR	LABEL PRINTER	EQUIPMENT TO BE REUSED/RELOCATED						VERIFY			
	183R	ORDER MONITOR	EQUIPMENT TO BE REUSED/RELOCATED						VERIFY			
	309R	SINGLE LEMONADE BUBBLER	EQUIPMENT TO BE REUSED/RELOCATED						VERIFY			
	315WR	10-HEAD DRINK TOWER/ICE BIN	EQUIPMENT TO BE REUSED/RELOCATED						VERIFY			
	400LR	SINGLE UPRIGHT FREEZER (30" WIDE)	EQUIPMENT TO BE REUSED/RELOCATED						VERIFY			
	420LR	SINGLE UNDERCOUNTER REFRIGERATOR	EQUIPMENT TO BE REUSED/RELOCATED						VERIFY			
	440CTR	ICE BATH BREADING TABLE	EQUIPMENT TO BE REUSED/RELOCATED						VERIFY			
	441R	SALAD PREP TABLE	EQUIPMENT TO BE REUSED/RELOCATED						VERIFY			
	442TR	REFRIGERATED EQUIPMENT STAND (48")	EQUIPMENT TO BE REUSED/RELOCATED						VERIFY			
	442WCLTR	REUSED SINGLE UPRIGHT REFRIGERATOR (30" WIDE)	EQUIPMENT TO BE REUSED/RELOCATED						VERIFY			
	443SLTR	SINGLE UPRIGHT REFRIGERATOR (24" WIDE)	EQUIPMENT TO BE REUSED/RELOCATED						VERIFY			
	431TR	DOUBLE REFRIGERATED WORK TABLE	EQUIPMENT TO BE REUSED/RELOCATED						VERIFY			
	503TR	EGG STATION	EQUIPMENT TO BE REUSED/RELOCATED						VERIFY			
	505VTR	VECTOR OVEN	EQUIPMENT TO BE REUSED/RELOCATED						VERIFY			
	505VLTR	VECTOR OVEN	EQUIPMENT TO BE REUSED/RELOCATED						VERIFY			
	180	ORDER REGISTER	NCR MODEL #P1230	120	1	1		0.7				
	182	RECEIPT PRINTER	EPSON MODEL #TM-T88IV	24	1	1		1.8				
	182L	LABEL PRINTER	EPSON MODEL #TM-L90	24	1	1		1.7				
	183	ORDER MONITOR	RADIANT KITCHEN PRODUCTION SYSTEM	120	1	1		0.125				
	184	IPAD	APPLE	120	1	1	0.12	1				
	184T	TIMER	APPLE	120	1	1	0.12	1				
	211B	FLY SYSTEM	PESTWEST MANTIS QUALIS (MODEL#125-000502)	120	1	1	0.013					
	269	ANSUL FIRE SUPPRESSION SYSTEM	HALTON HOODS	120	1	1		VERIFY	DIRECT CONNECTION			LOCATED ABOVE HOOD - BEHIND CLOSURE PANEL - REFER TO SHOP DRAWINGS - FED FROM CFA-T500 PANEL
	309	SINGLE LEMONADE BUBBLER	CRATHCO MODEL #CS-1D-16	120	1	1		3.6				
	310	DOUBLE LEMONADE BUBBLER	CRATHCO MODEL #CS-2D-16	120	1	1		8.5				
	380	ICE MACHINE	FOLLETT MODEL #I4MF141ORBT	115	1	1	0.6	5	5-15R			
	420A	SINGLE UNDERCOUNTER REFRIGERATOR	TRAULSEN MODEL #UHT27-ZCF	115	1	1	0.564	4.7	5-20R			
	420L	SINGLE UNDERCOUNTER REFRIGERATOR	TRAULSEN MODEL #UHT27-ZCF	115	1	1	0.564	4.7	5-20R			
	432T	DOUBLE REFRIGERATED WORK TABLE	TRAULSEN MODEL #UHT60-ZCF-LR	115	1	1	0.756	6.3	L5-20P			
	444SL	SINGLE THAWING CABINET (32" WIDE)	TRAULSEN MODEL #RETI32EWUT-FHS	115	1	1		16	DIRECT CONNECTION			
	503T	EGG STATION	ANTUNES MODEL #ES-600R 9300657	208	1	1		12.5	NEMA L6-20R		1	ORDER ON 4" CASTERS WITH WORK TOP AND BACKSPLASH, PROVIDE WITH TWIST LOCK
	522	OPEN FRYER	HENNY PENNY MODEL #OFE-410	208	3	3	22.0	61	PINSLEEVE			PINSLEEVE PROVIDED WITH EQUIPMENT AND RECEPTACLE BOX PROVIDED WITH HALTON ITEMS
	600T	MIXER	HOBART MODEL #HL200-1	120	1	1		8	L5-20R			
	F180	FUTURE ORDER REGISTER	NCR MODEL #P1230	120	1	1		0.7				
	F182	FUTURE RECEIPT PRINTER	EPSON MODEL #TM-T88IV	24	1	1		1.8				
	F505VT	FUTURE VECTOR OVEN	ALTO-SHAAM MODEL #VMC-H3H 1016224	208	3	3	7.9	22	L15-30P (BY EC)			
	F522	FUTURE OPEN FRYER	HENNY PENNY MODEL #OFE-410	208	3	3	22.0	61	PINSLEEVE			PINSLEEVE PROVIDED WITH EQUIPMENT AND RECEPTACLE BOX PROVIDED WITH HALTON ITEMS

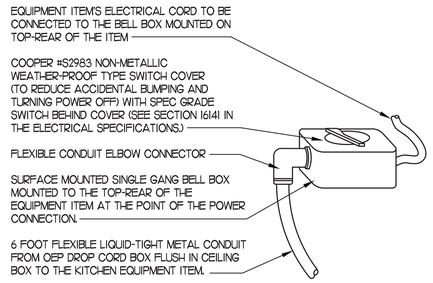
(5) SINGLE LINE DIAGRAM NOTES

1. GROUND ALL EQUIPMENT AND SERVICES IN ACCORDANCE WITH ARTICLE 250 OF THE NATIONAL ELECTRICAL CODE, LOCAL APPLICABLE CODES, AND ALSO AS INDICATED ON DRAWINGS.
2. 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
3. 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.
4. 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.
5. ALL DEVICES SHALL HAVE AN INTERRUPTING CAPACITY NOT LESS THAN THE POWER COMPANY AVAILABLE FAULT CURRENT, OR AS INDICATED ON THE DRAWINGS.
6. 120/208 VOLT BRANCH CIRCUIT PANELBOARD BREAKERS SHALL HAVE A MINIMUM U.L. SERIES RATING OF 65 KAIC WITH UP-STREAM FEEDER BREAKERS AS NOTED.
7. AVAILABLE SPACE FOR MAIN PANELBOARD IS LIMITED. PANELBOARD MUST FIT IN ALLOCATED SPACE. COORDINATE WITH CONSTRUCTION AS REQUIRED.
8. 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.



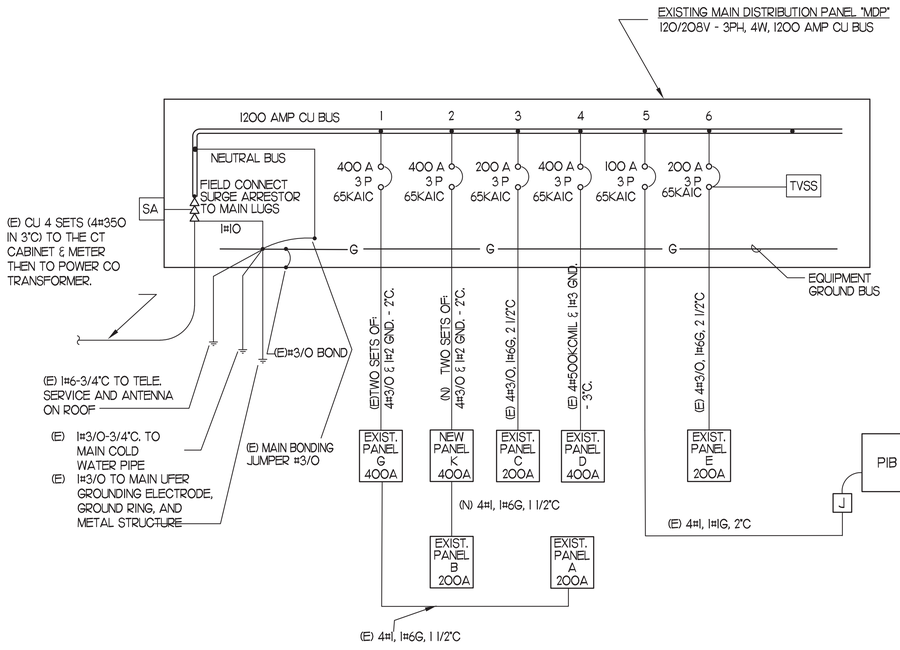
(2) KITCHEN EQUIP DIRECT CONNECTION

NOT TO SCALE — WALL MOUNT CONDITION



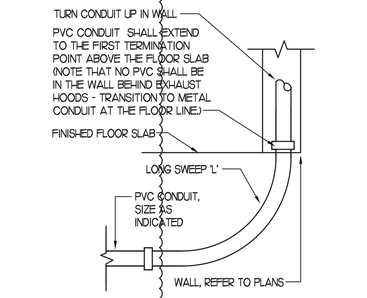
(3) KITCHEN EQUIP DIRECT CONNECTION

NOT TO SCALE — DROP CORD – ISLAND MOUNT CONDITION



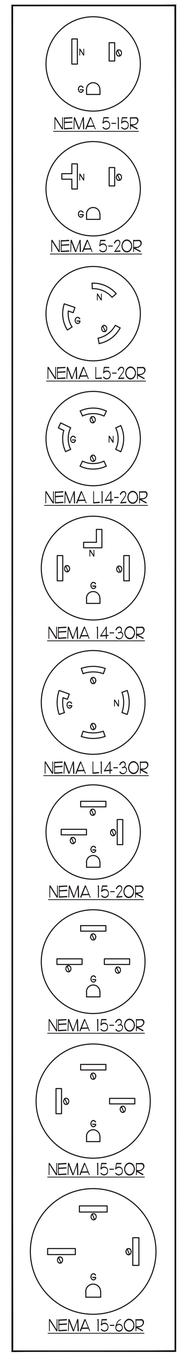
(6) SINGLE LINE DIAGRAM

NOT TO SCALE



(4) INTERIOR PVC CONDUIT DETAIL

NOT TO SCALE



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ALABAMA LICENSED No. PE53814 PROFESSIONAL ENGINEER SYLVIA NASSIF

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PHENIX CITY, AL 36837

FSR#01815

BUILDING TYPE / SIZE: S03D-136
RELEASE: -
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CONSTRUCTION

REVISION SCHEDULE

NO.	DATE	DESCRIPTION
5	08/15/24	FIELD REVISIONS

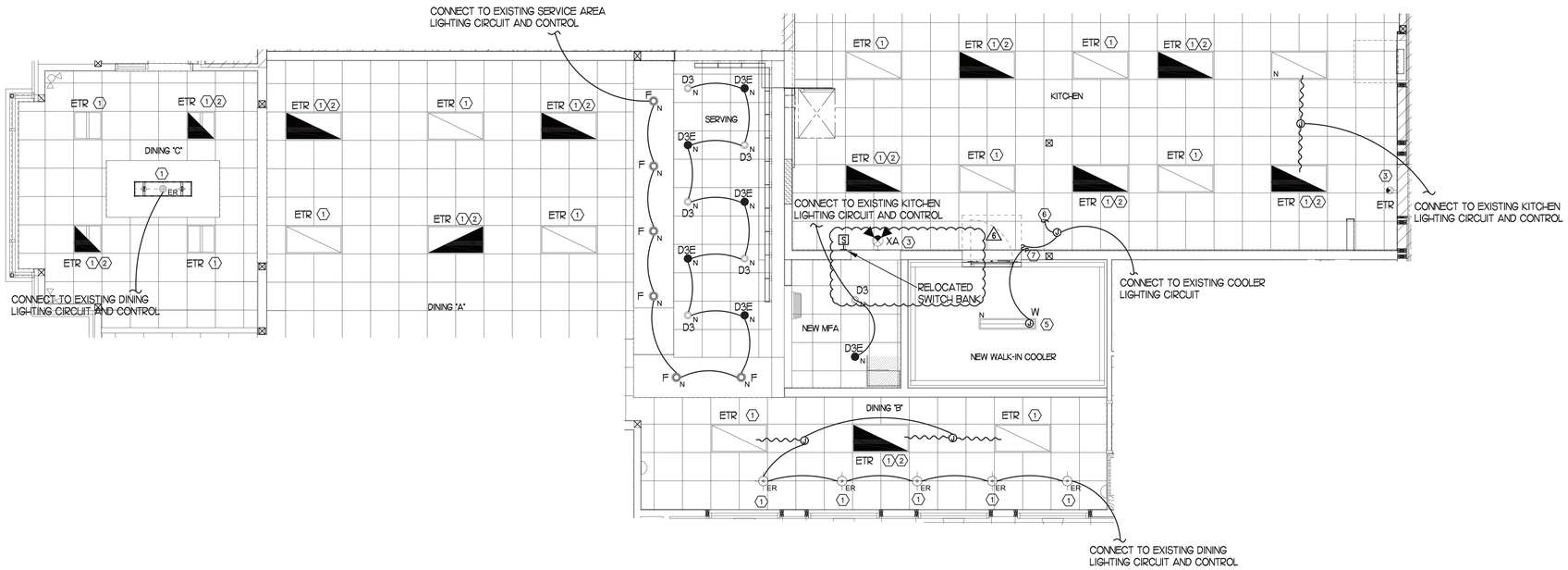
CONSULTANT PROJECT # 2023.0412
DATE DECEMBER 2023
DRAWN BY RZ
CHECKED BY MI

SHEET
EQUIP SCHEDULE AND DETAILS

SHEET NUMBER
E1.2

6 KEY NOTES (APPLY TO THIS SHEET ONLY)

1. CLEAN, RELAMP AND RELENSE ANY RELOCATED / EXISTING LIGHT FIXTURES TO LIKE NEW CONDITION, RECONNECT TO EXISTING AREA LIGHTING CIRCUIT AND CONTROL.
2. ASSUMED LOCATION OF EXISTING BATTERY BACKUP FIXTURE E.C. EXISTING FIXTURE IS EQUIPPED WITH A BATTERY BACK-UP AND REPORT ANY DISCREPANCIES TO ENGINEER PRIOR TO BID AND PROVIDE NEW AS NEEDED
3. CONNECT FIXTURE TO LOCAL LIGHTING CIRCUIT AHEAD OF ALL SWITCHING AND CONTROLS. THIS FIXTURE SHALL NOT BE SWITCHED.
4. CONNECT FIXTURE SO THAT FIXTURE AND BATTERY BACK-UP ARE NOT SWITCHED. "NL" ADJACENT TO FIXTURE INDICATES THAT FIXTURE SHALL BE ON 24 HOURS.
5. 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.
6. 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.
7. FOR CONTROL OF LIGHTING FIXTURE IN WALK-IN COOLER/FREEZER. FURNISHED WITH EQUIPMENT, INSTALLED BY ELECTRICAL CONTRACTOR.
8. SB6000 PANEL ENCLOSURE WITH 3 LITTLE FUSE SHOCK GFCI PROTECTION DEVICES AND SB6100 PANEL ENCLOSURE SHOCK BLOCK GFCI PROTECTION DEVICE. ENSURE CONDUITS ARE INSTALLED FOR LINE AND LOAD WIRES TO BE INSTALLED WITH PROPER WIRE BENDING SPAVE LABEL EACH SHOCK BLOCK WITH PANEL AND CIRCUIT NUMBER IT CONTROLS.



1 LIGHTING PLAN

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

3 KEY NOTES - SECURITY:

S9 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.

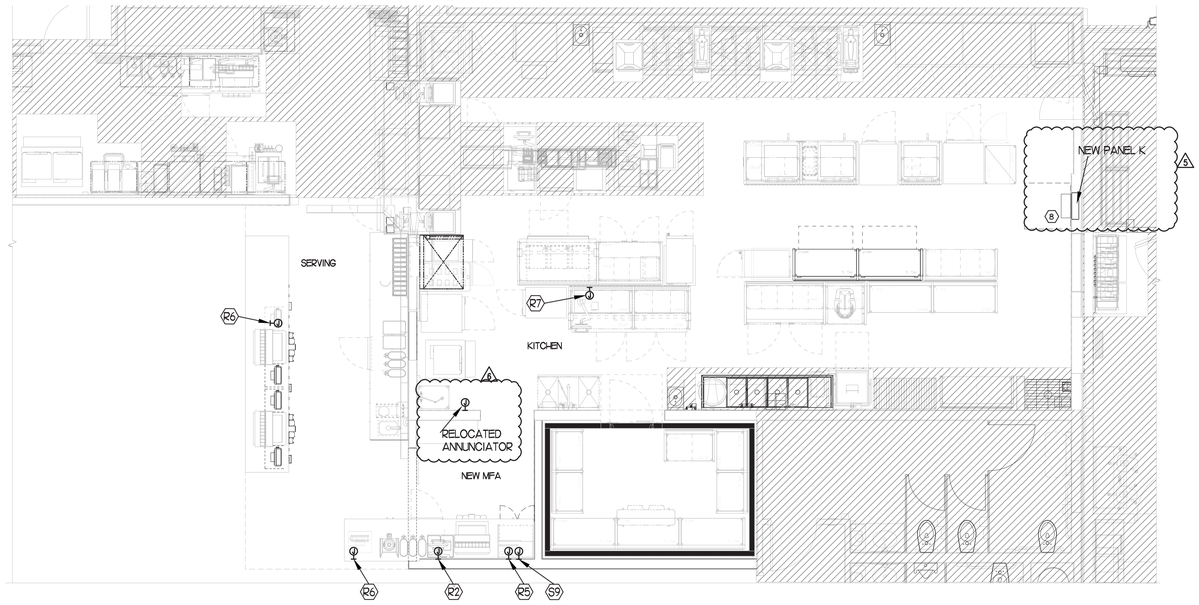
4 KEY NOTES - POS SYSTEM:

R2 PROVIDE SINGLE-GANG JUNCTION BOX WITH A 1" CONDUIT EXTENDING UP INTO THE CEILING SPACE FOR POS MONITOR(S). COVER PLATE PROVIDED BY OWNER'S POS SYSTEM VENDOR.

R5 PROVIDE SINGLE-GANG JUNCTION BOX WITH A 1" CONDUIT EXTENDING UP INTO THE CEILING SPACE FOR POS TERMINAL. POS SYSTEM SUPPLIER WILL PROVIDE COVER PLATE ON BOX.

R6 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 I80. DO NOT MOUNT BOX BETWEEN EQUIPMENT I80 AND EQUIPMENT I82 RECEPTACLES.

R7 PROVIDE SINGLE GANG EXTRA DEEP JUNCTION BOX MOUNTED FLUSH MOUNTED IN THE CEILING FOR POS DATA PLATE (BY OTHERS) FOR THE SALAD PREP AREA POS MONITOR AND PRINTER



2 POWER & SYSTEM PLAN

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

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6	09/03/24	FIELD REVISIONS

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CHECKED BY MI

SHEET
LIGHTING , POWER AND SYSTEM PLAN

SHEET NUMBER
E2.1

NOTE: REFER TO SHEET E2.1 FOR KEYNOTES FOR SECURITY ("S") AND POS DATA SYSTEM ("R") IN THE OFFICE/MP ROOM AREA.

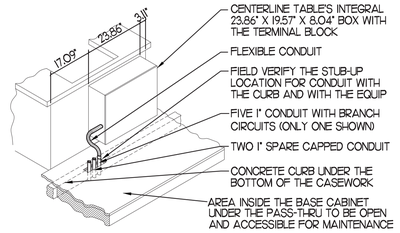
KITCHEN EQUIPMENT MARK NUMBER, SEE SCHEDULE FOR REQMENTS

PANEL AND CIRCUIT NUMBER BRANCH BREAKER SIZE (AMP/POLES), REFER TO SHEET E2.3 FOR THE CONDUIT AND CONDUCTOR SCHEDULE FOR WIRE AND CONDUIT SIZE RELATED TO THE BREAKER (VERIFY)

XX X-XX, AMP/POLE

2 CENTERLINE ISOMETRIC

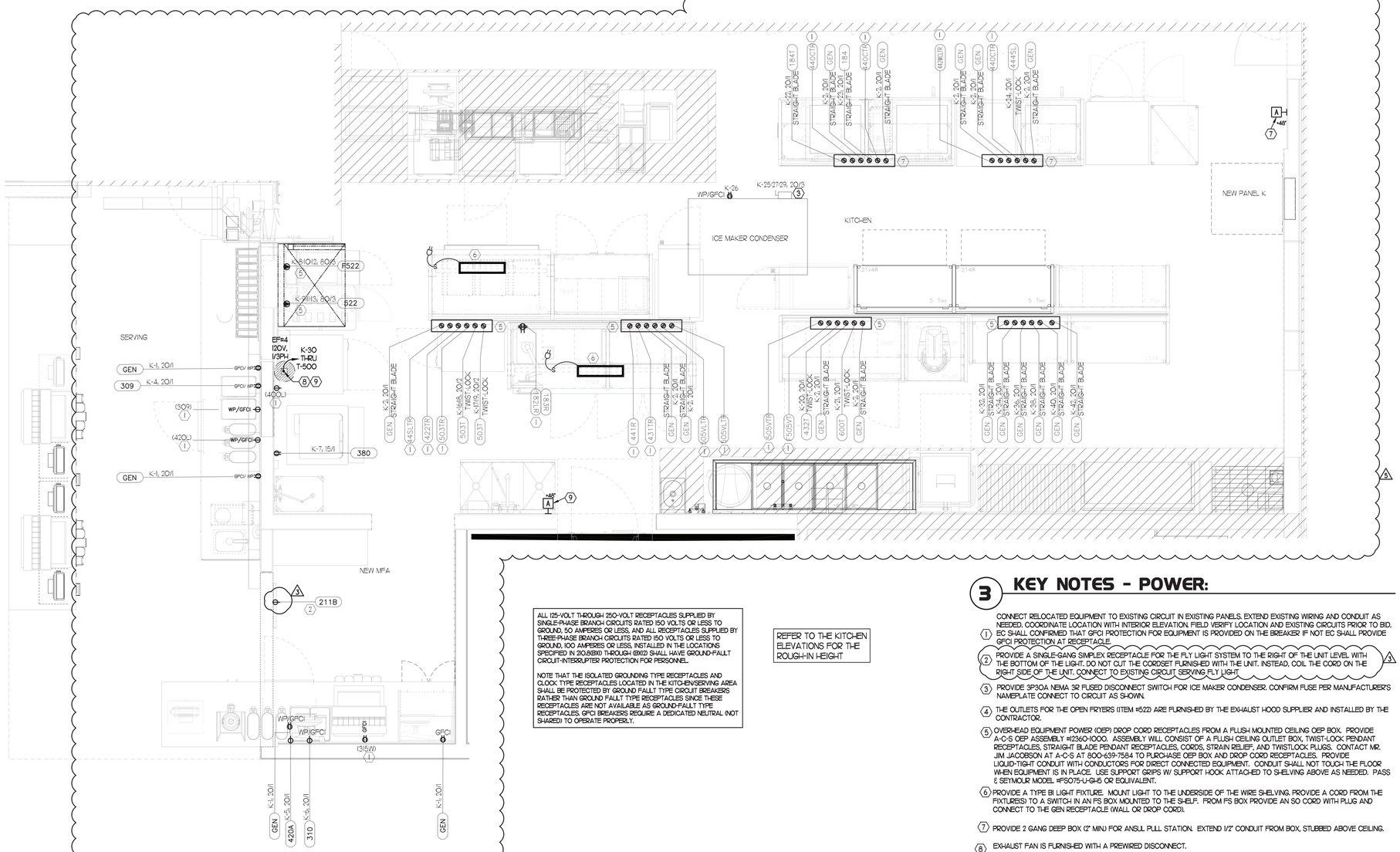
NO SCALE



4 CENTERLINE TABLE ISOMETRIC

NO SCALE

COMPARISON LOAD SUMMARY	
EXISTING TOTAL SERVICE LOAD BASED ON THE EXISTING DATA	864.0 AMPS
-NEW PANEL "K" LOAD	319.0 AMPS
EXISTING PANEL "B" IS FED FROM A 125A BREAKER IN NEW PANEL "K"	
NEW PANEL "K" IS FED FROM A 400A BREAKER IN THE MDP	
NEW TOTAL SERVICE LOAD	1183.00 AMPS
EXISTING SERVICE SIZE IS 1200 AMPS BASED ON EXISTING DATA RECEIVED	


NEW PANEL K
KITCHEN
ICE MAKER CONDENSER
WP/GFCI
K-26
K-25/27/29, 20/3
SERVING
EF#4 120V, 1PH
K-30 TH-RU T-500
(400L)
K-1, 20/1
K-4, 20/1
309
(309)
(420L)
K-7, 15/1
380
NEW MFA
211B
K-10/12, 80/3
R522
K-21/13, 80/3
522
420A
310
K-5, 20/1
(3/5")
GFCI
GFPI
K-22, 20/1 STRAIGHT BLADE
K-23, 20/1 STRAIGHT BLADE
K-24, 20/1 TWIST-LOCK
K-30, 20/1 TWIST-LOCK
K-31, 20/1 TWIST-LOCK
K-32, 20/1
K-33, 20/1
K-34, 20/1
K-35, 20/1
K-40, 20/1
K-42, 20/1
K-2, 20/1
K-3, 20/1
K-6/8, 30/2 TWIST-LOCK
K-20, 20/1
K-21, 20/1
K-26, 20/1
K-27, 20/1
K-28, 20/1
K-29, 20/1
K-36, 20/1
K-37, 20/1
K-38, 20/1
K-39, 20/1
K-41, 20/1
K-43, 20/1
K-44, 20/1
K-45, 20/1
(1841)
(4400TR)
(1184)
(4000TR)
(4445)
(4000TR)
(1645LTR)
(4221R)
(5037R)
(5037)
(5037)
(4128)
(1838)
(4411R)
(4311R)
(605VLT)
(605VLT)
(605VTR)
(605VTR)
(4327)
(600T)
(1645)
(1838)
(1838)
(1838

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 OVERHEAD 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.

4 KEY NOTES - POWER:

1 CONNECT RELOCATED EQUIPMENT TO EXISTING CIRCUIT IN EXISTING PANEL. EXTEND EXISTING WIRING AND CONDUIT AS NEEDED. COORDINATE LOCATION WITH INTERIOR ELEVATION. FIELD VERIFY LOCATION AND EXISTING CIRCUITS PRIOR TO BID.

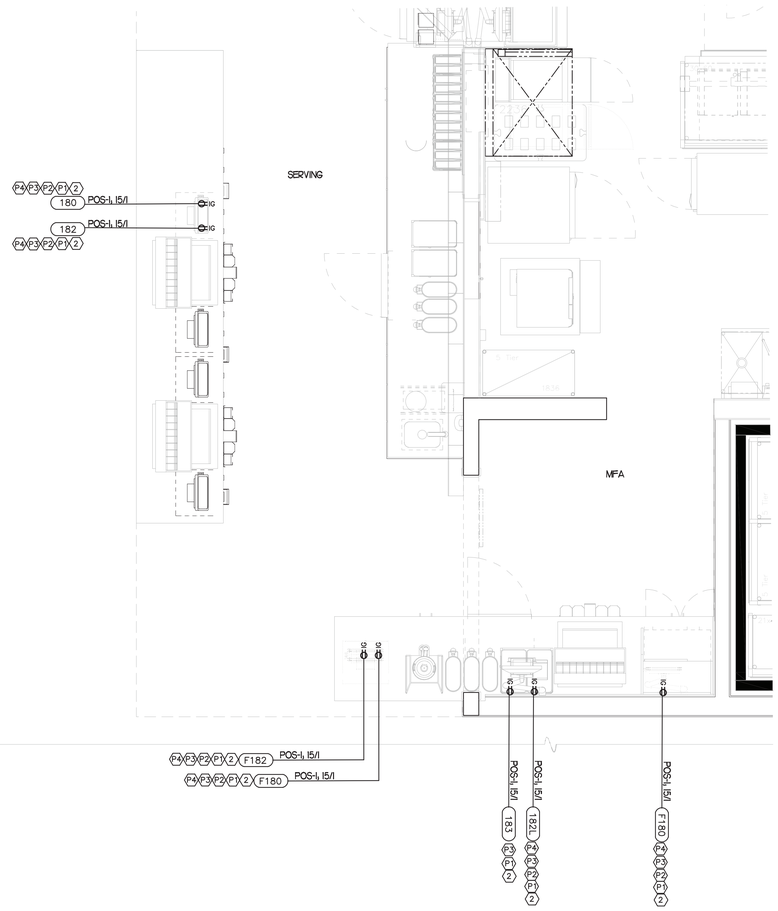
2 PROVIDE ONE (1) 15A/1P CIRCUIT FOR EQUIPMENT FI80, FI82, I80, I82, I82L AND I83. CONNECT TO NEXT AVAILABLE SPARE/SPACE IN PANEL POS. LOAD ON CIRCUIT NOT TO EXCEED 1.8 KW. FIELD VERIFY NUMBER OF SPARES/SPACES PRIOR TO BID. REPORT ANY DISCREPANCIES TO ENGINEER PRIOR TO CONSTRUCTION.

REFER TO THE KITCHEN ELEVATIONS FOR THE ROUGH-IN HEIGHT

2 CONDUIT AND CONDUCTORS SCHEDULE (Based on 2005, 2008, 2011 AND 2017 NEC)

	OCP	CONDUCTORS		CONDUCTORS					RACEWAY SIZE (NOMINAL INCHES)							
MARK	DEVICE	TOTAL AMPACITY		PHASE & NEUTRAL			MIN EQ GRD		NO.	PHASE, NEUTRAL & EQUIP GRD				WITH ISOLATED GROUND		
NO.	(AMP)	60D C	75D C	QTY	SIZE	TYPE	QTY	SIZE	SETS	EMT	IMC	RIGID	PVC	EMT	IMC	PVC
1	20	20	-	2	12	THHN	1	12	ONE	0.75	0.75	0.75	0.75	0.75	0.75	0.75
2	20	20	-	3	12	THHN	1	12	ONE	0.75	0.75	0.75	0.75	0.75	0.75	0.75
3	20	20	-	4	12	THHN	1	12	ONE	0.75	0.75	0.75	0.75	0.75	0.75	0.75
7	30	30	-	2	10	THHN	1	10	ONE	0.75	0.75	0.75	0.75	0.75	0.75	0.75
8	30	30	-	3	10	THHN	1	10	ONE	0.75	0.75	0.75	0.75	0.75	0.75	0.75
9	30	30	-	4	10	THHN	1	10	ONE	0.75	0.75	0.75	0.75	0.75	0.75	0.75
10	40	40	-	2	8	THHN	1	10	ONE	0.75	0.75	0.75	0.75	0.75	0.75	0.75
11	40	40	-	3	8	THHN	1	10	ONE	0.75	0.75	0.75	0.75	0.75	0.75	0.75
12	40	40	-	4	8	THHN	1	10	ONE	0.75	0.75	0.75	0.75	0.75	0.75	0.75
13	50	55	-	2	6	THHN	1	10	ONE	0.75	0.75	0.75	0.75	0.75	0.75	1.00
14	50	55	-	3	6	THHN	1	10	ONE	0.75	0.75	0.75	0.75	1.00	1.00	1.00
15	50	55	-	4	6	THHN	1	10	ONE	1.00	1.00	1.00	1.00	1.00	1.00	1.00
30	125	-	130	3	1	THW	1	6	ONE	1.50	1.50	1.50	1.50	2.00	2.00	2.00
31	125	-	130	4	1	THW	1	6	ONE	2.00	2.00	2.00	2.00	2.00	2.00	2.00
36	200	-	200	3	3/0	THW	1	6	ONE	2.00	2.00	2.00	2.00	2.50	2.50	2.50
37	200	-	200	4	3/0	THW	1	6	ONE	2.50	2.50	2.50	2.50	2.50	2.50	2.50
38	225	-	230	3	4/0	THW	1	4	ONE	2.50	2.50	2.50	2.50	2.50	2.50	2.50
39	225	-	230	4	4/0	THW	1	4	ONE	2.50	2.50	2.50	2.50	2.50	3.00	3.00
40	250	-	255	4	250	THW	1	4	ONE	2.50	3.00	3.00	3.00	3.00	3.00	3.00
43A	400	-	380	4	500	THW	1	3	ONE	3.50	3.50	3.50	3.50	3.50	3.50	3.50
43B	400	-	400	4	3/0	THW	2	3	TWO	2.50	2.50	2.50	2.50	2.50	2.50	2.50
44A	600	-	570	4	300	THW	2	1	TWO	3.00	3.00	3.00	3.00	3.00	3.00	3.00
44B	600	-	620	4	350	THW	2	1	TWO	3.00	3.00	3.00	3.00	3.00	3.00	3.50

NOTES:
CONDUCTORS ARE RATED AT 600 VOLT OR BELOW AND ARE TO BE COPPER.
NEC TABLE 310.16 (310.15(B)(16) IN 2017) 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.



1 LARGE SCALE POS POWER PLAN - SERVING AREA

SCALE: 1/2"= 1'-0"

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CHECKED BY MI

SHEET
ENLARGED POS POWER PLAN

SHEET NUMBER
E2.3

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 included 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 diagramatic 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 and 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 banks.

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.

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 feralloy. 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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5200 Buffington Road
Atlanta, Georgia
30349-2998

INTERPLAN
INTERPLAN LLC

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ENGINEERING
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CHICK-FIL-A
PHENIX CITY

3711 US HIGHWAY 280
PHENIX CITY, AL 36837

FSR#01815

BUILDING TYPE / SIZE: S03D-136
RELEASE: -
PRINTED FOR
CONSTRUCTION

REVISION SCHEDULE

NO.	DATE	DESCRIPTION

CONSULTANT PROJECT # 2023.0412
DATE DECEMBER 2023
DRAWN BY RZ
CHECKED BY MI

SHEET
ELECTRICAL SPECIFICATIONS
SHEET NUMBER

E4.1

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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, 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 bridle 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)
Tamper Resistant duplex: #TR8200-B (Vestibules & Play Area)
Tamper 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 #WIU-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 (via Chick-fil-A National Accounts Program)
A. Siemens (West, Midwest, and Southwest Regions): from Suncoast Environmental Controls (SEC), Scott Dyer (877) 544-6679.

B. Square-D (Northeast, Atlantic, and Southeast Regions): from Accu-Serv, Bob Harpring (502) 961-0096.

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 Christanell 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.

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 compatable 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.

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 bushing.

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.

PART 3 - EXECUTION

3.01 INSTALLATION
A. Provide one #10 equivalent nylon pull wire in each empty telephone conduit.

B. Provide trenching, backfilling, etc., for installation of service entrance conduit in accordance with other divisions, plans, and telephone utility requirements. Provide pull wire in empty conduit.

C. Coordinate with the local utility for point of service and type of service required. Pay for any utility company charges and fees for establishment of service.

D. Provide a complete raceway system in accordance with telephone utility company and interior system vendor/utility requirements. Telephone utility company and interior system vendor shall review the drawings. Contractor shall provide for any additional or varying requirements.

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

F. Final connections and testing of system will be provided by the system vendor. Contractor shall contact the owner and vendor and schedule the work.

CLOSE OUT DOCUMENT REQUIREMENTS

Provide the following to the building owner upon completion of construction:

1. Submittal data stating equipment rating and selected options for each piece of equipment requiring maintenance.

2. Operation manuals and maintenance manuals for each piece of equipment requiring maintenance. Required routine maintenance actions shall be clearly identified.

3. Names and addresses of at least one qualified service agency.

4. A complete narrative of how each system is intended to operate.

Chick-fil-A
5200 Buffington Road
Atlanta, Georgia
30349-2998

INTERPLAN
INTERPLAN LLC
AR99238
CA 8660

ARCHITECTURE
ENGINEERING
PERMITTING

220 E. CENTRAL PKWY, STE 4000
ALTAMONTE SPRINGS, FL 32701
407.645.5008

SEAL:
ALABAMA LICENSED
No. PE53814
PROFESSIONAL ENGINEER
SYLVIA NASSIF

CHICK-FIL-A
PHENIX CITY

3711 US HIGHWAY 280
PHENIX CITY, AL 36837

FSR#01815

BUILDING TYPE / SIZE: S03D-136
RELEASE: -
PRINTED FOR:
CONSTRUCTION

REVISION SCHEDULE

NO.	DATE	DESCRIPTION

CONSULTANT PROJECT # 2023.0412
DATE DECEMBER 2023
DRAWN BY RZ
CHECKED BY MI

SHEET
ELECTRICAL SPECIFICATIONS
SHEET NUMBER
E4.2

MARIBR - 03/06/2024 7:30:09 AM