KEY NOTES

1 EXISTING PLLUMBING FIXTURE TO REMAIN.PLUMBING CONTRACTOR SHALL BE RESPONSIBLE FOR VERIFYING FIXTURE IS CLEAR AND USABLE.
2 EXISTING VENT TO BE DEMOLISHED. CAP OFF AT MAIN LINE ABOVE CEILING.
3 EXISTING FLOO FIXTURE TO REMAIN.
4 DEMOLISH EXISTING FLOOR FIXTURE OR ABOVE SLAB FIXTURE, PREPARE LINES FOR CONNECTION OF NEW FIXTURE OR EXTENSION. REFER TO P-101.
5 DEMOLISH EXISTING RESTROOM FIXTURE. CAP WASTE CONNECTION BELOW SLAB OR WITHIN WALL FOR FUTURE CONNECTION. CAP EXISTING WATER LINES WITHIN WALL AND PREPARE FOR CONNECTION TO NEW EQUIPMENT
6 PLUMBING CONTRACTOR SHALL DEMOLISH EXISTING TRAP PRIMER LOCATED BELOW COUNTER. EXISTING CW LINES SHALL BE CAPPED AND ABANDONED.

PIPING LEGEND

SANITARY WASTE	SAN
EXISTING SANITARY	ESS
GREASE WASTE	GW
EXISTING GREASE	EGW
DEMOLISHED PIPE	
EXISTING FLOOR DRAIN	FD
EXISTING FLOOR SINK	FS

NOTE:

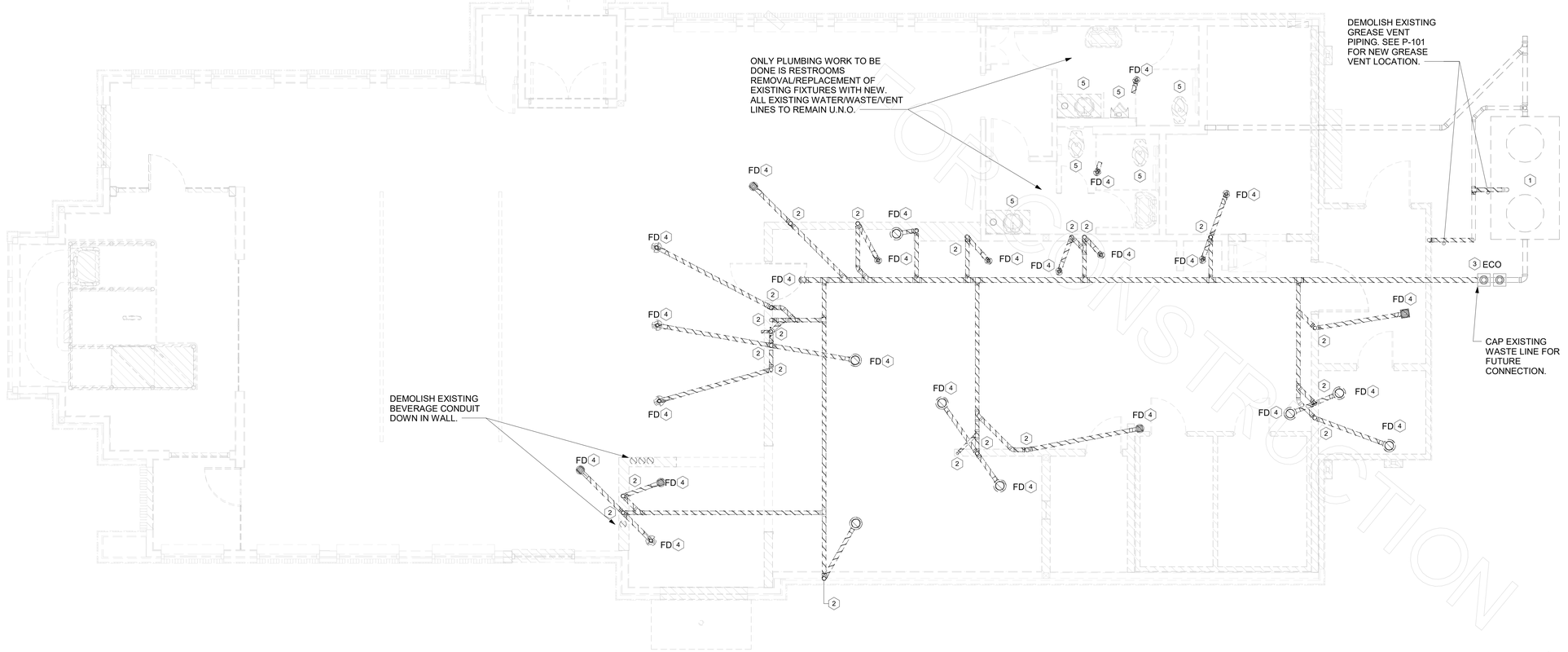
PLUMBING CONTRACTOR SHALL CLEAN OUT THE EXISTING SANITARY SEWER LINE WITHIN SPACE TO MAIN BUILDING SEWER LINE WHICH SHALL BE FIELD VERIFIED EITHER AT THE STREET OR IN THE PARKING LOT AND ALSO VERIFY ALL NEW WASTE LINES ARE CLEAR. LINES SHALL BE CLEARED OF ALL EXISTING DEBRIS AND SHALL BE GUARANTEED THAT A CLEAR FLOW SHALL EXIST WHEN CFA TAKES POSSESSION. AFTER WASTE LINES ARE INSTALLED, PRIOR TO GRAVEL AND CONCRETE POUR, PLUMBING CONTRACTOR SHALL MAINTAIN THAT WASTE LINE STUB-UPS ARE CAPPED TO ENSURE THAT GRAVEL AND CONCRETE DO NOT ENTER PIPING.

1. SITE PIPING DEMO NOTES

1. CAREFULLY EXAMINE & VERIFY ALL EXISTING CONDITIONS PRIOR TO COMMENCING ANY DEMOLITION WORK. FIELD VERIFY ALL SERVICE LINE LOCATIONS, DIAMETERS, ROUTING, INVERTS, ETC.
2. REFER TO SITE PLAN FOR EXACT LOCATION OF EXISTING GREASE INTERCEPTOR AND ALL SITE PIPING.

2. SHEET NOTES

1. VERIFY IF EXISTING SLAB IS A POST TENSION TYPE. CONTRACTOR IS REQUIRED TO PERFORM GROUND PENETRATING RADAR (GPR) TEST ON THE FLOOR PRIOR TO CUTTING FLOOR FOR KITCHEN DRAIN RELOCATIONS.
2. LOCATIONS OF WASTE LINES, VENTS, CW LINES & OTHER UNDER AND ABOVE GROUND ITEMS AS SHOWN ON THESE PLANS ARE APPROXIMATE AND THEIR ACTUAL LOCATION MAY VARY SIGNIFICANTLY. FIELD VERIFY ALL EXISTING CONDITIONS, INCLUDING LOCATION, FALL, DIRECTION OF FLOW AND CONNECTING INVERTS, PRIOR TO COMMENCING WORK. NOTIFY CHICK-FIL-A CONSTRUCTION REPRESENTATIVE IF EXISTING MAJOR DISCREPANCIES IN ROUTING OF SERVICE LINES ARE DISCOVERED IN FIELD.
3. IT IS THE RESPONSIBILITY OF THE CONTRACTOR TO VISIT THE SITE DURING BID PHASE, WITH EXISTING DRAWINGS PROVIDED BY THE OWNER, IN ORDER TO DETERMINE THE TRUE AS-BUILT CONDITIONS OF THE POTABLE WATER, SANITARY WASTE-VENT AND OTHER PIPING SYSTEMS.
4. GENERAL CONTRACTOR SHALL BE RESPONSIBLE FOR REMOVING, STORING, AND RELOCATING EXISTING PLUMBING EQUIPMENT. PLUMBING CONTRACTOR TO COORDINATE DISCONNECTING OF EXISTING EQUIPMENT WITH GENERAL CONTRACTOR PRIOR TO COMMENCING WORK.
5. ALL LINES THAT ARE TO BE ABANDONED IN PLACE SHALL BE DEMOLISHED MIN. 6" BELOW SLAB, IN WALL OR ABOVE CEILING AND PLUGGED WATER/AIR TIGHT. ALL AFFECTED ADJACENT SURFACES SHALL BE REPAIRED AND REFINISHED TO MATCH SURROUNDING AREA.
6. VERIFY ALL FIXTURES THAT ARE TO BE REUSED ARE IN GOOD USABLE CONDITION; REPLACE FIXTURE IF DEFICIENCIES ARE FOUND.
7. EXCEPT AS NOTED ON PLAN OR DETAILS, ALL NEW OR RELOCATED FLOOR DRAINS SHALL BE INSTALLED CENTERED IN 3 FT. DIAM. 1" DEEP SLAB DEPRESSION.
8. CONTRACTOR IS RESPONSIBLE FOR REPAIRING AND LEVELING OF FLOOR DEPRESSIONS IN AREAS WHERE EXISTING FLOOR DRAINS, CLEANOUTS &/OR OTHER FLOOR ITEMS ARE BEING DEMOLISHED, ABANDONED OR RELOCATED.



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

Kurzynske & Associates
2705 Lebanon Pike - Suite One
Nashville, Tennessee 37214
Telephone: (615) 255-5203

STATE OF MISSOURI
MARK T. KURZYNSKE
E-20001
REGISTERED PROFESSIONAL ENGINEER
8/1/23

CHICK-FIL-A
ST JOSEPH FSU

5303 N BELT HWY
ST JOSEPH, MO 64506

FSR#02309

BUILDING TYPE / SIZE: SO8C
RELEASE: v2.20.08
PRINTED FOR
ISSUE FOR CONSTRUCTION

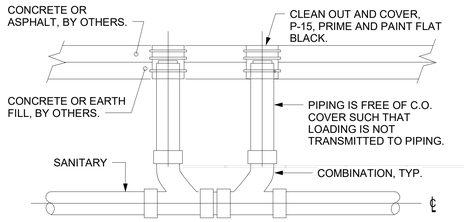
REVISION SCHEDULE

NO.	DATE	DESCRIPTION

CONSULTANT PROJECT # 22172.CD.R
DATE 12/01/22
DRAWN BY BF

SHEET
BELOW SLAB DEMOLITION PLAN

SHEET NUMBER
P-100



4 SAN. C.O. OUTSIDE BUILDING
NOT TO SCALE

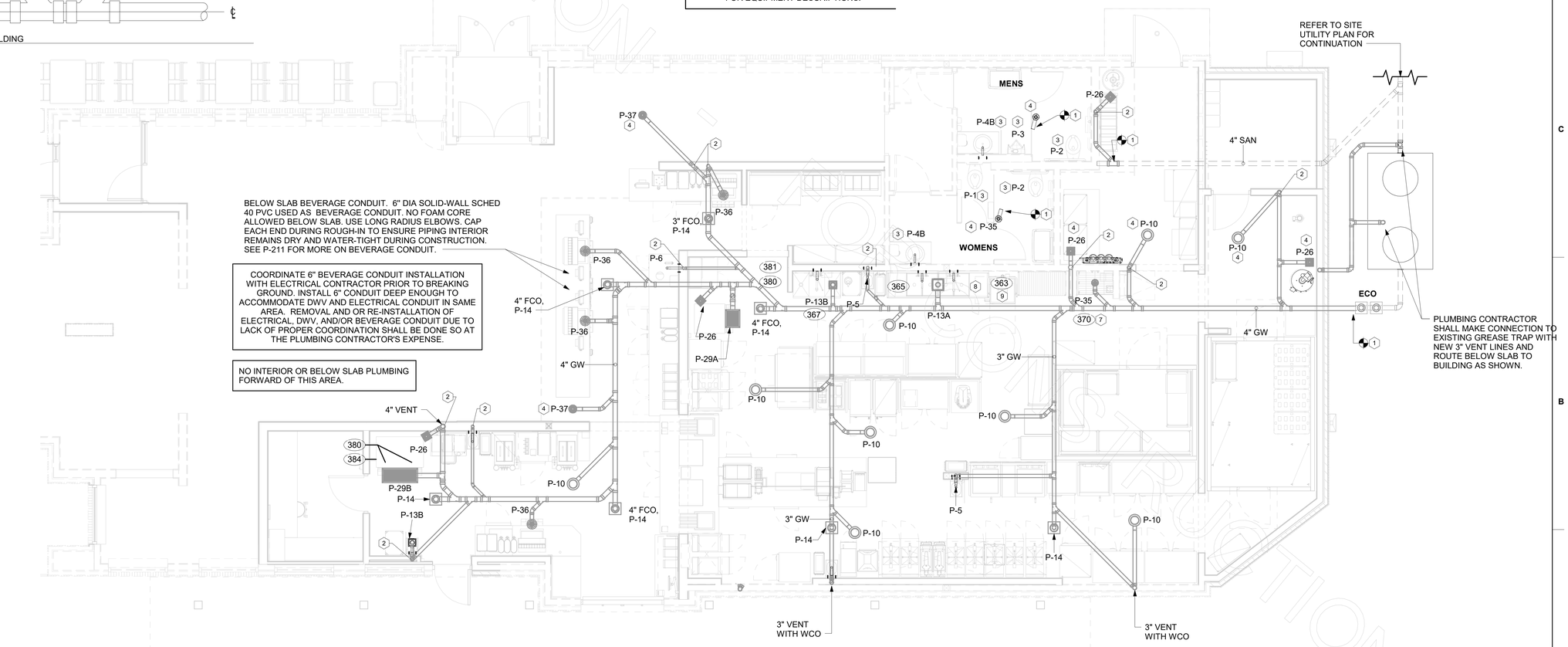
(XXX) KITCHEN EQUIPMENT NO. SEE KITCHEN EQUIPMENT SCHEDULE ON DWG P-303 FOR EQUIPMENT DESCRIPTIONS.

5. SHEET NOTES

1. COORDINATE INSTALLATION OF SANITARY PIPING WITH FOOTINGS IN THE FIELD. SLEEVE PENETRATIONS IN FOOTINGS WITH PVC.
2. COMBINATION WASTE AND VENT SYSTEM SHOWN HERE. WHERE REQUIRED BY LOCAL AUTHORITY HAVING JURISDICTION, PROVIDE SAFE-WASTE SYSTEM OR DEDICATED VENT SYSTEM AS OUTLINED IN STATE AND LOCAL CODE AMENDMENTS.
3. ALL WATER PIPING INSTALLED WITHIN EXTERIOR WALLS SHALL BE LOCATED ON THE INTERIOR SIDE OF THE INSULATION.
4. ALL VENT PIPING TO BE 2" DIAMETER MIN U.N.O. SEE 1/P-301 FOR VENT LAYOUT.

KEY NOTES

1 CONNECT NEW WASTE LINE TO EXISTING AS SHOWN. VERIFY FALL, FLOW DIRECTION AND CONNECTING INVERTS. PROVIDE VENT CONNECTION TO EXISTING SYSTEM WHERE APPLICABLE.
2 ROUTE NEW VENT LINE UP IN WALL TO ABOVE CEILING. MAKE CONNECTION TO EXISTING VENT HEADER OF SAME SIZE OR LARGER. WHERE DRAIN IS LOCATED IN NEW ADDITION, ROUTE VENT LINE UP IN WALL AND ABOVE CEILING INTO EXISTING BUILDING AND MAKE NECESSARY CONNECTION.
3 INSTALL NEW PLUMBING FIXTURE. MAKE CONNECTION TO EXISTING WASTE LINE LOCATED BELOW SLAB/WITHIN WALL. PLUMBING CONTRACTOR SHALL BE RESPONSIBLE FOR ANY ADDITIONAL PIPE REQUIRED.
4 PROVIDE WITH TRAP SEAL PROTECTOR, P-26A.
6 PROVIDE AND INSTALL NEW GREASE INTERCEPTOR, REFER TO DETAIL FOR REQUIREMENTS. REFER TO SITE PLAN FOR LOCATION AND ALL CONNECTIONS. VERIFY IN FIELD W/ SITE & NEW CONSTRUCTION WORK. SEE P-100 FOR DEMOLITION REQUIREMENTS.
7 INSTALL FLOOR DRAIN P-35 AT MOP SINK DEPRESSION WITH TOP OF STRAINER 0'-7" BFF.
8 PROVIDE AND INSTALL NEW WASTE PIPING BELOW KITCHEN SINK. PROVIDE 1-1/2" SCHED 40 PVC INDIRECT WASTE DRAIN FROM EACH SINK BASIN TO FLOOR SINK. NO P-TRAPS REQUIRED.
9 ROUTE NEW DRAIN LINE TO BELOW POT SINK AND TERMINATE INTO P-13A FLOOR SINK WITH AIR GAP.



1 BELOW SLAB PLUMBING PLAN
1/4" = 1'-0"

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

Kurzynske
& Associates
2705 Lebanon Pike - Suite One
Nashville, Tennessee 37214
Telephone: (615) 255-5203

STATE OF MISSOURI
MARK F. BRADLEY
NUMBER E-2000132901
REGISTERED PROFESSIONAL ENGINEER
8/1/23

CHICK-FIL-A
ST JOSEPH FSU

5303 N BELT HWY
ST JOSEPH, MO 64506

FSR#02309

BUILDING TYPE / SIZE: SO8C ALL
RELEASE: v2.20.08
PRINTED FOR
ISSUE FOR CONSTRUCTION

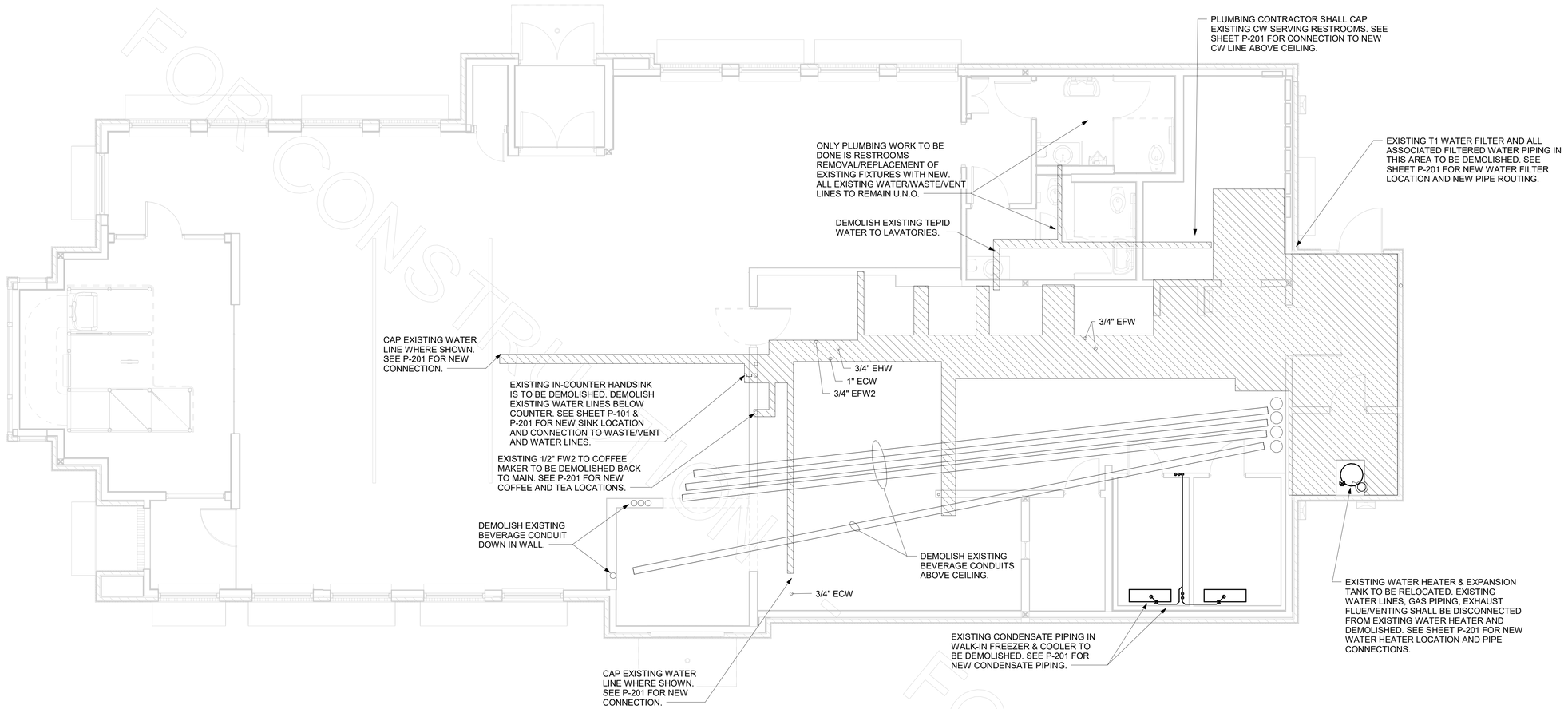
REVISION SCHEDULE

NO.	DATE	DESCRIPTION

CONSULTANT PROJECT # 22172.CD.R
DATE 12/01/22
DRAWN BY BF

SHEET
BELOW SLAB PLUMBING PLAN

SHEET NUMBER
P-101



1 WATER PIPING PLAN PLUMBING
1/4" = 1'-0"

1. SITE PIPING DEMO NOTES

1. CAREFULLY EXAMINE & VERIFY ALL EXISTING CONDITIONS PRIOR TO COMMENCING ANY DEMOLITION WORK. FIELD VERIFY ALL SERVICE LINE LOCATIONS, DIAMETERS, ROUTING, INVERTS, ETC.
2. REFER TO SITE PLAN FOR EXACT LOCATION OF EXISTING GREASE INTERCEPTOR AND ALL SITE PIPING.

PIPING LEGEND

CW	CW - COLD WATER
HW	HW - HOT WATER
FW	FW - FILTERED WATER, TO P-30, CARBONATORS, COFFEE, AND TEA
FW2	FW2 - FILTERED WATER, TO ICE MAKERS
	EXISTING PIPE TO BE DEMOLISHED
	EXISTING PIPE TO REMAIN

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

Kurzynske & Associates
2705 Lebanon Pike - Suite One
Nashville, Tennessee 37214
Telephone: (615) 255-5203

STATE OF MISSOURI
MARK T. KURZYNSKE
E-2000153900
REGISTERED PROFESSIONAL ENGINEER
8/1/23

CHICK-FIL-A
ST JOSEPH FSU

5303 N BELT HWY
ST JOSEPH, MO 64506

FSR#02309

BUILDING TYPE / SIZE: SO8C
RELEASE: v2.20.08
PRINTED FOR
ISSUE FOR CONSTRUCTION

REVISION SCHEDULE

NO.	DATE	DESCRIPTION

CONSULTANT PROJECT # 22172.CD.R
DATE 12/01/22
DRAWN BY BF

SHEET
ABOVE SLAB DEMOLITION PLAN

SHEET NUMBER
P-200

3. SHEET NOTES

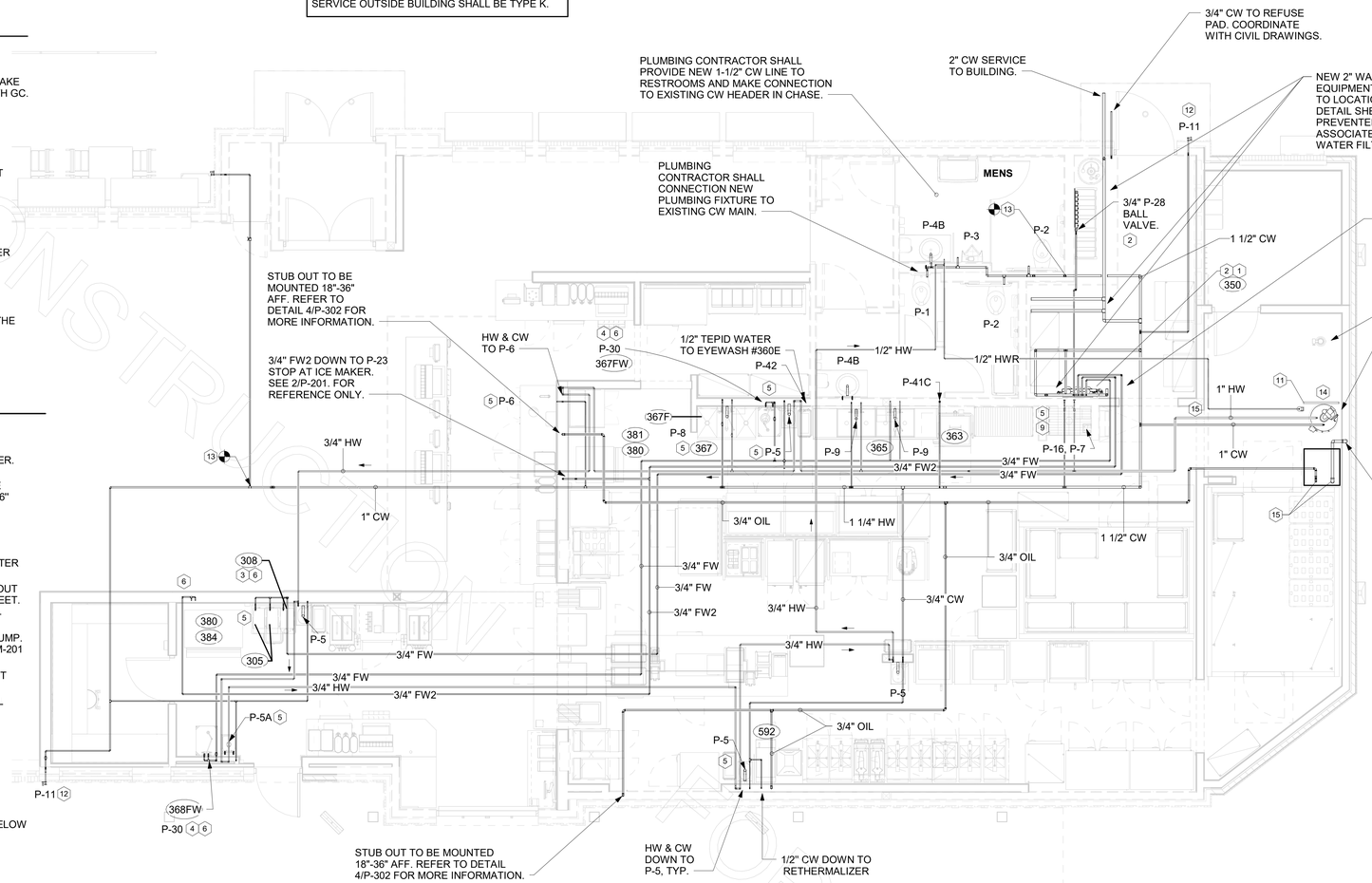
1. COORDINATE VENT TERMINAL LOCATIONS WITH FRESH AIR HOODS ON ROOFTOP EQUIPMENT SO AS TO MAINTAIN MINIMUM 15'-0" CLEARANCE.
2. HOLD ALL PIPING ABOVE THE CEILING TIGHT TO STRUCTURE. DUCT LOCATIONS TAKE PRIORITY. SEE DRAWING M-201 FOR DUCT LAYOUT. COORDINATE CONFLICTS WITH GC.
3. SEE K-SHEET ELEVATIONS FOR KITCHEN EQUIPMENT WATER PIPING ROUGH-IN LOCATIONS.
4. SEE SHEET P-211 FOR BEVERAGE CONDUIT PIPING.
5. SEE RISER DIAGRAM 1/P-301 FOR VENT PIPING. SEE ROOF PLAN 1/P-250 FOR VENT THRU ROOF (VTR) LOCATION.
6. VERIFY WALL TYPE AND WALL THICKNESS AT EXTERIOR HOSE BIBBS PRIOR TO ORDERING EQUIPMENT.
7. WATER HEATER PIPING IS SHOWN FOR STATE/A.O. SMITH MODELS WITH SIDE INLET/OUTLET CONNECTIONS. ADJUST PIPING AS NEEDED TO ACCOMODATE OTHER CONNECTION POINTS WHEN ALTERNATE MODELS ARE PROVIDED.
8. 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.

⬡ KEY NOTES

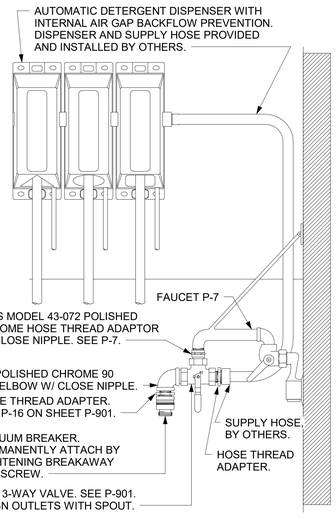
1 NEW WATER FILTERS. SEE DETAIL 5/P-303
2 <varies>
3 1/2" FW TO P-24 & P-34 AT TWO (2) TEA BREWERS AND ONE (1) COFFEE BREWER. SEE DETAIL 6, SHEET P-302
4 3/4" FW DROP TO TWO-HANDLE FAUCET P-30. MOUNT FAUCET ON WALL. SEE K-SHEETS FOR EXACT LOCATION. PIPE 1/2" FW TO EACH FAUCET INLET WITH 6" SPREAD. PROVIDE BALL VALVE ABOVE CEILING.
5 PROVIDE 1/2" HW & CW CONNECTIONS TO FIXTURE.
6 INSTALL SHOCK ABSORBER (P-25) AT TOP OF WATER LINE DROP DOWN TO FIXTURE.
7 1/2" HOT WATER RETURN LINE. MAKE CONNECTION TO CW INLET SIDE OF WATER HEATER. SEE DETAIL ON SHEET P-303.
9 INSTALL P-16 3-WAY VALVE WITH BACKFLOW PREVENTER ON P-7 FAUCET SPOUT FOR CONNECTION TO ECOLAB DETERGENT DISPENSER. SEE DETAIL THIS SHEET. PROVIDE BALL VALVE FOR EACH WATER LINE ABOVE CEILING WITH P-22 BALL CHECK VALVE IN EACH DROP.
10 SEE 6/P-303 FOR P-19 WATER HEATER, AND P-38 HOT WATER CIRCULATING PUMP. COORDINATE WATER AND DWV PIPING IN THIS AREA WITH HVAC DUCT. SEE M-201 FOR DUCT LAYOUT.
11 1" GAS DOWN FROM ROOF FOR P-19. SEE 6/P-303 FOR CONTINUATION. OFFSET DROP WITHIN WALL ABOVE MECH ROOM CEILING.
12 P-11 WALL HYDRANT 24" AFF WITH BALL VALVE IN DROP 48" AFF. VERIFY WALL THICKNESS PRIOR TO ORDERING. SEE WATER RISER 1/P-302.
13 MAKE CONNECTION TO EXISTING CW, HW, AND/OR FW LINES.
14 OWNER PROVIDED, PLUMBER INSTALLED STOP/BFP PANEL. SEE K-SHEET ELEVATIONS FOR EXACT LOCATION. PROVIDE EXPOSED 3/4" BALL VALVE AT CONNECTION TO PANEL. ROUTE 1" PVC DRAIN FROM FACTORY PANEL DRAIN CONNECTION TO P-26 FUNNEL DRAIN AT END OF BEVERAGE RACK AND TERMINATE WITH ELBOW AND AIR GAP.
15 TURN 3/4" AND 2" SCHEDULE 40 STEEL PIPE DOWN THROUGH CEILING FOR FUTURE DARPRO OIL TANK AND CAP ACCORDINGLY. PROVIDE CHROMED ESCUTCHEONS AT CEILING PENETRATIONS. 3/4" OIL LINE TO BE CAPPED 2" BELOW CEILING.

MAIN 2" WATER SERVICE TO BUILDING:

REFER TO SITE UTILITY PLAN FOR CONTINUATION. MATERIAL USED FOR WATER SERVICE OUTSIDE BUILDING SHALL BE TYPE K.

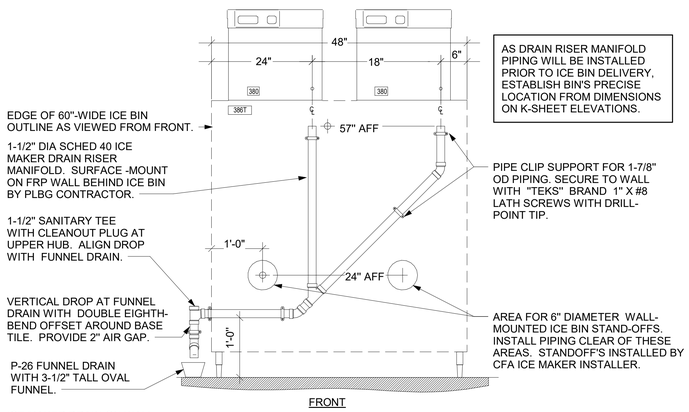


1 WATER PIPING PLAN PLUMBING
1/4" = 1'-0"



4 3-WAY VALVE AT MOP SINK
NOT TO SCALE

DRAIN RISER LOCATIONS MEASURED FROM EDGE OF ICE BIN. VERIFY ICE BIN WIDTH AND PRECISE LOCATION FROM DIMENSIONS ON K-SHEET ELEVATIONS.



AS DRAIN RISER MANIFOLD PIPING WILL BE INSTALLED PRIOR TO ICE BIN DELIVERY, ESTABLISH BIN'S PRECISE LOCATION FROM DIMENSIONS ON K-SHEET ELEVATIONS.

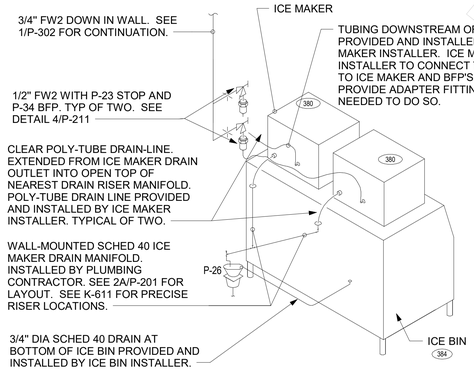
PIPE CLIP SUPPORT FOR 1-7/8" OD PIPING. SECURE TO WALL WITH "TEKS" BRAND 1" X #8 LATH SCREWS WITH DRILL-POINT TIP.

AREA FOR 6" DIAMETER WALL-MOUNTED ICE BIN STAND-OFFS. INSTALL PIPING CLEAR OF THESE AREAS. STANDOFF'S INSTALLED BY CFA ICE MAKER INSTALLER.

3 ICE MAKER DRAIN ON WALL
NOT TO SCALE

NOTE TO WATER HEATER INSTALLER:

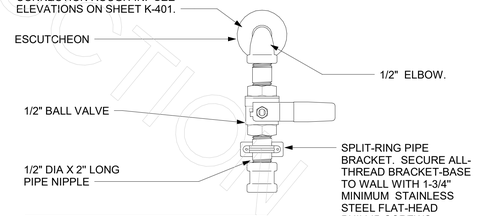
POSITION VALVES AND TRIM IN WATER HEATER CLOSET SUCH THAT VISIBLE OBSERVATION OF VALVES AND TRIM IS UNOBSTRUCTED AND SUCH THAT ACCESS FOR OPERATION OR REPAIR IS POSSIBLE WITHOUT USE OF STEP LADDERS OR ANY NEED TO DISASSEMBLE ANY COMPONENTS.



2 ICE MACHINE PIPING
NOT TO SCALE

ALL PIPE NIPPLES AND FITTINGS SHALL BE LEAD -FEE CHROME PLATED BRASS.

BALL VALVES SHALL BE FULL-PORT, LEAD-FREE STAINLESS STEEL WITH FIP INLET & OUTLET.



COORDINATE WALL BLOCKING LOCATION WITH GENERAL CONTRACTOR.

GENERAL CONTRACTOR TO PROVIDE AND INSTALL WALL BLOCKING SIM 2A/P-302.

5 RETHERMALIZER SUPPLY VALVE
NOT TO SCALE

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

Kurzynske & Associates
2705 Lebanon Pike - Suite One
Nashville, Tennessee 37214
Telephone: (615) 255-5203

STATE OF MISSOURI
MARK T. KURZYNSKE
NUMBER E-2000132901
REGISTERED PROFESSIONAL ENGINEER
8/1/23

CHICK-FIL-A
ST JOSEPH FSU

5303 N BELT HWY
ST JOSEPH, MO 64506

FSR#02309

BUILDING TYPE / SIZE: SO8C ALL
RELEASE: v2.20.08
PRINTED FOR
ISSUE FOR CONSTRUCTION

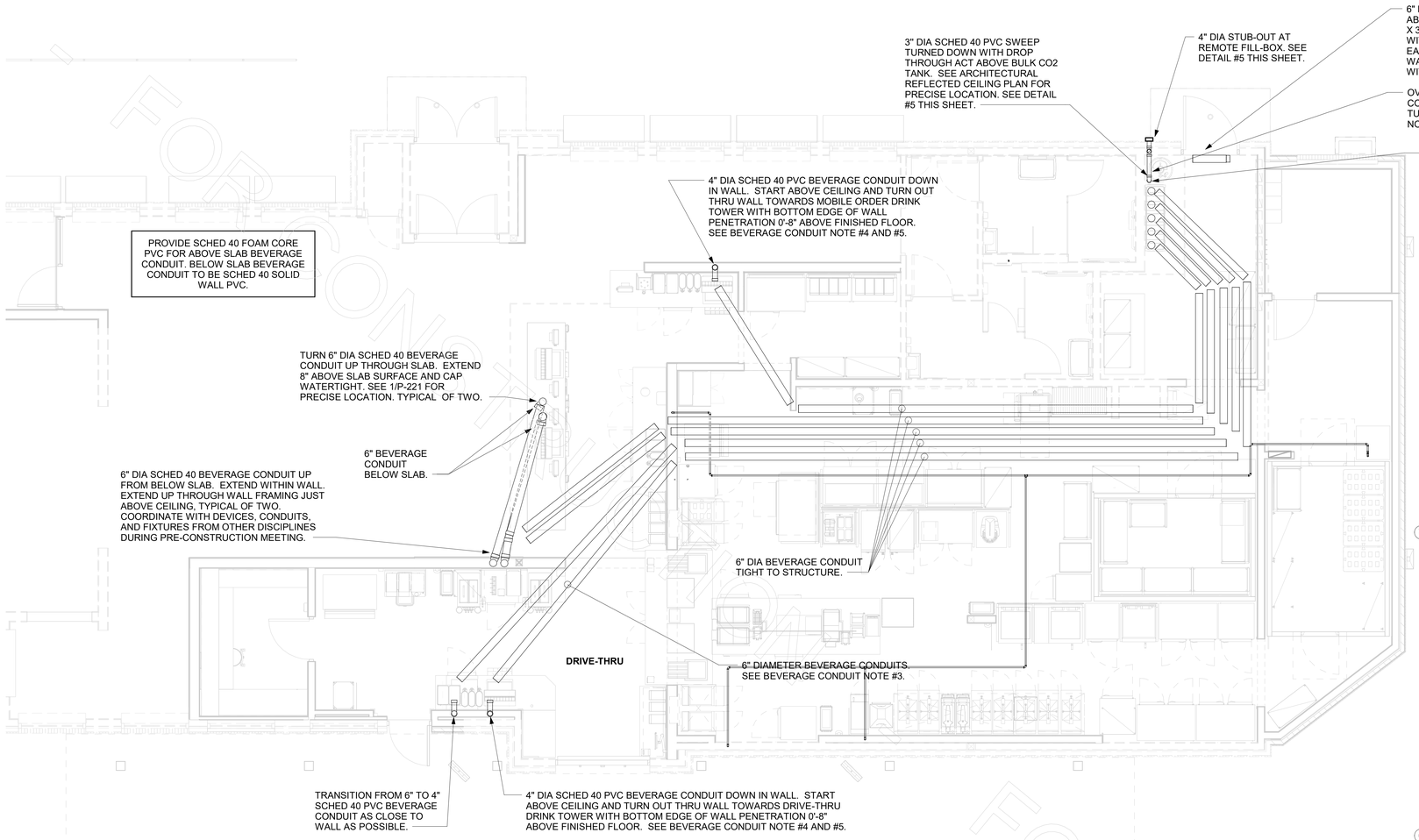
REVISION SCHEDULE

NO.	DATE	DESCRIPTION

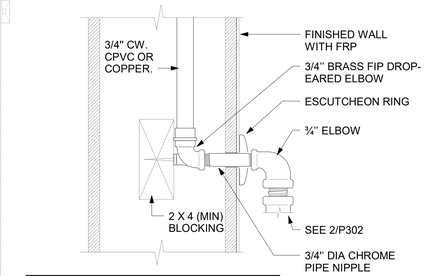
CONSULTANT PROJECT # 22172.CD.R
DATE 12/01/22
DRAWN BY JP

SHEET
WATER PIPING PLAN

SHEET NUMBER
P-201

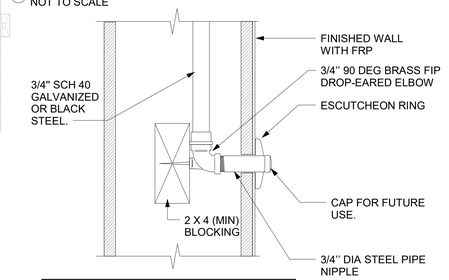


1 BEVERAGE CONDUIT PIPING PLAN
1/4" = 1'-0"



SECURE DROP-EARED ELBOW TO BLOCKING WITH 1-1/4" FLAT HEAD PHILLIP SCREWS.

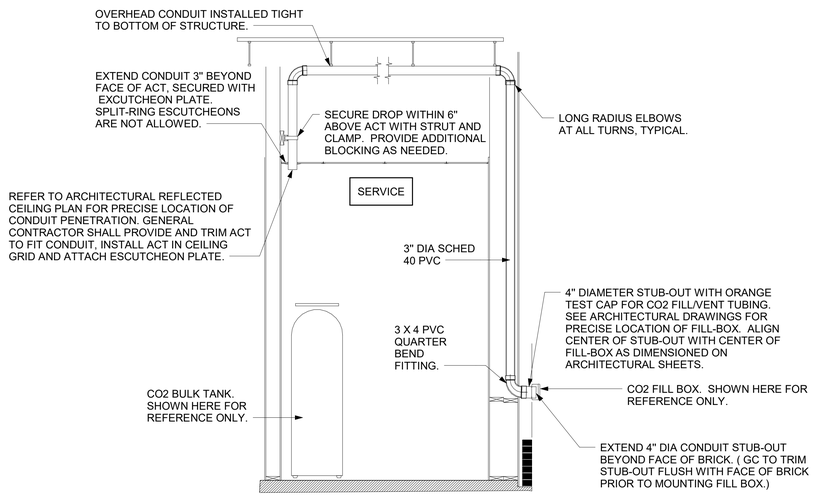
7 SECTION AT PIPNG WITHIN WALL
NOT TO SCALE



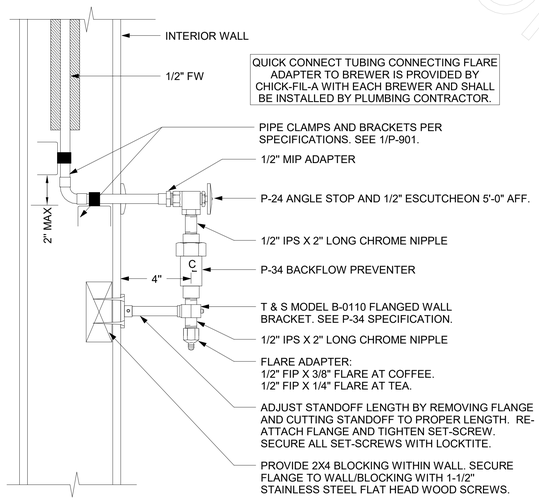
SECURE DROP-EARED ELBOW TO BLOCKING WITH 1-1/4" FLAT HEAD PHILLIP SCREWS.

6 DARPRO OIL PIPING SECTION WITHIN WALL
NOT TO SCALE

5 CO2 FILL/VENT CONDUIT AND FILL-BOX INSTALLATION
NOT TO SCALE



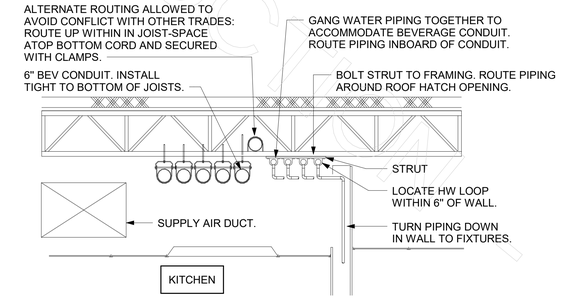
CO2 FILL BOX, FILL TUBING, AND VENT LINE SET PROVIDED BY CAF AND INSTALLED BY GC. GC TO COORDINATE REQUIRED LENGTH OF TUBING AND LINE SET FROM FILL BOX TO TANK LOCATION WITH TMS; LENGTH NOT TO EXCEED 100 FT. FINAL CONNECTION BY CO2 VENDOR.



4 COFFEE & TEA BREWER STOP & BFP
1/4" = 1'-0"

2. BEVERAGE CONDUIT NOTES

1. ROUTE BEVERAGE SYSTEM PIPING OVERHEAD FROM THE BEVERAGE RACK TO DRINK TOWERS IN FIVE (5)-6" DIA SCH 40 PVC DWV CONDUITS. ALL CONDUIT SHALL BE HELD TIGHT TO STRUCTURE AND SUPPORTED WITH THREADED ROD AND CLEVIS HANGERS AT INTERVALS SHOWN IN SPECIFICATIONS FOR HORIZONTAL OVERHEAD PIPING. COORDINATE ROUTING WITH THE GENERAL CONTRACTOR TO AVOID MECHANICAL AND ELECTRICAL SYSTEMS. SEE 1/P-101 AND 1/P-221 FOR BELOW-SLAB BEVERAGE CONDUIT.
2. COORDINATE ROUTING OF ALL CONDUITS WITH HVAC DUCT IN KITCHEN. SEE SHEET M-201 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. AT 4" DIA CONDUIT DROP IN DRIVE-THRU, PROVIDE 1/8TH BEND FITTING WITH SHORT PIPE STUB AT BASE OF DROP. CUT STUB AND FITTING FLUSH WITH FINISHED WALL.
5. FOR BEVERAGE CONDUIT DROPS AT WALLS WITH SHEATHING EXTENDED ABOVE THE CEILING, PROVIDE APPROPRIATE FITTING AT UPPER END OF CONDUIT DROP TO EXTEND CONDUIT THROUGH SHEATHING.
6. INSTALL CONTINUOUS CONDUIT FROM CO2 FILL-BOX LOCATION TO BULK CO2 TANK AS SHOWN ON PLANS AND DETAILS. COORDINATE 4" CONDUIT WALL STUB INSTALLATION CLOSELY WITH GENERAL CONTRACTOR AND BRICK MASON. PRIOR TO COVERING UP OF CONDUIT, VERIFY WITH GENERAL CONTRACTOR THE FULL LENGTH OF FILL/VENT TUBING MAY BE INSTALLED AND SUBSEQUENTLY REMOVED FROM CONDUIT. SEE PLAN AND DETAIL #5 THIS SHEET.



3 SECTION AT WET WALL
NOT TO SCALE

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

Kurzynske & Associates
2705 Lebanon Pike - Suite One
Nashville, Tennessee 37214
Telephone: (615) 255-5203

STATE OF MISSOURI
MARK T. KURZYNSKE
NUMBER E-2000153941
REGISTERED PROFESSIONAL ENGINEER
8/1/23

CHICK-FIL-A
ST JOSEPH FSU

5303 N BELT HWY
ST JOSEPH, MO 64506

FSR#02309

BUILDING TYPE / SIZE: SO8C -R
RELEASE: v2.20.08
PRINTED FOR
ISSUE FOR CONSTRUCTION

REVISION SCHEDULE

NO.	DATE	DESCRIPTION

CONSULTANT PROJECT # 22172.CD.R
DATE 12/01/22
DRAWN BY BF

SHEET
BEVERAGE CONDUIT PLAN

SHEET NUMBER
P-211

NOTE OF SPECIAL IMPORTANCE:

BELOW-SLAB BEVERAGE CONDUIT SHALL BE 6" DIAMETER SCHED 40 DWV SOLID WALL, NO FOAM CORE ALLOWED. USE LONG RADIUS ELBOWS (A.K.A. SWEEPS) ON ALL BEVERAGE CONDUIT. PLEASE NOTE BEVERAGE CONDUIT ROUGH-IN LOCATIONS ARE MEASURED TO THE FRACTION OF AN INCH. CARE MUST BE TAKEN WHEN INSTALLING 6" DIAMETER CONDUIT LOCATED WITHIN A 2X8 WALL. THE MARGIN FOR ERROR IS ONLY 1/16TH INCH.

IMPORTANT NOTE TO INSTALLER

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

FLOOR FIXTURE ELEVATIONS

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

FIXTURE	TYPE	RIM ELEVATION
P-10	FLOOR DRAIN	1/2" BFF
P-35	RESTROOM FLOOR DRAIN	1/4" BFF
P-35	MOP SINK DRAIN	7" BFF
P-36	INDIRECT WASTE RECEIVER	1/4" BFF
P-37	FLOOR DRAIN	1/4" BFF

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

MOP SINK NOTE

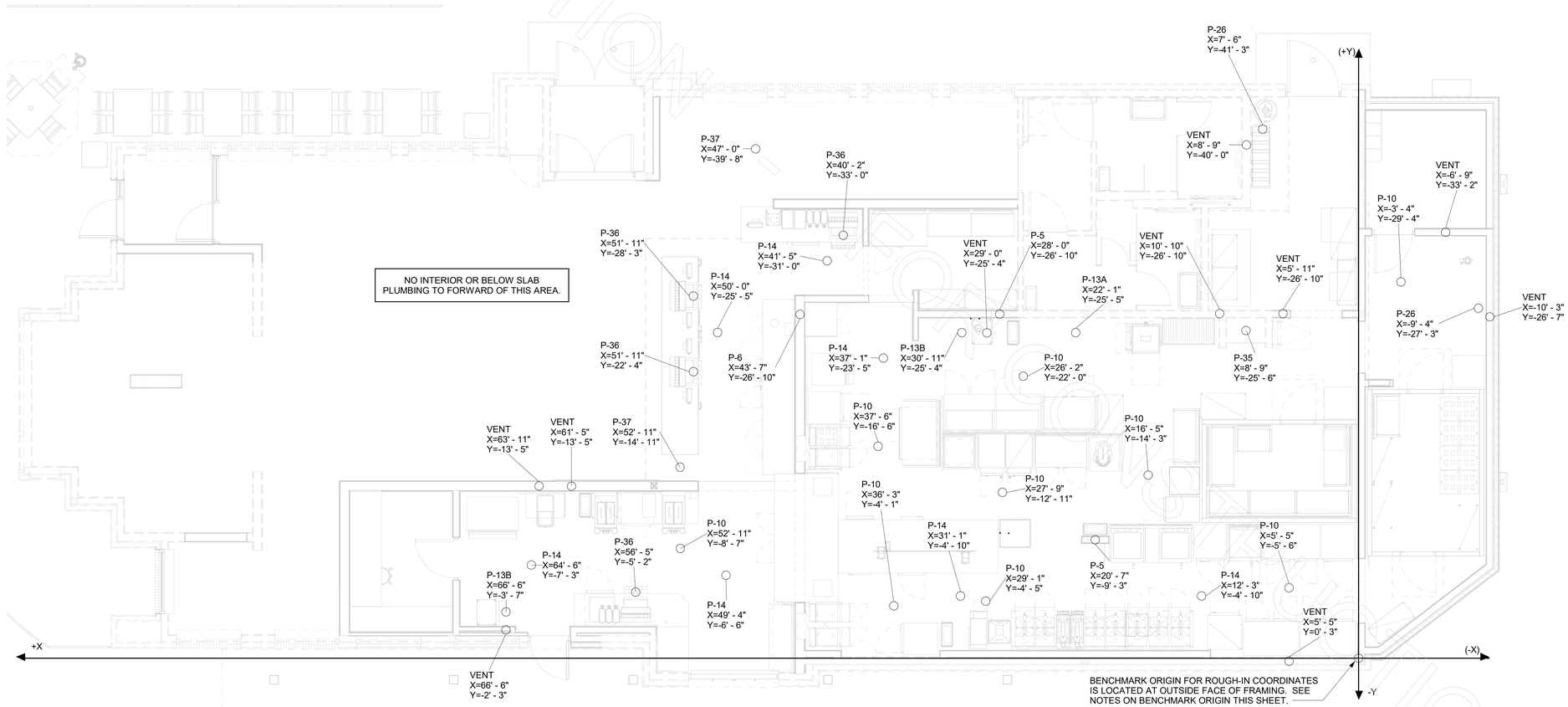
IMPORTANT: INSTALL FLOOR DRAIN WITH TOP OF DRAIN 0'-7" BFF. COORDINATE WITH GENERAL CONTRACTOR. SEE ARCHITECTURAL AND STRUCTURAL DRAWINGS.

COORDINATE LEGEND

TYPE	EXAMPLE	PIPE COORDINATES
#1	CW X=43'8" Y=14'7"	APPLIES TO WATER PIPING ROUGH-IN PENETRATION ONLY. SEE P-101 FOR CONTINUATION.
#2	VENT X=43'8" Y=14'7"	APPLIES TO DWV PENETRATION ONLY.
#3	6" BEV COND X=43'8" Y=27'3"	APPLIES TO 6" BEVERAGE CONDUIT PENETRATION ONLY.

NOTES ABOUT (0,0) BENCHMARK ORIGIN

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



1 SLAB ROUGH-IN PLAN
1/4" = 1'-0"

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

Kurzynske & Associates
2705 Lebanon Pike - Suite One
Nashville, Tennessee 37214
Telephone: (615) 255-5203

STATE OF MISSOURI
MARK T. KURZYNSKE
E-2000132907
REGISTERED PROFESSIONAL ENGINEER
8/1/23

CHICK-FIL-A
ST JOSEPH FSU

5303 N BELT HWY
ST JOSEPH, MO 64506

FSR#02309

BUILDING TYPE / SIZE: SO8C ALL
RELEASE: v2.20.08
PRINTED FOR
ISSUE FOR CONSTRUCTION

REVISION SCHEDULE

NO.	DATE	DESCRIPTION
2	08/01/23	Issue for Construction

2

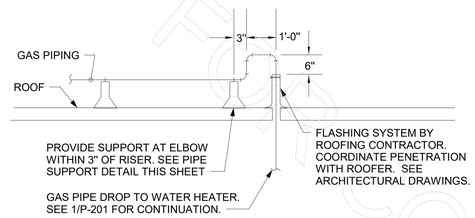
THIS IS A NEW SHEET ADDED TO THE SET.

CONSULTANT PROJECT # 22172.CD.R
DATE 12/01/22
DRAWN BY JP

SHEET
SLAB ROUGH-IN PLAN

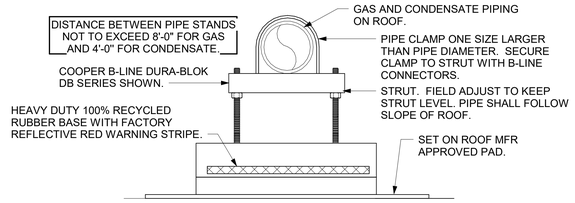
SHEET NUMBER
P-221

OFFSET PIPING A MINIMUM OF 6" ABOVE TOP EDGE OF FLASHING.



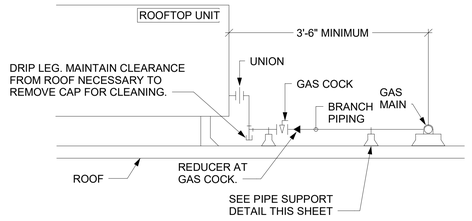
6 GAS PIPE DROP TO WATER HEATER
NOT TO SCALE

NOTES:
1. NON ADJUSTABLE MODEL DB610 PIPE STAND TO BE USED FOR NON-ELEVATED PIPING INSTALLED FLAT ON ROOF DECK.
2. PROVIDE MODEL DBE 10-8 OR DBE 10-12 OR DBE 10-16 AS NEEDED FOR ELEVATING CONDENSATE PIPING TO MAINTAIN PROPER SLOPE AND FOR GAS PIPING CROSSING OVER CONDENSATE PIPING.
3. ENSURE GAS AND CONDENSATE PIPING DO NOT OBSTRUCT ROOFTOP EQUIPMENT ACCESS OPENINGS. RE-PIPING OF SYSTEMS DUE TO CONFLICTS WITH EQUIPMENT ACCESS OPENINGS SHALL BE DONE AT PLUMBING CONTRACTOR'S EXPENSE.



4 PIPING SUPPORT ON ROOF
NOT TO SCALE

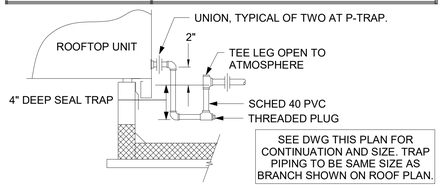
NOTES:
1. INSTALL GAS PIPING SUCH THAT HVAC EQUIPMENT ACCESS PANELS AND/OR DOORS ARE IN NO WAY OBSTRUCTED BY PIPING, VALVES, OR SUPPORTS.
2. TO AVOID CONFLICT WITH AC UNIT ACCESS DORRS, INSTALL GAS PIPING NO CLOSER THAN 3'-6" FROM AC UNIT. (EXCEPT FOR BRANCH LINE CONNECTED TO AC UNIT.)
3. ROUTE BRANCH TAKE-OFF DIRECTLY FROM MAIN TO ROOFTOP UNIT AS SHOWN ON PLAN AND DETAILS WITHOUT LATERAL OFFSETS WHICH MAY OBSTRUCT UNIT ACCESS DOORS.



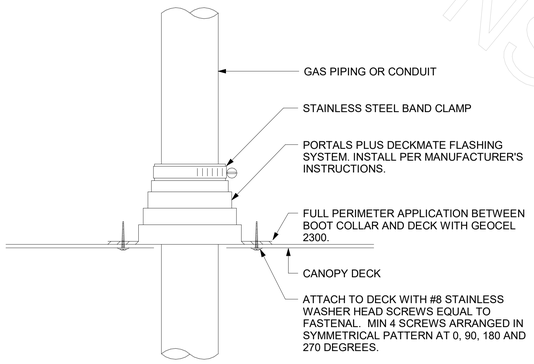
3 GAS PIPING AT RTU
1/4" = 1'-0"

5. GAS CONNECTION SCHEDULE

EQUIPMENT	GAS LOAD
AC#1 (NEW)	400,000 BTUS
AC#2 (NEW)	200,000 BTUS
AC#3 (NEW)	240,000 BTUS
AC#4 (NEW)	200,000 BTUS
AC#5 (NEW)	130,000 BTUS
GIH (6 @ 50,000 BTU EA.)	300,000 BTUS
WATER HEATER	125,000 BTUS
TOTAL CONNECTED LOAD	1,595,000 BTUS
REMARKS:	1) EQUIVALENT TO 1,595.0 CFH 2) 7" W.C. DELIVERY PRESSURE 3) DEVELOPED LENGTH: 250 FT (METER TO GIH)

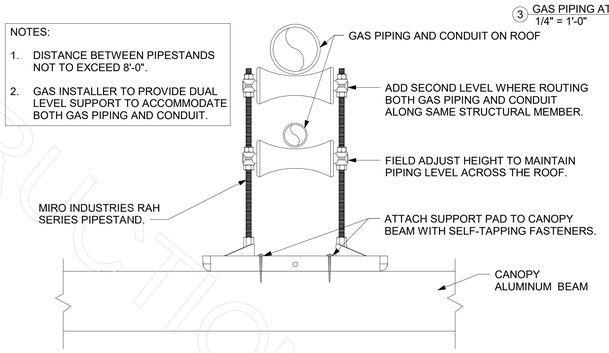


SEE DWG THIS PLAN FOR CONTINUATION AND SIZE. TRAP PIPING TO BE SAME SIZE AS BRANCH SHOWN ON ROOF PLAN.



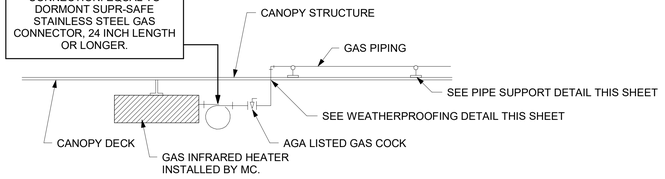
9 WEATHERPROOFING AT CANOPY PENETRATION
NOT TO SCALE

NOTES:
1. DISTANCE BETWEEN PIPESTANDS NOT TO EXCEED 8'-0".
2. GAS INSTALLER TO PROVIDE DUAL LEVEL SUPPORT TO ACCOMMODATE BOTH GAS PIPING AND CONDUIT.



8 PIPING SUPPORT ON CANOPY
NOT TO SCALE

AGA LISTED FLEXIBLE CSST CONNECTION. EQUAL TO DORMONT SUPR-SAFE STAINLESS STEEL GAS CONNECTOR, 24 INCH LENGTH OR LONGER.



2 CONDENSATE DRAIN PIPING
1/4" = 1'-0"

7 GAS CONNECTION AT APPLIANCE
NOT TO SCALE

LEGEND

GIH#1	GAS INFRARED HEATER #1 (TYP.)	B/G	BELOW GRADE
———	NEW GAS PIPING ABOVE GRADE	EC	ELECTRICAL CONTRACTOR
- - -	NEW GAS PIPING BELOW GRADE	MC	MECHANICAL CONTRACTOR

CANOPY GENERAL NOTES

1. COORDINATE NEW WORK WITH EXISTING CONDUIT, STRUCTURE, AND PIPING. FIELD VERIFY EXISTING CONDITIONS PRIOR TO START OF WORK.
2. COORDINATE LOCATION AND RESPONSIBILITIES FOR UNDERGROUND PIPING AND ASSOCIATED TRENCHING WITH GENERAL CONTRACTOR PRIOR TO START OF WORK.
3. EXPOSED GAS PIPING SHALL BE PAINTED BY GENERAL CONTRACTOR.
4. ACTUAL NUMBER OF GAS INFRARED HEATERS WILL BE DETERMINED BY SITE-SPECIFIC CANOPY LAYOUT AND EQUIPMENT LOCATIONS, AS INDICATED ON ARCHITECTURAL PLANS.

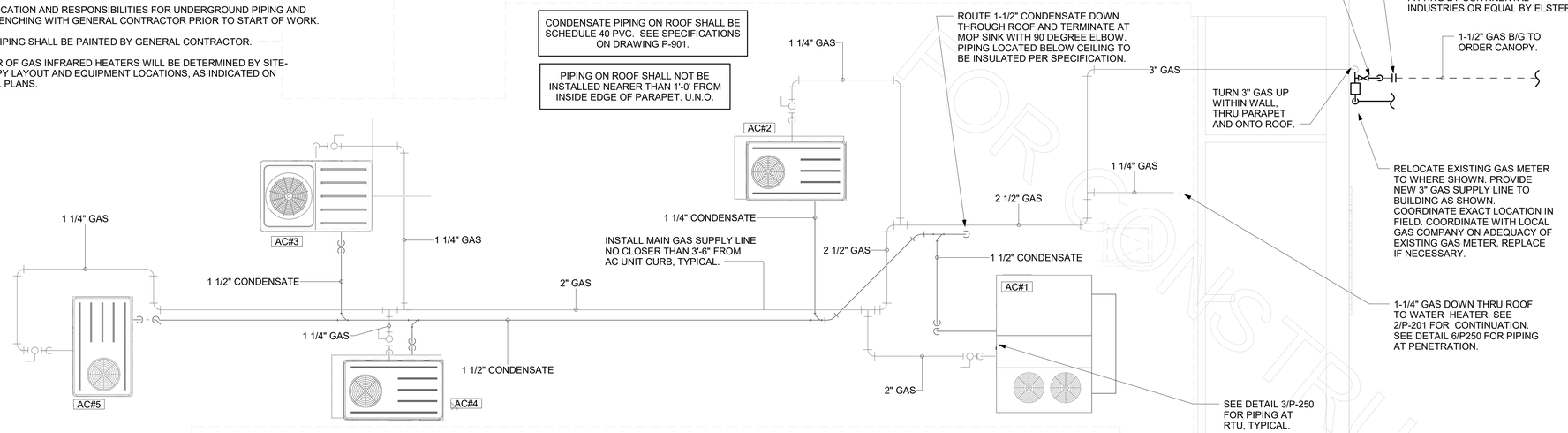
PROVIDE FULL PORT BALL VALVE EQUAL TO APOLLO 50GB SERIES WITH WING HANDLE OPTION ABOVE GRADE AT THE METER. PROVIDE BRASS VALVE TAG WITH JACK CHAIN AT VALVE MARKED "SERVICE SHUTOFF FOR CANOPY HEATERS."

ROUTE POLYETHYLENE GAS B/G FROM THE METER. FOR TRANSITION FROM POLYETHYLENE PIPING B/G TO STEEL AT THE METER, INSTALL ANODELESS RISER WITH INTEGRAL CONSTAB PE-TO-IPS TRANSITION FITTING BY CONTINENTAL INDUSTRIES OR EQUAL BY ELSTER.

CONDENSATE PIPING ON ROOF SHALL BE SCHEDULE 40 PVC. SEE SPECIFICATIONS ON DRAWING P-901.

PIPING ON ROOF SHALL NOT BE INSTALLED NEARER THAN 1'-0' FROM INSIDE EDGE OF PARAPET. U.N.O.

ROUTE 1-1/2" CONDENSATE DOWN THROUGH ROOF AND TERMINATE AT MOP SINK WITH 90 DEGREE ELBOW. PIPING LOCATED BELOW CEILING TO BE INSULATED PER SPECIFICATION.



SEE ARCHITECTURAL DETAILS FOR ROOFTOP PIPE PENETRATIONS.

PLUMBING CONTRACTOR SHALL PROVIDE AND INSTALL CONDUIT FOR ICE MAKER, AND WALK-IN FREEZER AND COOLER REFRIGERANT TUBING THROUGH ROOF. SEE ARCHITECTURAL DRAWINGS FOR ROOFTOP REFRIGERANT CONDUIT INSTALLATIONS AND LOCATION OF ICE MAKER, FREEZER AND COOLER CONDENSING UNITS.

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

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

Kurzynske & Associates
2705 Lebanon Pike - Suite One
Nashville, Tennessee 37214
Telephone: (615) 255-5203

STATE OF MISSOURI
MARK T. BRADLEY
NUMBER E-2000153901
REGISTERED PROFESSIONAL ENGINEER
8/1/23

CHICK-FIL-A
ST JOSEPH FSU

5303 N BELT HWY
ST JOSEPH, MO 64506

FSR#02309

BUILDING TYPE / SIZE: SOSC ALL
RELEASE: v2.20.08
PRINTED FOR
ISSUE FOR CONSTRUCTION

REVISION SCHEDULE

NO.	DATE	DESCRIPTION

CONSULTANT PROJECT # 22172.CD.R
DATE 12/01/22
DRAWN BY BF

SHEET
ROOF PLAN AND DETAILS

SHEET NUMBER
P-250

VALVE TAG LEGEND	
VALVE	VALVE POSITION
① MAIN WATER SHUT-OFF	NORMALLY OPEN
② MAIN DRAIN	NORMALLY CLOSED
③ ACCESSORY SHUT-OFF	NORMALLY OPEN
④ WATER FILTER INLET	NORMALLY OPEN
⑤ RECIRC PUMP ISOLATION VALVE	NORMALLY OPEN
⑥ WATER HEATER INLET	NORMALLY OPEN
⑦ RESTROOM & KITCHEN COLD WATER	NORMALLY OPEN
⑧ POST HYDRANT COLD WATER	NORMALLY OPEN
⑨ GAS TO WATER HEATER	NORMALLY OPEN
⑩ WATER HEATER OUTLET	NORMALLY OPEN
NOTE: HANDLE IN-LINE WITH PIPING = VALVE OPEN	

← LAMINATE VALVE TAG LEGEND AND MOUNT PERMANENTLY WHERE SHOWN ON WATER HEATER DETAIL IN AN ALUMINUM FRAME EQUAL TO SETON #68624.

VALVE TAG

② ← VALVE TAG SYMBOL AS SHOWN ON DETAIL 6/P-303. PROVIDE 1-1/2" ROUND BRASS VALVE TAG WITH 1/2" HIGH BLACK FILLED LETTERING. EACH TAG SHALL INDICATE VALVE NUMBER AND WILL ALSO HAVE "PLBG" STAMPED ON THE TAG IN 1/4" HIGH BLACK FILLED LETTERING EQUAL TO SETON #M4506. HANG WITH BRASS JACK CHAIN ON VALVE HANDLE.

③ VALVE TAGS AND LEGEND
NOT TO SCALE

2. KITCHEN EQUIPMENT SCHEDULE

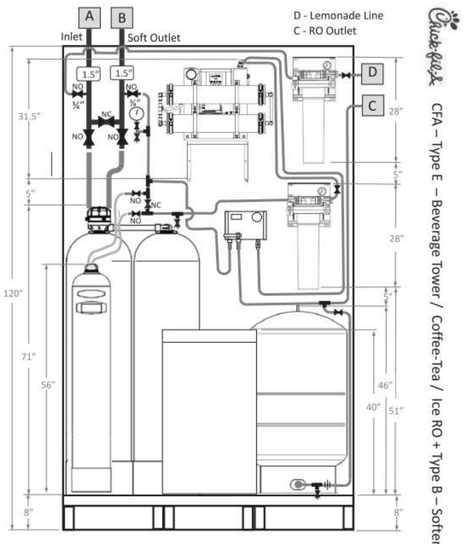
TAG	DESCRIPTION	FW	FW2	CW	HW	WASTE	ROUGH-IN
305	TEA BREWER	1/2"	X	X	X	X	P-24, SEE K-611 & 6/P-211
308	COFFEE MAKER	1/2"	X	X	X	X	P-24, SEE K-611 & 6/P-211
318A	CARBONATOR BFP PANEL	3/4"	X	X	X	X	P-28, SEE K-611
350	WATER FILTER PANEL	(3) 3/4"	3/4"	3/4"	X	X	SEE DET 5/P-303
360E	EMERGENCY EYEWASH STATION	X	X	1/2"*	1/2"*	X	*1/2" TEPID WATER FROM P-42, SEE K-611 & 1/P-201
363	DISHWASHER	X	X	3/4"	X	INDIRECT TO P-37	P-41, SEE K-611 & 1/P-201
365	POT SINK	X	X	(2) 1/2"	(2) 1/2"	2" PER BASIN	TWO #365F FAUCETS, P-9 SEE K-611
367	VEGETABLE PREP SINK	X	X	1/2"	1/2"	2" PER BASIN	#367F FAUCET, P-8 SEE K-611
367FW	FILTERED WATER FAUCET	(2) 1/2"	X	X	X	X	P-30 48" AFF.
368FW	FILTERED WATER FAUCET	(2) 1/2"	X	X	X	X	P-30 48" AFF.
370	MOP SINK	X	X	1/2"	1/2"	3" P-35	P-7 SEE K-611
380	ICE MAKER	X	(2) 1/2"	X	X	INDIRECT	P-23 SEE K-611 & 3/P-201
381	ICE BIN (1 HEAD)	X	1/2"	X	X	INDIRECT	P-23 SEE K-611 & 3/P-201
384	ICE BIN (2 HEAD)	X	1/2"	X	X	INDIRECT	P-23 SEE K-611 & 3/P-201
592	RETHERMALIZER	X	X	1/2"	X	INDIRECT	SEE DET 3/P-302

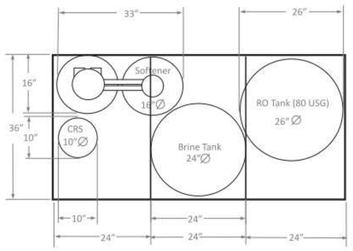
1. FIXTURE CONNECTION SCHEDULE

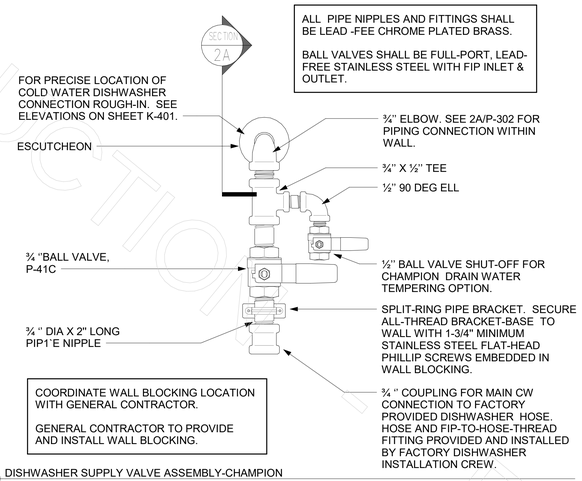
MARK	FIXTURE	FW	FW2	CW	HW	WASTE
	<varies>	X	X	<varies>	X	X
P-1	WATER CLOSET - FLOOR MOUNT (1.28 GPF)	X	X	1"	X	3"
P-2	WATER CLOSET - ADA FLOOR MOUNT (1.28 GPF)	X	X	1"	X	3"
P-3	URINAL - ADA WALL HUNG (0.125 GPF)	X	X	3/4"	X	2"
P-4A	LAVATORY - ADA COUNTERTOP (0.50 GPM)	X	X	1/2"	1/2"	1-1/4"
P-4B	LAVATORY - ADA WALL-MOUNTED (0.50 GPM)	X	X	1/2"	1/2"	1-1/4"
P-5	KITCHEN HAND SINK - WALL HUNG (1.0 GPM)	X	X	1/2"	1/2"	1-1/2"
P-5A	KITCHEN DUMP SINK - WALL HUNG (1.0 GPM)	X	X	1/2"	1/2"	1-1/2"
P-6	SINGLE COMP SINK - COUNTERTOP (1.0 GPM)	X	X	1/2"	1/2"	1-1/2"
P-7	MOP SINK	X	X	1/2"	1/2"	3"
P-8	VEGETABLE PREP SINK (0.65 GPM SPRAYER)	X	X	1/2"	1/2"	(2) 1-1/2"
P-9	POT SINK (0.65 GPM SPRAYER)	X	X	(2) 1/2"	(2) 1/2"	(4) 1-1/2"
P-10	FLOOR DRAIN (SQUARE TOP)	X	X	X	X	3"
P-11	WALL HYDRANT (NON FREEZE)	X	X	3/4"	X	X
P-12	FUNNEL DRAIN (3")	X	X	X	X	3"
P-13A	FLOOR SINK (4") 12" TOP	X	X	X	X	4"
P-13B	FLOOR SINK (3") 8" TOP	X	X	X	X	3"
P-14	CLEANOUT INSIDE BUILDING	X	X	X	X	SEE PLAN
P-15	CLEANOUT OUTSIDE BUILDING	X	X	X	X	SEE PLAN
P-16	3-WAY VALVE/ VACUUM BREAKER	X	X	3/4"	3/4"	X
P-17	VACUUM RELIEF VALVE	X	X	3/4"	X	X
P-18	EXPANSION TANK	X	X	3/4"	X	X
P-19	WATER HEATER	X	X	1"	1"	X
P-20	THERMOMETER	X	X	X	1/2"	X
P-21	BACKFLOW PREVENTER	X	X	1-1/2"	X	X
P-22	MOP SINK CHECK VALVES	X	X	1/2"	1/2"	X
P-23	UTILITY CONNECTION (ICE MAKER)	X	1/2"	X	X	X
P-24	UTILITY CONNECTION (COFFEE & TEA)	1/2"	X	X	X	X
P-25	SHOCK ABSORBER	1/2"	1/2" & 3/4"	1/2"	1/2"	X
P-26	FUNNEL DRAIN	X	X	X	X	3"
P-26A	TRAP SEAL PROTECTOR	X	X	X	X	3"
P-27	WATER PRESSURE GAUGE	X	X	1/4"	X	X
P-28	BALL VALVE-CARBONATOR STOP/BFP PANEL	3/4"	X	X	X	X
P-29	ICE MACHINE FLOOR SINK	X	X	X	X	3"
P-29A	ICE MACHINE TRENCH DRAIN (18")	X	X	X	X	4"
P-29B	ICE MACHINE TRENCH DRAIN (36")	X	X	X	X	4"
P-30	FILTERED WATER FAUCET	(2) 1/2"	X	X	X	X
P-31	DUMPSTER POST HYDRANT	X	X	3/4"	X	X
P-32	DUMPSTER DRAIN	X	X	X	X	3"
P-33	TRAP PRIMER (MECHANICAL TYPE)	X	X	1/2"	X	X
P-34	DISPENSER BACKFLOW PREVENTER	1/2"	X	X	X	X
P-35	FLOOR DRAIN	X	X	X	X	3"
P-36	BEVERAGE TOWER INDIRECT RECEIVER	X	X	X	X	3"
P-37	FLOOR DRAIN (SQUARE TOP)	X	X	X	X	3"
P-38	HOT WATER CIRCULATING PUMP	X	X	X	1/2"	X
P-39	PRESSURE REDUCING VALVE	X	X	2"	X	X
P-40	WYE STRAINER	X	X	2"	X	X
P-41C	DISHWASHER SUPPLY VALVES - CHAMPION	X	X	3/4"	X	X
P-42	EMERGENCY EYEWASH MIXING VALVE	X	X	1/2"	1/2"	X
P-43	RETHERMALIZER SUPPLY VALVE	X	X	3/4"	X	X

NOTES: ① REFER TO FOOD SERVICE DRAWINGS FOR KITCHEN EQUIPMENT INSTALLATION AND HOOK-UP RESPONSIBILITIES.

② DO NOT MANIFOLD POT OR PREP SINK DRAINS TOGETHER UNLESS ALLOWED BY LOCAL AUTHORITY.



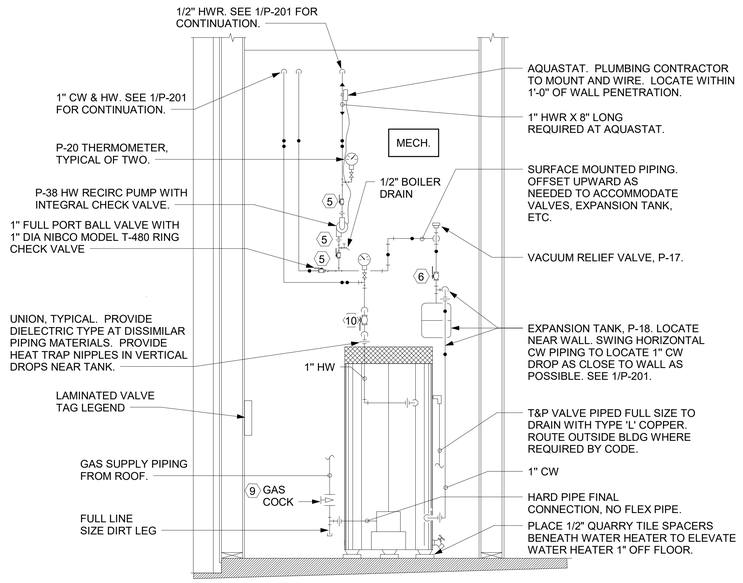




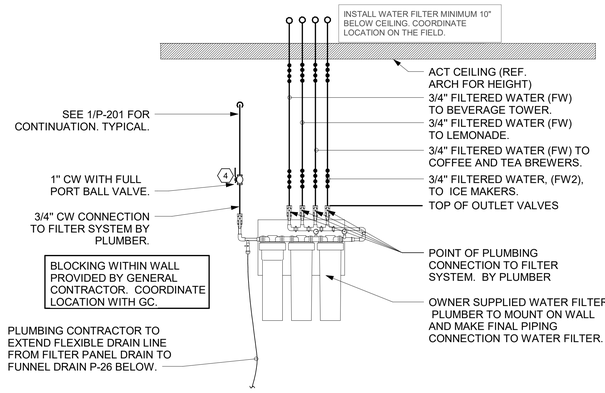
⑦ DISHWASHER SUPPLY VALVE ASSEMBLY-CHAMPION
NOT TO SCALE

NOTES TO WATER HEATER INSTALLER:

1. POSITION VALVES AND TRIM IN MECH ROOM SUCH THAT VALVES AND TRIM ARE UNOBSTRUCTED TO VIEW AND SO THAT ACCESS FOR OPERATION OR REPAIR IS POSSIBLE WITHOUT USE OF STEP LADDERS OR NEED TO DISASSEMBLE ANY COMPONENTS.
2. VENT HEATER UP THRU MECH ROOM ROOF AND PROVIDE FRESH AIR PIPING PER MANUFACTURER'S RECOMMENDATIONS.



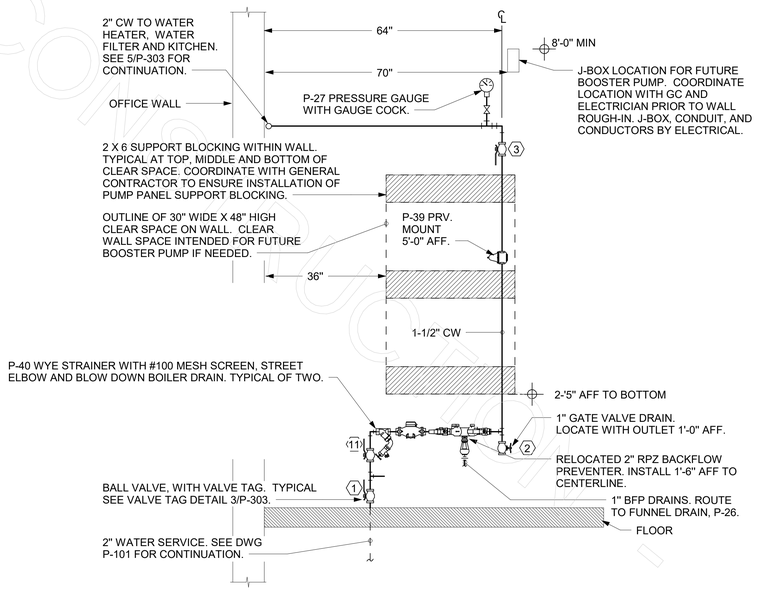
⑥ PIPING AT WATER HEATER
NOT TO SCALE



① PIPING AT WATER FILTER
NOT TO SCALE

NOTE OF SPECIAL IMPORTANCE :

1. LOCATIONS OF 2" CW RISER AND CLEAR SPACE ARE DIMENSIONED BECAUSE THEY ARE CRITICAL FOR THE FUTURE PUMP PANEL INSTALLATION.
2. GENERAL CONTRACTOR SHALL ENSURE OTHER TRADES SHALL NOT INSTALL ANY OTHER BUILDING COMPONENT WITHIN CLEAR SPACE OR WITHIN 10" OF EDGES.



② PIPING AT WATER SERVICE ENTRANCE IN MECHANICAL ROOM
NOT TO SCALE

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

Kurzynske & Associates
2705 Lebanon Pike - Suite One
Nashville, Tennessee 37214
Telephone: (615) 255-5203

STATE OF MISSOURI
MARK J. KURZYNSKE
E-2000153901
REGISTERED PROFESSIONAL ENGINEER

8/1/23

CHICK-FIL-A
ST JOSEPH FSU

5303 N BELT HWY
ST JOSEPH, MO 64506

FSR#02309

BUILDING TYPE / SIZE: SO8C ALL
RELEASE: v2.20.08
PRINTED FOR

ISSUE FOR CONSTRUCTION

REVISION SCHEDULE

NO.	DATE	DESCRIPTION

CONSULTANT PROJECT #	22172.CD.R
DATE	12/01/22
DRAWN BY	JP

SHEET
DETAILS AND SCHEDULES

SHEET NUMBER
P-303

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 STRINGENT 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 MANUFACTURER'S 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 1/2" THICK INSULATION FOR ALL ABOVE SLAB COLD WATER, FILTERED WATER, CONDENSATE PIPING, AND HORIZONTAL RAIN WATER CONDUCTORS INSIDE THE BUILDING. PIPING INSULATION SHALL BE KNAUF 1000F 25/50 FIBERGLASS PIPE COVERING, WHITE KRAFT PAPER VAPOR BARRIER (.02 PERMS) BONDED TO ALUMINUM FOIL AND REINFORCED WITH GLASS FIBERS. MAXIMUM THERMAL CONDUCTIVITY OF 0.23 AT 75F. LONGITUDINAL LAP SHALL BE SELF SEALING. INSULATION FOR WALK-IN COOLER/FREEZER CONDENSATE PIPING SHALL BE ARMACELL A/P ARMAFLEX WITH MINIMUM 3/4" 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 ABOVE GRADE 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. ALL BELOW GRADE NATURAL GAS PIPING SHALL BE MEDIUM DENSITY POLYETHYLENE (PE) MEETING ASTM D2513 AS MANUFACTURED BY GASTITE WITH JOINING SYSTEM AS MANUFACTURED BY CON-STAB. TRANSITIONS FROM ABOVE GRADE RIDGID PIPING TO PE BELOW GRADE PIPING SHALL BE MADE WITH ANODE-LESS RISER ASSEMBLY AS MANUFACTURED BY CON-STAB.

P. EXPOSED SUPPORTS AND ATTACHMENTS SHALL BE STAINLESS STEEL, CHROME OR CHROME PLATED. GALVANIZED ATTACHMENTS WILL NOT BE ACCEPTED.

Q. 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.

B. EXPOSED HOT AND COLD WATER TRIM FITTINGS AND ACCESSORIES IN FINISHED AREAS SHALL BE CHROME FINISHED.

C. ACCEPTABLE METHODS OF PIPE SUPPORT WITHIN WALLS SHALL BE THE SUMNER SYSTEM, POSIFIX, STAKFIX, PIPEFIX, HOLDRITE OR CHANNEL.

D. PROVIDE J.R. SMITH OR APPROVED EQUAL SHOCK ABSORBERS #5005 THRU 5050 SIZE AS RECOMMENDED BY MANUFACTURER INSTALLED ON HOT AND COLD WATER BRANCH LINES CONTAINING SINGLE LEVER FAUCETS, FLUSH VALVES OR EQUIPMENT WITH QUICK CLOSING VALVES BETWEEN THE LAST TWO FIXTURES AS SHOWN ON THE CONTRACT DRAWINGS. SHOCK ABSORBERS 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 1/4" 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.

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: ZURN. ACCEPTABLE ALTERNATES: JAY R. SMITH, JONES STEPHENS CORP, WATTS, OR JOSAM.

B. ALTERNATES TO ZURN (ZRN) FIXTURES: ONLY AS SHOWN ON PLANS. APPROVED JAY R. SMITH (JRS), WATTS (WTS), 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.

COORDINATION NOTE

1. CONTRACTOR SHALL THOROUGHLY REVIEW THE KITCHEN EQUIPMENT DRAWINGS TO ENSURE ALL ITEMS REGARDING THE PLUMBING SCOPE ARE FULLY UNDERSTOOD. MOST NOTABLY, ALL FAUCETS ARE REQUIRED TO BE PROVIDED (THROUGH HJC) & INSTALLED BY THE CONTRACTOR AS OUTLINED IN THE KITCHEN EQUIPMENT SCHEDULES.

NATIONAL ACCOUNTS

1. 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) AND PLUMBING (15100)

P-1 <varies>
WATER CLOSET: TOTO MODEL CT705UN#01 BOWL WITH 1.28 GPF TET1LA32#CP ECO-POWER FLUSH VALVE AND SC534 SEAT (ALL PROVIDED BY HJC). 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 TET1LA32#CP ECO-POWER FLUSH VALVE AND SC534 SEAT (ALL PROVIDED BY HJC). 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#01 URINAL WITH TEU1UA12#CP 0.125 GPF SELF SUSTAINED HYDROPOWER SELF-GENERATING ELECTRONIC SENSOR-OPERATED FLUSH VALVE (BOTH PROVIDED BY HJC). NO SUBSTITUTIONS. VITREOUS CHINA, 3/4" TOP SPUD, SENSOR OPERATED WITH MANUAL OVERRIDE BUTTTON, INTERNAL VALVE FILTER PROTECTION, PLEASE SEE NATIONAL ACCOUNT INFORMATION ON THIS SHEET FOR PRICING OF TOTO PRODUCTS.

P-4A LAVATORY FAUCET: (BUILT-IN COUNTERTOP LAVATORY PROVIDED BY OWNER) TOTO MODEL TEL 155-D10ET#CP ECO-POWER SENSOR HOT/COLD FAUCET WITH THERMOSTATICALLY CONTROLLED ASSE 1070 MIXING VALVE FAUCET. 0.09 GALLONS PER CYCLE. NO SUBSTITUTIONS. PROVIDE MCGUIRE LF175 SUPPLY WITH STOP, MCGUIRE 155-WC GRID DRAIN WITH OFFSET TAILPIECE. MCGUIRE 8872C POLISHED CHROME P-TRAP. P-TRAP SHALL BE PARALLEL WITH BACK WALL. TRUEBRO INC., HANDI LAV-GUARD INSULATION KITS MODELS 101EZ AND 105EZ. (ALL PROVIDED BY HJC). CHICK-FIL-A HAS NATIONAL ACCOUNTS WITH TOTO. PLEASE SEE NATIONAL ACCOUNT INFORMATION ON THIS SHEET FOR PRICING OF TOTO FIXTURES.

P-4B LAVATORY FAUCET: (LAVATORY PROVIDED BY HJC) TOTO MODEL TEL T307 ECO-POWER SENSOR HOT/COLD FAUCET MODEL TEL105-D10ET#CP WITH THERMOSTATICALLY CONTROLLED ASSE 1070 MIXING VALVE FAUCET. 0.09 GALLONS PER CYCLE. NO SUBSTITUTIONS. MCGUIRE LF175 SUPPLY WITH STOP, MCGUIRE 155-WC GRID DRAIN WITH OFFSET TAILPIECE. MCGUIRE 8872C POLISHED CHROME P-TRAP. P-TRAP SHALL BE PARALLEL WITH BACK WALL. TRUEBRO INC., HANDI LAV-GUARD INSULATION KITS MODELS 101EZ AND 105EZ. (ALL PROVIDED BY HJC). CHICK-FIL-A HAS NATIONAL ACCOUNTS WITH TOTO. PLEASE SEE NATIONAL ACCOUNT INFORMATION ON THIS SHEET FOR PRICING OF TOTO FIXTURES.

P-5 KITCHEN HAND SINK ROUGH IN: SINK BY TMS; FAUCET: TOTO MODEL #TEL165-C20E#CP - PROVIDED BY HJC WITH THP3094 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 ROUG IN: (SINK BY TMS; FAUCET: T&S MODEL # B-1146-CFA-VF05 - PROVIDED BY HJC WITH THP3094 NOZZLE) CONTRACTOR SHALL INSTALL WALL HUNG, STAINLESS STELL SINK AND FAUCET SET AND MAKE FINAL CONNECTIONS. MCGUIRE LF 175 SUPPLIES WITH STOPS (PROVIDED BY HJC).

P-6 SERVING COUNTER DROP IN SINK ROUGH IN: (SINK PROVIDED BY CLAYTON FIXTURE; FAUCET-T&S EC-3100-7XF1THG WITH 1.0 GPM AERATOR PROVIDED BY HJC) CONTRACTOR SHALL INSTALL SINK AND FAUCET SET AND MAKE FINAL CONNECTIONS. MCGUIRE 8912C POLISHED CHROME P-TRAP AND MCGUIRE LF175R20 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, HOSE THREAD SPOUT OUTLET, TOP BRACE, ADJUSTABLE INLET SPREAD FROM 3" TOP 8". INCLUDE T&S BRASS MODEL 43-072 HOSE THREAD X 3/4" FEMALE NPT CHROME ADAPTOR (ALL PROVIDED BY HJC). NO SUBSTITUTIONS. SEE ALSO P-16.

P-8 VEGETABLE PREP SINK ROUGH-IN: (SINK PROVIDED BY TMS; FAUCET T&S B-0152-14-CRBCT WITH 0.65 GPM SPRAY HEAD BY HJC) CONTRACTOR SHALL INSTALL SINK AND MAKE FINAL CONNECTIONS. MCGUIRE LFST08 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 1-1/2" 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; FAUCETS: T&S B-0152-14CRBCT & B2299-CR WITH 0.65 GPM SPRAY HEAD PROVIDED BY HJC) CONTRACTOR SHALL INSTALL SINK, ASSEMBLE & MOUNT TWO FAUCETS. AND MAKE FINAL CONNECTIONS. MCGUIRE LFST08 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 1-1/2" 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 67C AUTOMATIC DRAINING WALL HYDRANT WITH DUAL CHECK BFP, ASSE 1052 APPROVED, WALL CLAMP, POLISHED BRASS FINISH (PROVIDED BY HJC). "C" STYLE INLET, SEE WALL HYDRANT NOTES ON 1/P-201 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 WALK-IN COOLER (PROVIDED BY HJC). 4" ROUND FUNNEL (ZURN) ZN328-4.

P-13A FLOOR SINK (POT SINK): ZURN MODEL Z1901-4NL-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 Z1910-KC-3NL-1-23 CAST IRON INDIRECT WASTE RECEIVER WITH FLASHING CLAMP, 8" SQ. BODY, ALUMINUM SEDIMENT BUCKET, AND NO GRATE (PROVIDED BY HJC). NO SUBSTITUTIONS.

P-14 CLEANOUTS INSIDE BUILDING: ZURN ZN1400-XNL-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 3/4" FIP INLET AND OUTLETS AND QUARTER TURN LEVER HANDLE. PROVIDE WITH TWO (2) FORGED BRASS 3/4" MIP X 3/4" MALE GARDEN HOSE THREAD ADAPTERS (PLUMBEST MODEL G20-103 OR EQUAL). PROVIDE WITH ONE ASSE 1011 APPROVED CHROME PLATED VACUUM BREAKER (WOODFORD MODEL 34H-CH OR EQUAL) (ALL PROVIDED BY HJC). FOR INSTALLATION AT MOP SINK, SEE 4/P-201. PROVIDE ALSO TWO 3/4" CLOSE CHROME PLATED BRASS NIPPLE AND 3/4" POLISHED CHROME 90 DEGREE ELBOW.

P-17 VACUUM RELIEF VALVE: WATTS MODEL #LFN36M1, 3/4" CONNECTION. (PROVIDED BY HJC.)

P-18 EXPANSION TANK: AO SMITH MODEL TW12-5, ACCEPTANCE 2.19 GALLONS (PROVIDED BY HJC) AT 40 PSI PRECHARGE, 3/4" CONNECTION. ALTERNATE MODELS SIZED PER WATER HEATER MANUFACTURER RECOMMENDATIONS ARE ACCEPTABLE.

P-19 WATER HEATER: BRADFORD-WHITE EF-60T-125E-3N STORAGE TYPE GAS FIRED 60 GALLON WATER HEATER, 125MBH INPUT, 145 GPH RECOVERY AT 100F RISE, DIRECT VENT, BLOWER POWERED, CONDENSING TYPE WITH THREE-YEAR WARRANTY (PROVIDED BY HJC). CONTRACTOR TO PROVIDE DIELECTRIC HEAT TRAP NIPPLES. STATE INDUSTRIES SUF-100-199-NE, RHEEM GHE80-130, AND BRADFORD-WHITE EF-60T-199-3N MODELS ARE ACCEPTABLE SUBSTITUTES. (ANY SUBSTITUTIONS PROVIDED ON REQUEST FROM HJC.)

P-20 THERMOMETER: PROVIDE TRERICE MODEL B83404 - 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. (PROVIDED BY HJC.)

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) 112-975XLT2U. (ANY AND ALL PROVIDED BY HJC.)

P-22 MOP SINK CHECK VALVES: T&S BRASS 1/2" MODEL B-CVV1-2 BALL CHECK. (PROVIDED BY HJC)

P-23 UTILITY CONNECTION (ICEMAKER): PROVIDE A MCGUIRE MODEL LFHST06SB LEAD-FREE CHROME WHEEL ANGLE STOP, 1/2" FIP INLET AND OUTLET (PROVIDED BY HJC). PROVIDE CHROME WALL ESCUTCHEON. INSTALL WITH BFP P-34. SEE DETAIL 3/P-201 FOR PIPING AT ICE MAKERS.

P-24 UTILITY CONNECTION (COFFEE & TEA BREWERS): PROVIDE A MCGUIRE MODEL LFHST06SB LEAD-FREE CHROME WHEEL ANGLE STOP, 1/2" FIP INLET AND OUTLET (PROVIDED BY HJC). PROVIDE CHROME WALL ESCUTCHEON. INSTALL WITH BFP P-34.

P-25 SHOCK ABSORBER: ZURN Z1700-100 THRU Z1700-300 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-8S-OF FLOOR DRAIN W/FUNNEL. INDIRECT WASTE RECEIVER WITH NICKEL BRONZE STRAINER AND FUNNEL. PROVIDE 8"X8" SQUARE STRAINER WITH 3.25"X 8.25" OBLONG FUNNEL (DRAIN AND STRAINER PROVIDED BY HJC). ALT: (JRS) 3510L03-F22NB.

P-26A TRAP SEAL PROTECTOR: PROVENT TRAP GUARD MODEL TG3H 3" TRAP SEAL INSERT FOR INTERIOR INSTALLATION AND REPLACEMENT ACCESS THROUGH STRAINER (PROVIDED BY HJC). PROVIDE AT P-35 FLOOR DRAINS IN RESTROOMS, P-37 FLOOR DRAINS DINING ROOM, AND P-26 FUNNEL DRAINS IN MECH ROOM. PROVIDE PROSET MODEL TG33-ZURN WHEN USING ZURN FLOOR FIXTURES (PROVIDED BY HJC).

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. (PROVIDED BY HJC.)

P-28 ISOLATION BALL VALVE (8-STOP WATER MANIFOLD PANEL): NIBCO MODEL 4660-T, 3/4", WITH IPS INLET AND OUTLET. (PROVIDED BY HJC.)

P-29 ICE MACHINE FLOOR SINK: ZURN Z1910-KC-3NL-1-23 CAST IRON INDIRECT WASTE RECEIVER WITH FLASHING CLAMP, 8" SQ. BODY, ALUMINUM SEDIMENT BUCKET AND NO GRATE (PROVIDED HJC). NO SUBSTITUTIONS.

P-29A <varies>

P-29B <varies>

P-30 FILTERED WATER FAUCET: (FAUCETS: T&S B-02326-CR-063X PROVIDED BY HJC) TWO-HANDLE WALL MOUNT FAUCET WITH SWING SPOUT. MOUNT ON WALL AS SHOWN ON K-SHEETS. PIPE FIL

KITCHEN EQUIPMENT SCHEDULE - CHICK-FIL-A REMODEL Store #2309

VERIFY THE QUANTITY AND ROUGH-IN OF EACH EQUIPMENT ITEM WITH THE KITCHEN EQUIPMENT SCHEDULE

SCHEDULE NOTES	EQUIP. NO.	EQUIPMENT DESCRIPTION	ELECTRICAL LOAD					NEMA CONFIG		COOPER/ARROW HART (UON) RECEP. CATATOG NO.	Wire/Conduit MARK NO.	COMMENTS AND REMARKS
			VOLTS	PH	WIRES	KW	AMPS	WALL	DROP-CORD			
	180	ORDER REGISTER (POS)	120	1	2		0.7	5-20R	N/A	IG5362RN (ORANGE)	1-IG	
	182	RECEIPT PRINTER	120	1	2		0.18	5-20R	5-20R	IG5362RN (ORANGE)	1-IG	
	182L	LABEL PRINTER	120	1	2		0.18	5-20R	5-20R	IG5362RN (ORANGE)	1-IG	
NOTE 5	183	ORDER MONITOR	120	1	2		0.125	5-20R	5-20R	IG5362RN (ORANGE)	1-IG	
NOTE 2 OR 5	184	IPAD	120	1	2	0.120	1.0	5-20R	5-20R	VGF20	1	
NOTE 2	190	DRIVE-THRU VIDEO MONITOR	120	1	2		0.8	5-20R	N/A	CR20	1	
NOTE 5	211b	FLY SYSTEM - KITCHEN AREA	120	1	2	0.078	0.650	5-15R	N/A	TR780W (DUPLEX)	1	CLOCK STYLE RECEPTACLE REQ'D
	269	ANSUL FIRE SYSTEM	120	1	2		VERIFY	DIRECT	N/A	-	1	FED FROM CFA-T500 PANEL
	270	ANSUL FIRE SYSTEM	120	1	2		VERIFY	DIRECT	N/A	-	1	FED FROM CFA-T500 PANEL
NOTE 2	300a	MILKSHAKE DISPENSER	120	1	2		4.0	5-20R	N/A	1877 (SIMPLEX)	1	
	300X	DOUBLE BARREL ICE DREAM	208	3	3		15.0	15-20R	N/A	HUBBELL HBL8420	2	FURNISHED WITH ANGLE PLUG
			208	3	3		19.0	15-30R	N/A	HUBBELL HBL8430A	8	FURNISHED WITH ANGLE PLUG
NOTE 2	305	TEA BREWER	120	1	2	1.650	13.8	5-20R	N/A	VGF20	1	
	308	COFFEE BREWER	208	1	3	4.000	19.2	L14-30R	N/A	AHL1430R	8	
NOTE 2	309	SINGLE JUICE DISPENSER	120	1	2		3.6	5-20R	N/A	1877 (SIMPLEX)	1	
NOTE 2	310	DOUBLE JUICE DISPENSER	120	1	2		8.5	5-20R	N/A	1877 (SIMPLEX)	1	
	315W	DRINK TOWER	120	1	2		10.0	5-20R	N/A	CR20	1	
NOTE 2	320	TURBO CARBONATOR	120	1	2		6.2	5-20R	N/A	CR20	1	
	363H	HIGH-TEMP DISHMACHINE	208	3	3		45.4	DIRECT	N/A	-	17	PROVIDE IN-SIGHT DISC SWITCH OR PAD-LOCK DEVICE ON BRANCH BREAKER IF ALLOWED BY AHJ
	380A	ICE BIN SANITATION SYSTEM	120	1	2	0.010		5-15R	N/A	-	-	PLUGS INTO DUPLEX OF ONE #380Z UNIT
NOTE 5	380	INTERIOR ICE MAKER	120	1	2	0.600	5.0	5-15R	N/A	817 (SIMPLEX) CR15 (DUPLEX)	1	
	380C	ROOF MTD ICE CONDENSER	208	3	4	5.112	14.2	DIRECT	N/A	-	3	
NOTE 5	380D	INTERIOR ICE MAKER	120	1	2	0.600	5.0	5-15R	N/A	817 (SIMPLEX) CR15 (DUPLEX)	1	
	380CD	ROOF MTD ICE CONDENSER	208	3	4	5.652	15.7	DIRECT	N/A	-	6	
NOTE 2	400	REACH-IN FRY FREEZER	120	1	2		9.4	5-20R	L5-20R	VGF20 / AHL520R	1	
	410	WALK-IN FREEZER DOOR HTR/LTG	120	1	2		3.3	DIRECT		-	1	REFER TO LIGHTING FLOOR PLAN
		WI FREEZER CONDENSER	208	3	3		16.30	DIRECT		-	11	REQUIRES 35 AMP MOCP
		WI FREEZER EVAP COIL	208	1	2		1.5	DIRECT		-		POWER FED FROM CONDENSER
NOTE 5	420	SINGLE UC REFRIGERATOR	120	1	2		4.7	5-20R	L5-20R	1877 (SIMPLEX) / AHL520R	1	
NOTE 2	421	DOUBLE UC REFRIGERATOR	120	1	2		6.3	5-20R	L5-20R	1877 (SIMPLEX) / AHL520R	1	
NOTE 5	422	REFRIGERATED EQUIPMENT STAND	120	1	2		6.7	5-15R	L5-15R	1877 (SIMPLEX) / CWL515C	1	
NOTE 5	431	REFRIGERATED WORK TABLE	120	1	2		6.3	5-20R	L5-20R	1877 (SIMPLEX) / AHL520R	1	PROVIDE TWIST LOCK PLUG IN FIELD
NOTE 2	439	COLD RAIL	120	1	2		7.1	5-20R	N/A	VGF20	1	
NOTE 2	440CT	BREADING TABLE	120	1	2		1.0	L5-15R	L5-15R	CWL515R / CWL515C	1	PROVIDE 10 FT CORD AND TWIST LOCK PLUG
NOTE 5	441	REFRIGERATED SALAD PREP	120	1	2		9.0	L5-15R	L5-15R	CWL515R / CWL515C	1	15 AMP TWIST LOCK PLUG PROVIDED W/ EQUIP
NOTE 2	442WCT	SINGLE UPRIGHT REFRIGERATOR	120	1	2		7.0	L5-15R	L5-15R	CWL515R / CWL515C	1	PROVIDE TWIST LOCK PLUG IN FIELD
	444	DOUBLE DOOR THAWING CABINET	120	1	2		16.0	DIRECT	DIRECT	-	1	PROVIDE 6 FT LIQUID-TIGHT FLEX CONDUIT
	444S	SINGLE DOOR THAWING CABINET	120	1	2		16.0	DIRECT	DIRECT	-	1	PROVIDE 6 FT LIQUID-TIGHT FLEX CONDUIT
	449	WALK-IN COOLER LIGHTING	120	1	2		2.4	DIRECT		-	1	REFER TO LIGHTING FLOOR PLAN
		WI COOLER CONDENSER	208	3	3		9.50	DIRECT		-	2	REQUIRES 15 AMP MOCP
		WI COOLER EVAP COIL	208	1	2		1.0	DIRECT		-	1	POWER FED FROM CONDENSER
NOTE 2 OR 5	500A	VERTICAL CONTACT TOASTER	120	1	2	1.800	15.0	5-20R	L5-20R	VGF20 / AHL520R	1	
	500B	RADIANT TOASTER	208	1	3	5.000	24.0	L6-30R	L6-30R	AHL530R / AHL530C	8	
NOTE 5	503	EGG STATION	208	1	3	2.500	12.5	6-20R	L6-20R	1876 (SIMPLEX) / AHCL620C	2	TWIST LOCK PLUG PROVIDED W/ EQUIP
	505V	MULTI-COOK OVEN	208	3	3	7.920	22.0	L15-30R	L15-30R	AHLC1530R / AHCL1530C	9	PROVIDE 6 FT CORD AND PLUG
NOTE 3	522	OPEN FRYER - ELECTRIC	208	3	3	22.000	61.0	NOTE 3	N/A	-	22	PLUG AND CORD-SET PROVIDED W/ EQUIP
NOTE 3	522A	DOUBLE OPEN FRYER - REQUIRES TWO ELECTRICAL CONNECTIONS EACH OF THE SAME LOAD AND CHARACTERISTICS AS #522 ABOVE										
	523	PRESSURE FRYER - ELECTRIC	208	3	3	13.500	38.0	15-50R	N/A	HUBBELL HBL8450A	14	PLUG AND CORD-SET PROVIDED W/ EQUIP
	524	DUAL SIDED CHAR-GRILL	208	3	3	9.000	24.1/28.2/23.1	15-50R	N/A	HUBBELL HBL8450A	14	
NOTE 2	560	FRY HOLDING STATION	120	1	2	1.840	15.4	DIRECT		-	1	
NOTE 5	562A	HOT HOLDING TOWER	120	1	2	1.911	15.9	L5-20R	L5-20R	AHL520R / AHL520C	1	
NOTE 5	563D	DOUBLE SANDWICH SLIDE	120	1	2	1.090	9.13	5-20R	N/A	1877 (SIMPLEX)	1	
NOTE 5	563S	SINGLE SANDWICH SLIDE	120	1	2	0.548	4.56	5-20R	N/A	1877 (SIMPLEX)	1	
NOTE 5	564	PRODUCT HOLDING CABINET	120	1	2	1.320	11.00	5-20R	L5-20R	1877 / AHL520C	1	
	564A	PRODUCT HOLDING CABINET	120	1	2	0.660	5.50	5-20R	L5-20R	1877 / AHL520C	1	
	564B	PRODUCT HOLDING CABINET	120	1	2	0.660	5.50	5-20R	L5-20R	1877 / AHL520C	1	
NOTE 2	565C	FOOD COOKER/WARMER	120	1	2	1.500	12.50	5-20R	L5-20R	VGF20 / AHL520R	1	
NOTE 5	580H	MULTI-USE HOLDING CABINET	120	1	2	1.920	16.0	5-20R	L5-20R	1877 / AHL520C	1	
	592	SOUP RETHERMALIZER	208	3	3	7.920	22.0	15-30R	L15-30R	AH8430N / AHL1530C	9	PROVIDE TWIST LOCK PLUG IN FIELD WHEN REQ'D
NOTE 5	600	MIXER	120	1	2		8.0	5-20R	L5-20R	VGF20 / AHL520C	1	PROVIDE TWIST LOCK PLUG IN FIELD WHEN REQ'D
NOTE 2	607	LEMON JUICER	120	1	2		1/4 HP	5-20R	N/A	VGF20	1	PROVIDE GFCI DUPLEX RECEPTACLE
	669	OFFICE SAFE (SMART SAFE)	120	1	2			5-20R	N/A	CR20	1	
NOTE 2	671	LED MENU BOARD	120	1	2		12.50	5-20R	N/A	CR20	1	

WIRING DEVICE PACKAGE, INCLUDING SWITCHES (EXCEPT HUBBELL BRAND DEVICES) SHALL BE PURCHASED AS A PART OF A NATIONAL ACCOUNTS PROGRAM THROUGH GEXPRO (FORMERLY GE SUPPLY). CONTACT BRIAN REECE AT 770-840-4162 (EMAIL: BRIAN.REECE@GEXPRO.COM)

NOTE 1: ALL SO CORD LENGTHS SHALL BE MEASURED FROM THE REAR OF THE EQUIPMENT TO THE END OF THE CORD.

NOTE 2: CONTRACTOR SHALL PROVIDE GROUND-FAULT PROTECTION FOR ALL 120 VOLT 15 AMP AND 20 AMP RECEPTACLES IN THE KITCHEN / FOOD PREPARATION AREAS. GROUND-FAULT PROTECTION SHALL BE PROVIDED AT THE RECEPTACLE AS A GFCI TYPE RECEPTACLE UNLESS NOTED OTHERWISE ON THE PLANS WHERE A GFCI TYPE BREAKER IS INDICATED.

NOTE 3: A RECESSED PIN & SLEEVE BOX IS PROVIDED WITH THE EXHAUST HOOD PACKAGE AND INSTALLED BY THE CONTRACTOR. THE P&S BOX INCLUDES THE "SLEEVE" RECEPTACLES FOR THE OPEN FRYERS. THE OPEN FRYER SUPPLIER WILL PROVIDE PRE-WIRED CORDSET WITH A "PIN" DEVICE INTEGRAL WITH THE OPEN FRYER TO PLUG INTO THE "SLEEVE" RECEPTACLE.

NOTE 4: WIRE NUMBER INDICATED DOES NOT INCLUDE THE REQUIRED GREEN EQUIPMENT GROUND CONDUCTOR OR, WHEN APPLICABLE, THE STRIPED IG CONDUCTOR.

NOTE 5: PROVIDE GFCI TYPE BRANCH BREAKER FOR KITCHEN/FOOD PREPARATION AREA RECEPTACLES THAT ARE TWIST-LOCK, CLOCK STYLE, OR IG (ISOLATED GROUND) TYPE.

NOTE 6: REFER TO THE CONDUIT AND CONDUCTOR SCHEDULE FOR THE WIRE/CONDUIT MARK NUMBER AND THE MINIMUM WIRE AND CONDUIT SIZE FOR EACH EQUIPMENT ITEM.

NOTE 7: THE 'R' SUBSCRIPT ON EQUIPMENT NUMBERS ON THE KITCHEN SERIES DRAWINGS REFERS TO EXISTING EQUIPMENT THAT HAS BEEN RELOCATED. IN SEVERAL CASES THERE MAY BE ONE OR MORE NEW AND ONE OR MORE RELOCATED ITEMS, THEREFORE, IN ORDER TO AVOID CONFUSION, ALL EQUIPMENT IS LISTED AS 'NEW' AND THIS SUBSCRIPT IS NOT USED. FIELD VERIFY ELECTRICAL REQUIREMENTS - WHAT IS INDICATED IN THIS SCHEDULE IS BASED ON 'NEW BUILD' PROTOTYPICAL EQUIPMENT ITEMS.

C1 ELECTRICAL LEGEND

SYMBOL	DESCRIPTION	MTG HT AFF TO CL
	LIGHTING FIXTURES	
	SURFACE MOUNTED LIGHTING FIXTURE	
	RECESSED LED TROFFER LIGHTING FIXTURE	
	SURFACE MOUNTED LED LIGHTING FIXTURE	
	RECESSED LED LIGHTING FIXTURE	
	WALL MOUNTED LIGHTING FIXTURE, SEE LIGHTING FIXTURE SCHEDULE	AS NOTED
	WALL MOUNTED EXIT SIGN, SHADE INDICATES FACES, PROVIDE CHEVRON DIRECTIONALS WHEN NEEDED	6" FROM CEILING TO TOP
	CEILING MTD EXIT SIGN, SHADING INDICATES FACES. PROVIDE W/ CHEVRON DIRECTIONALS WHEN NEEDED	
	COMBO EXIT WITH TWO LAMPHEADS	
	WALL MTD EMERGENCY BATTERY PACK LIGHTING FIXTURE	AS NOTED
	CEILING MTD EMERGENCY BATTERY PACK LIGHTING FIXTURE	
	FLUORESCENT STRIP LIGHTING FIXTURE	
	WALLWASHER TYPE RECESSED DOWNLIGHT, AIM LIGHT TOWARD WALL	
	RECESSED LIGHTING FIXTURE W/ EMERGENCY BATTERY PACK	
	PENDANT LIGHTING FIXTURE	AS NOTED
	LIGHTING TRACK WITH TRACK HEADS	
	WIRING DEVICES	
	120 VOLT DUPLEX RECEPTACLE, 20 AMPS U.O.N.	14" UON
	120 VOLT DUPLEX AT SPECIAL MTD HEIGHT, 20 AMPS U.O.N.	44" UON
	120 VOLT QUADRAPLEX RECEPTACLE, 20 AMPS U.O.N.	14" UON
	120 VOLT QUAD. AT SPECIAL MTD HEIGHT, 20 AMPS U.O.N.	44"
	120 VOLT SIMPLEX RECEPTACLE, 20 AMPS U.O.N.	14" UON
	SINGLE SPECIAL PURPOSE RECEPT W/ VOLTS, AMPS, & PHASE AS NOTED, NEMA CONFIGURATION AS REQUIRED BY EQUIP.	14" UON
	RECEPTACLE MOUNTED ON DROP CORD, 120 VOLT, 20 AMP, UON, 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"

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.

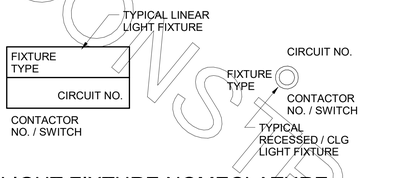
	CONDUIT/RACEWAYS	
	CONDUIT CONCEALED ABOVE CEILNG OR IN WALL	
	CIRCUIT HOMERUN TO PANELBOARD W/ MIN 2#12, 1#12G, 3/4"C	
	CONDUIT TURNING UP	
	CONDUIT TURNING DOWN	
	CONDUIT CONCEALED IN OR BELOW SLAB (OR UNDERGROUND)	
	FLEXIBLE LIGHT FIXTURE WHIP; SIX FOOT MAXIMUM LENGTH	
-MC-	METAL CLAD CABLE ASSEMBLY - ONLY WHERE INDICATED ON DWGS OR SPECS	
	DISTRIBUTION EQUIPMENT	
	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 & 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	6'-6" *

* 6'-6" DISTANCE IS TO TOP-MOST DISCONNECTING DEVICE OR HIGHEST POSITION OF OPERATING HANDLE OF DISCONNECTING DEVICE

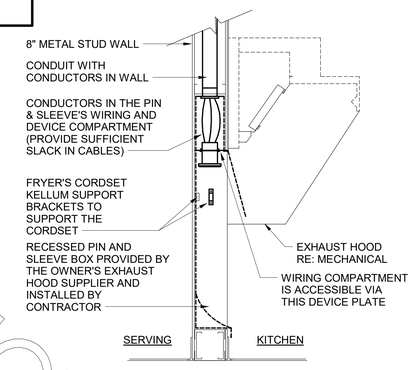
SYMBOL	DESCRIPTION	MTG HT AFF TO CL
	MISCELLANEOUS SYMBOLS	
	GROUND	
M	MOTOR	
EF	EXHAUST FAN MOTOR	
J	JUNCTION BOX	
1	CONDUIT AND WIRE 'MARK' NUMBER, REFER TO CONDUCTORS AND CONDUIT SCHEDULE FOR SIZE	
101	KITCHEN EQUIPMENT 'MARK' NUMBER, REFER TO KITCHEN EQUIPMENT SCHEDULE FOR REQUIREMENTS	
1	NOTE NUMBER	
A	HOOD EXTINGUISHING ANSUL PULL STATION	
D	SMOKE DETECTORS REMOTE STATUS INDICATOR W/ 1/2"C STUB-UP	
+	PUSHBUTTON	
B	BELL, TYPE AS NOTED ON PLANS	
PE	PHOTO-ELECTRIC CELL	
T	TRANSFORMER / DRIVER	
S	LOCKABLE SINGLE POLE SWITCH	
	ABBREVIATIONS	
AFF	ABOVE FINISHED FLOOR	
AFG	ABOVE FINISHED GRADE	
AHU	AIR HANDLING UNIT	
C	CONDUIT	
CL	CENTER-LINE	
CT	CONTACTOR	
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	
TB	TERMINAL BLOCK	
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.

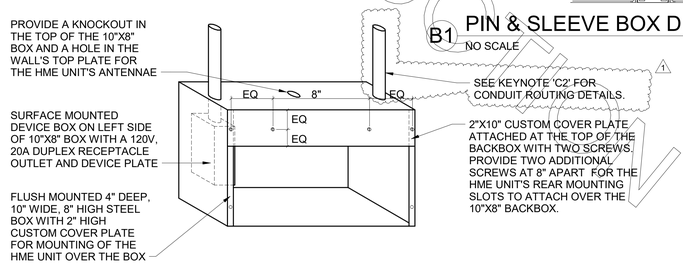
	CCTV / SECURITY SYSTEM
K	SECURITY ALARM KEYPAD
S1	SECURITY SYSTEM KEY NOTE



A2 LIGHT FIXTURE NOMECLATURE
NO SCALE



B1 PIN & SLEEVE BOX DETAIL
NO SCALE



A1 HME UNIT POWER & DATA BOX DETAIL
NO SCALE

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

Kurzynske & Associates
2705 Lebanon Pike - Suite One
Nashville, Tennessee 37214
Telephone: (615) 255-5203

STATE OF MISSOURI
MARK L. KURZYNSKE
NUMBER E-2000153901
REGISTERED PROFESSIONAL ENGINEER
8/1/2023

CHICK-FIL-A
ST. JOSEPH FSU

5303 N BELT HWY
SAINT JOSEPH, MO 64506

FSR#02309

BUILDING TYPE / SIZE: S08C-R LRG
RELEASE: v2.20.08
PRINTED FOR
CONSTRUCTION

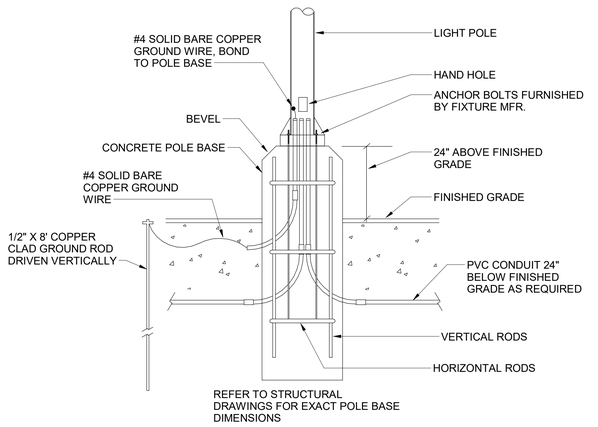
REVISION SCHEDULE

NO.	DATE	DESCRIPTION
1	05.10.2023	City Comments

CONSULTANT PROJECT # 22172.CD.R
DATE 01/12/2023
DRAWN BY ML

SHEET
ELECTRICAL SCHEDULES AND DETAILS

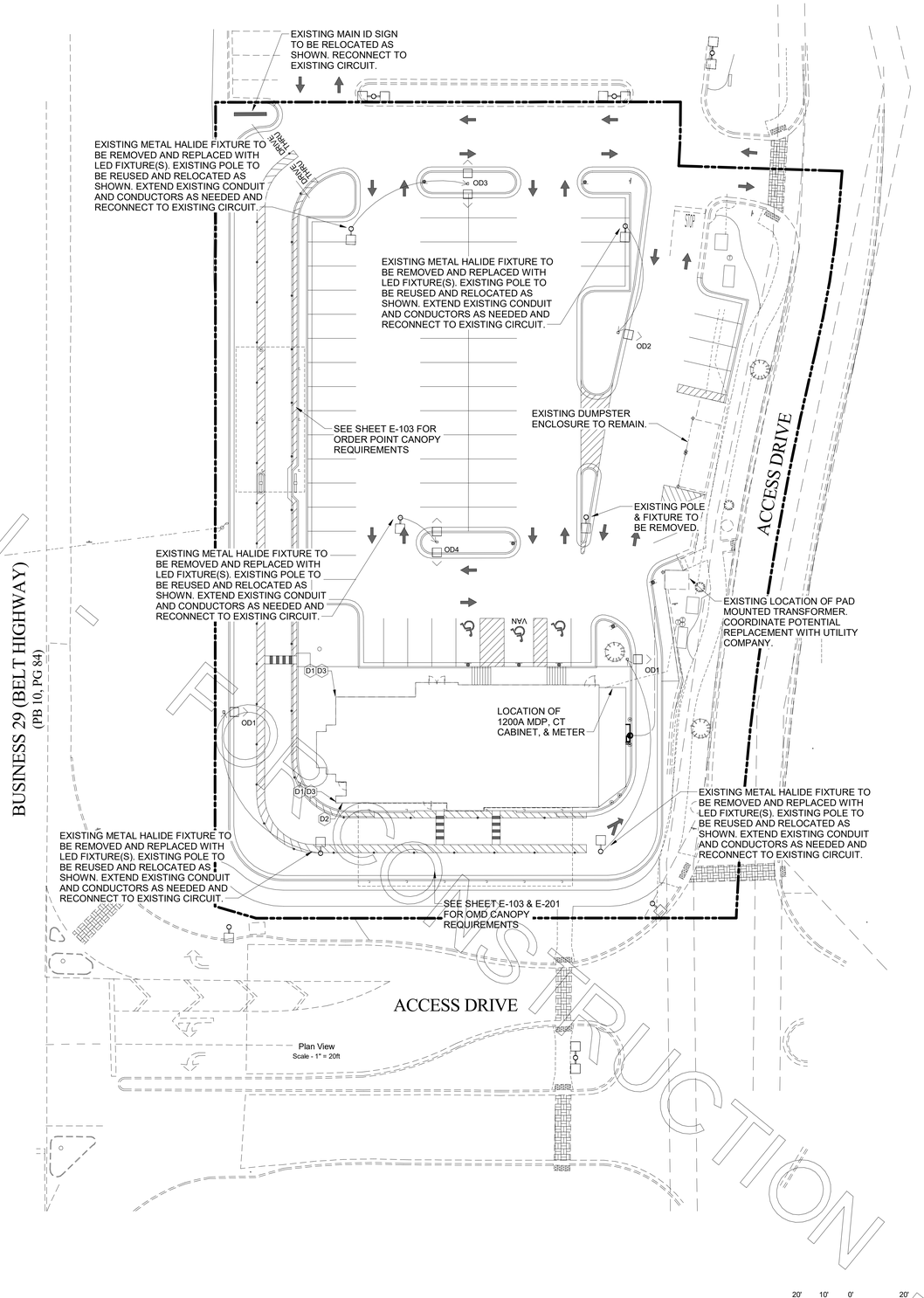
SHEET NUMBER
E-101



B3 TYPICAL CONCRETE BASE POLE DETAIL.
N.T.S.

DT CASH STATION - KEYNOTES

- D1 LOCATION OF A 360 DEGREE BUILDING MOUNTED EXTERIOR CAMERA (BY OTHERS). PROVIDE A 3/4" CONDUIT AT 9'-4" AFF TO AN EXTERIOR WALL MOUNTED WP JUNCTION BOX WITH THE CONDUIT ABOVE THE INTERIOR CEILING AND EXTENDED TO AN ACCESSIBLE CEILING AREA FOR CAMERA CABLES BY OTHERS.
- D2 PROVIDE AN EXTERIOR DUPLEX 120V, 20A RECEPTACLE AT 18"AFF WITH 'IN-USE' STYLE LOCKABLE WP COVER AND CONNECT TO A GENERAL PURPOSE 120V RECEPTACLE CIRCUIT.
- D3 PROVIDE A JUNCTION BOX ON THE INSIDE PARAPET WALL ABOVE THE ROOF WITH A 3/4" CONDUIT STUBBED DOWN INTO AN ACCESSIBLE CEILING SPACE AREA BELOW FOR THE OWNER PROVIDED WI-FI EXTERIOR ANTENNAE.



A1 ELECTRICAL SITE PLAN
1" = 20'-0"

Plan View
Scale - 1" = 20ft

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

Kurzynske
& Associates
2705 Lebanon Pike - Suite One
Nashville, Tennessee 37214
Telephone: (615) 255-5203

STATE OF MISSOURI
MARK L. LISKEY
E-2000132901
REGISTERED PROFESSIONAL ENGINEER
8/1/2023

CHICK-FIL-A
ST. JOSEPH FSU

5303 NORTH BELT HIGHWAY
SAINT JOSEPH, MO 64506

FSR#02309

BUILDING TYPE / SIZE: S08C-R
RELEASE: 22.05
PRINTED FOR
CONSTRUCTION

REVISION SCHEDULE

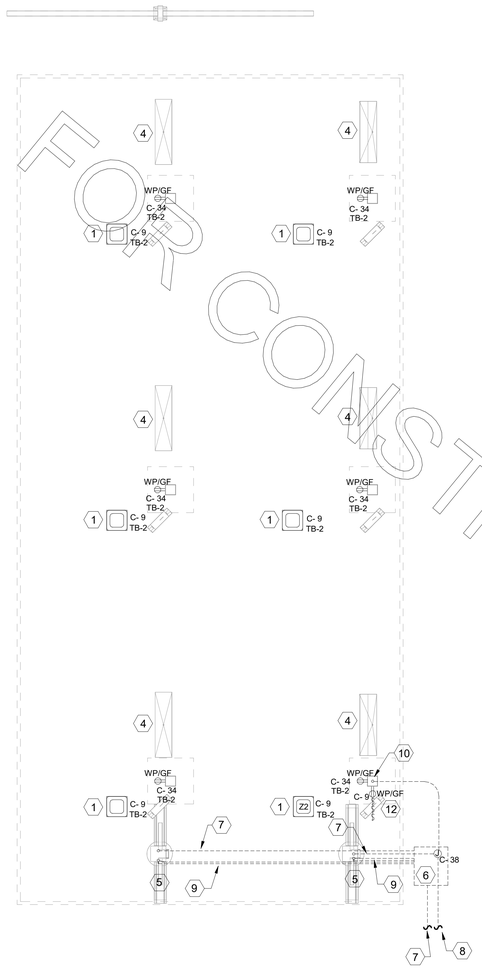
NO.	DATE	DESCRIPTION

CONSTRUCTION

CONSULTANT PROJECT # 22172.CD.R
DATE 01/12/2023
DRAWN BY ML

SHEET
ELECTRICAL SITE PLAN

SHEET NUMBER
E-102

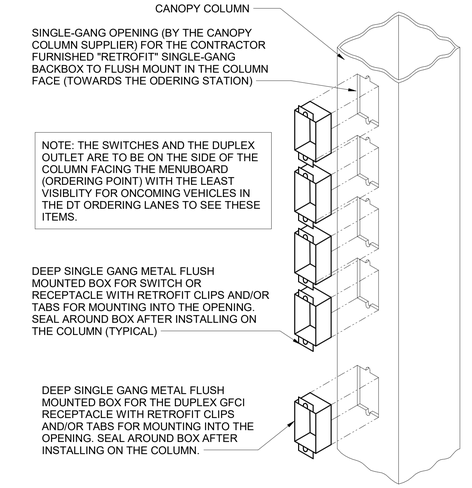


C3 MLOP ORDER CANOPY POWER PLAN

1/4" = 1'-0"

ORDER CANOPY ELECTRICAL KEYNOTES:

1. CEILING LIGHT PROVIDED BY CANOPY SUPPLIER AND INSTALLED BY E.C.
2. NOT USED.
3. AIR CIRCULATING FAN (WITH INTEGRAL ON-OFF SWITCH) PROVIDED BY OTHERS. PROVIDE A DUPLEX OUTLET (WITH IN-USE COVER PLATE) FLUSH MOUNTED IN CUT-OUT AT TOP OF COLUMN FOR FAN'S PLUG AND CORD. LOCATE CUT-OUT AT TOP OF COLUMN ON DOWNSTREAM SIDE.
4. INFRARED GAS HEATER WITH INTEGRAL ON-OFF SWITCH PROVIDED BY OTHERS.
5. MENUBOARD PROVIDED BY OTHERS.
6. PROVIDE IN-GROUND QUASITE PULLBOX FOR MLOP DATA CABLES WITH POWER NEMA 3R JUNCTION BOX MOUNTED INSIDE THE PULLBOX.
7. 2" UNDERGROUND SCH40 PVC CONDUIT WITH POWER CIRCUITS, SEE WIRING SCHEMATIC.
8. 2" EMPTY UNDERGROUND SCH40 PVC CONDUIT, ONE 2" FOR OWNER'S AUDIO SYSTEM/DETECTOR LOOP CABLES AND ONE 2" FOR OWNER'S DIGITAL MENUBOARD CABLES.
9. 1" EMPTY UNDERGROUND SCH40 PVC CONDUIT FOR OWNER'S AUDIO SYSTEM/DETECTOR LOOP CABLES AND 2" EMPTY UNDERGROUND SCH40 PVC CONDUIT FOR OWNER'S DIGITAL MENUBOARD CABLES.
10. INSTALL UNDERGROUND 3" SCH40 PVC CONDUIT UP INTO THE CANOPY COLUMN WITH TYPE MC CABLE (GALVANIZED STEEL WITH PVC JACKET) RUN WITHIN FOR THE 120V POWER FOR LIGHTS, 120 VOLT POWER FOR FANS, AND 24 VOLT POWER FOR THE INFRARED GAS HEATERS.
11. NOT USED.
12. PROVIDE ONE DUPLEX GFCI (WITH IN-USE WP COVER PLATE), TWO 120V SINGLE-POLE SWITCHES (EACH WITH HUBBELL #RW51550 WP COVER PLATE), AND ONE DUPLEX SINGLE-POLE SWITCH (WITH HUBBELL #RW51470 WP COVER PLATE) MOUNTED ON THE COLUMN IN FLUSH MOUNTED METAL SINGLE GANG BOXES FOR LOCAL ON-OFF CONTROL OF THE FAN, TWO-STAGE HEATERS, AND CANOPY LIGHTS. SEE WIRING SCHEMATIC AND CANOPY COLUMN DETAILS FOR FURTHER INFORMATION. ALL SURFACE MOUNTED ITEMS AND COVER PLATES TO BE FIELD PAINTED MATTE BLACK.
13. ALL CONDUIT AND BOXES SHALL BE CONCEALED FROM NORMAL VIEW; UNDERGROUND, IN COLUMNS, OR ABOVE THE CANOPY (ON THE ROOF). MC CABLE (GALVANIZED STEEL WITH PVC JACKET) TO BE USED INSIDE THE COLUMNS, BUT MUST CONVERT BACK TO IMC ABOVE THE ROOF. REFER TO THE MECHANICAL DRAWINGS FOR LOCATIONS OF GAS PIPING ABOVE THE ROOF AND INSTALL CONDUIT ALONG THE SAME LOCATIONS USING THE SAME PIPE STAND FOR PIPING AND CONDUIT. ALL EXPOSED ELECTRICAL BOXES TO BE NEMA 3R CAST-METAL.



D1 CANOPY COLUMN ISOMETRIC

N.T.S.

B2 MEAL DELIVERY CANOPY COLUMN SECTION

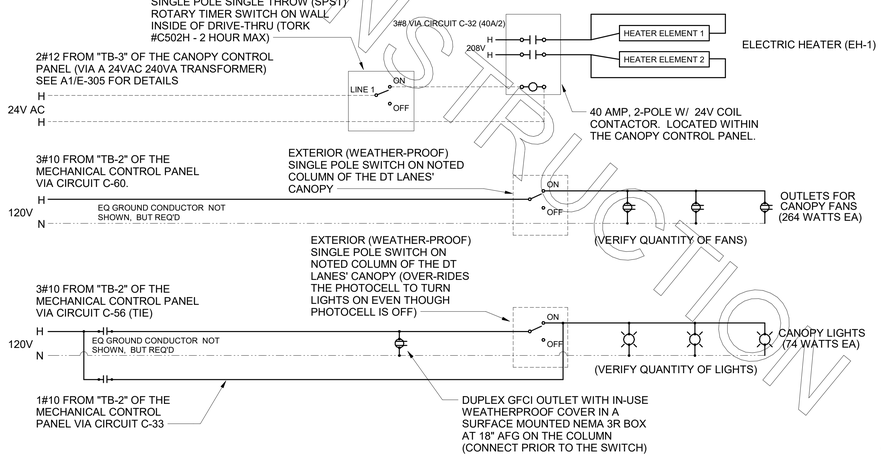
N.T.S.

B1 MLOP ORDER CANOPY COLUMN SECTION

N.T.S.

A3 MULTI-LANE ORDER CANOPY POWER WIRING SCHEMATIC

N.T.S.



A1 MEAL DELIVERY CANOPY POWER WIRING SCHEMATIC

N.T.S.

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

Kurzynske & Associates
2705 Lebanon Pike - Suite One
Nashville, Tennessee 37214
Telephone: (615) 255-5203

STATE OF MISSOURI
MARKET:
ISSUED TO:
E-2000132901
REGISTERED PROFESSIONAL ENGINEER

8/1/2023

CHICK-FIL-A
ST. JOSEPH FSU

5303 N BELT HWY
SAINT JOSEPH, MO 64506

FSR#02309

BUILDING TYPE / SIZE: S08C-R ALL
RELEASE: v2.20.08
PRINTED FOR
CONSTRUCTION

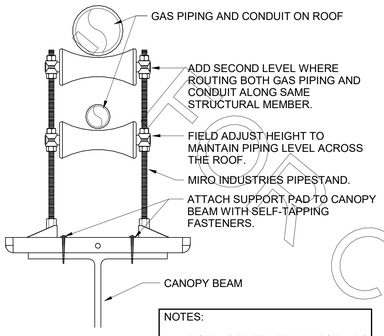
REVISION SCHEDULE

NO.	DATE	DESCRIPTION

CONSULTANT PROJECT # 22172.CD.R
DATE 01/12/2023
DRAWN BY ML

SHEET
CANOPY PLANS & DETAILS

SHEET NUMBER
E-103

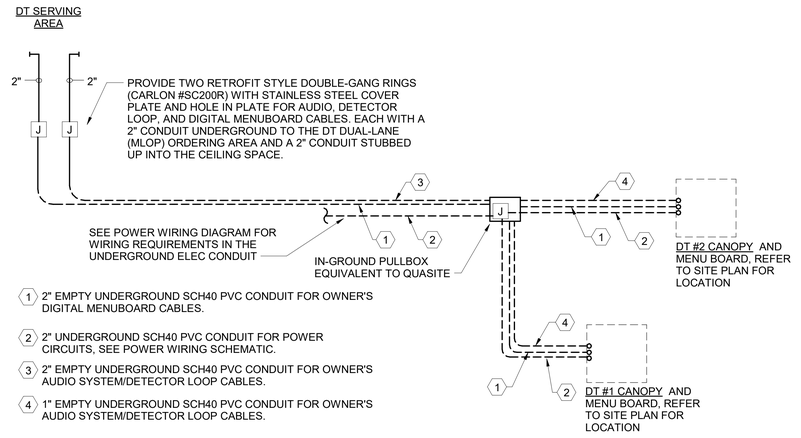


NOTES:

1. DISTANCE BETWEEN PIPESTANDS NOT TO EXCEED 8'-0".
2. MC TO PROVIDE DUAL LEVEL SUPPORT TO ACCOMMODATE BOTH GAS PIPING AND CONDUIT.

D4 PIPING SUPPORT ON CANOPY

1/4" = 1'-0"



D1 MLOP DT REQUIREMENTS - WITH ORDER AREA F2F CANOPY

NO SCALE

SEQUENCE OF OPERATION

STORE SWITCH IN "STORE OPEN" POSITION

A. INFRARED HEATERS ARE ENABLED.
B. COOLING FANS ARE ENABLED.
C. LIGHTS ARE ENABLED.
D. MASTER AUTO/OFF SWITCH FOR IR HEATERS AND COOLING FANS. PROVIDE SINGLE POINT ON/OFF CONTROL.

STORE SWITCH IN "STORE CLOSED" POSITION

A. INFRARED HEATERS ARE DISABLED.
B. COOLING FANS ARE DISABLED.
C. LIGHTS ARE DISABLED.

NOTES

1. CONTRACTOR SHALL PURCHASE CONTROL PANEL DIRECT FROM SUNCOAST ENVIRONMENTAL CONTROLS (727-544-6679).
2. COORDINATE WITH GC TO ESTABLISH LOCATION TO MOUNT PANEL IN A CONDITIONED SPACE INSIDE THE BUILDING. SUGGESTED LOCATION IS SURFACE MOUNTED DIRECTLY ABOVE THE LOCATION OF THE CFA-T500 CONTROL PANEL.
3. THE SUNCOAST ENVIRONMENTAL CONTROLS (SEC) IS TO BE SURFACE MOUNTED, UNLESS OTHERWISE REQUESTED TO SUNCOAST.
4. PROVIDE LAMINATED LEGEND SHOWING NAMED LOCATIONS OF FANS AND IR HEATERS. MOUNT LEGEND AT PANEL.

LEGEND

SEC SUNCOAST ENVIRONMENTAL CONTROLS (SUPPLIER OF CONTROL PANELS)
LOW VOLTAGE BY CONTRACTOR
LOW VOLTAGE WIRING BY SUNCOAST
120 VOLT BY CONTRACTOR
120 VOLT BY SUNCOAST

SUNCOAST RELAYS CONTACTORS SHOWN IN DE-ENERGIZED "STORE UNOCCUPIED" CONDITION. RELAYS AND CONTACTORS FACTORY INSTALLED BY SEC IN CONTROL PANEL. RELAYS AND CONTACTORS ENERGIZED VIA "STORE OPEN/CLOSED" SWITCH.

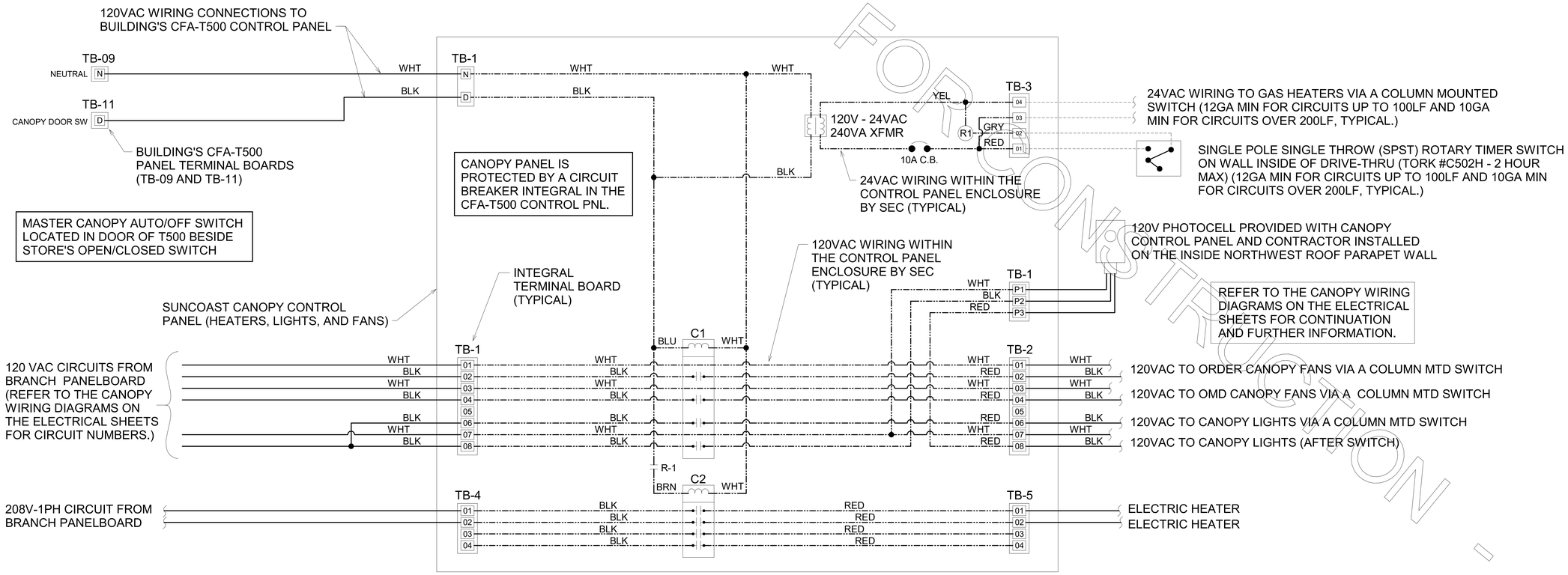
CIRCULATING FAN SCHEDULE

MARK	CFM	RPM	HP	MODEL	MANUFACTURER
CF	5,750	1,625	1/8	U18TE-HD	TPI

REMARKS

1. ALUMINUM PADDLE WITH STEEL HUB/SPIDER PROPELLER.
2. 360° ROTATING HEAD HORIZONTALLY AND VERTICALLY.
3. OSHA COMPLIANT DOUBLE LOCKING, COATED STEEL WIRE GUARD.
4. 3-SPEED, TOTALLY ENCLOSED, PERMANENTLY LUBRICATED BALL BEARING MOTOR.
5. FACTORY PRE-WIRED POWER CORD.
6. PROVIDE FACTORY WALL MOUNTING BRACKET. SEE FAN MOUNTING DETAIL ON CANOPY SHOP DRAWINGS FOR TYPICAL INSTALLATION INSTRUCTIONS.
7. PROVIDE ENGRAVED PLASTIC LABEL AT EACH UNIT WITH UNIT DESIGNATION IN 1" HIGH WHITE LETTERS ON A BLACK BACKGROUND. MOUNT TO UNDERSIDE OF CANOPY OR EXISTING OVERHANG, FACING DOWNWARD, 12" LATERALLY FROM THE FAN LOCATION.
8. REMOVE PULL CHAIN EXTENSION AT ON/OFF SWITCH IN THE FIELD.
9. FACTORY CERTIFIED FOR OUTDOOR INSTALLATION.

TPI FAN PACKAGE - THE CONTRACTOR IS REQUIRED TO PURCHASE THE FAN PACKAGE DIRECTLY FROM TOM BARROW COMPANY. CONTACT MR. SCOTT GEORGE AT 404-351-1010 FOR PRICING AND AVAILABILITY. FANS NOT PURCHASED THRU TOM BARROW COMPANY WILL NOT BE ACCEPTED.



A1 SUNCOAST CANOPY CONTROL PANEL WIRING DIAGRAM

NO SCALE

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

Kurzynske & Associates
2705 Lebanon Pike - Suite One
Nashville, Tennessee 37214
Telephone: (615) 255-5203

STATE OF MISSOURI
MARK L. KURZYNSKE
E-2000132901
REGISTERED PROFESSIONAL ENGINEER
8/1/2023

CHICK-FIL-A
ST. JOSEPH FSU

5303 N BELT HWY
SAINT JOSEPH, MO 64506

FSR#02309

BUILDING TYPE / SIZE: S08C-R ALL
RELEASE: v2.20.08
PRINTED FOR
CONSTRUCTION

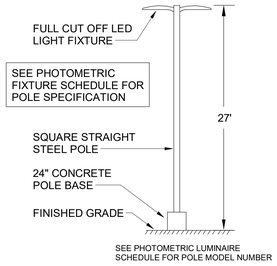
REVISION SCHEDULE

NO.	DATE	DESCRIPTION

CONSULTANT PROJECT # 22172.CD.R
DATE 01/12/2023
DRAWN BY ML

SHEET
ORDER CANOPY CONTROL PANEL

SHEET NUMBER
E-104

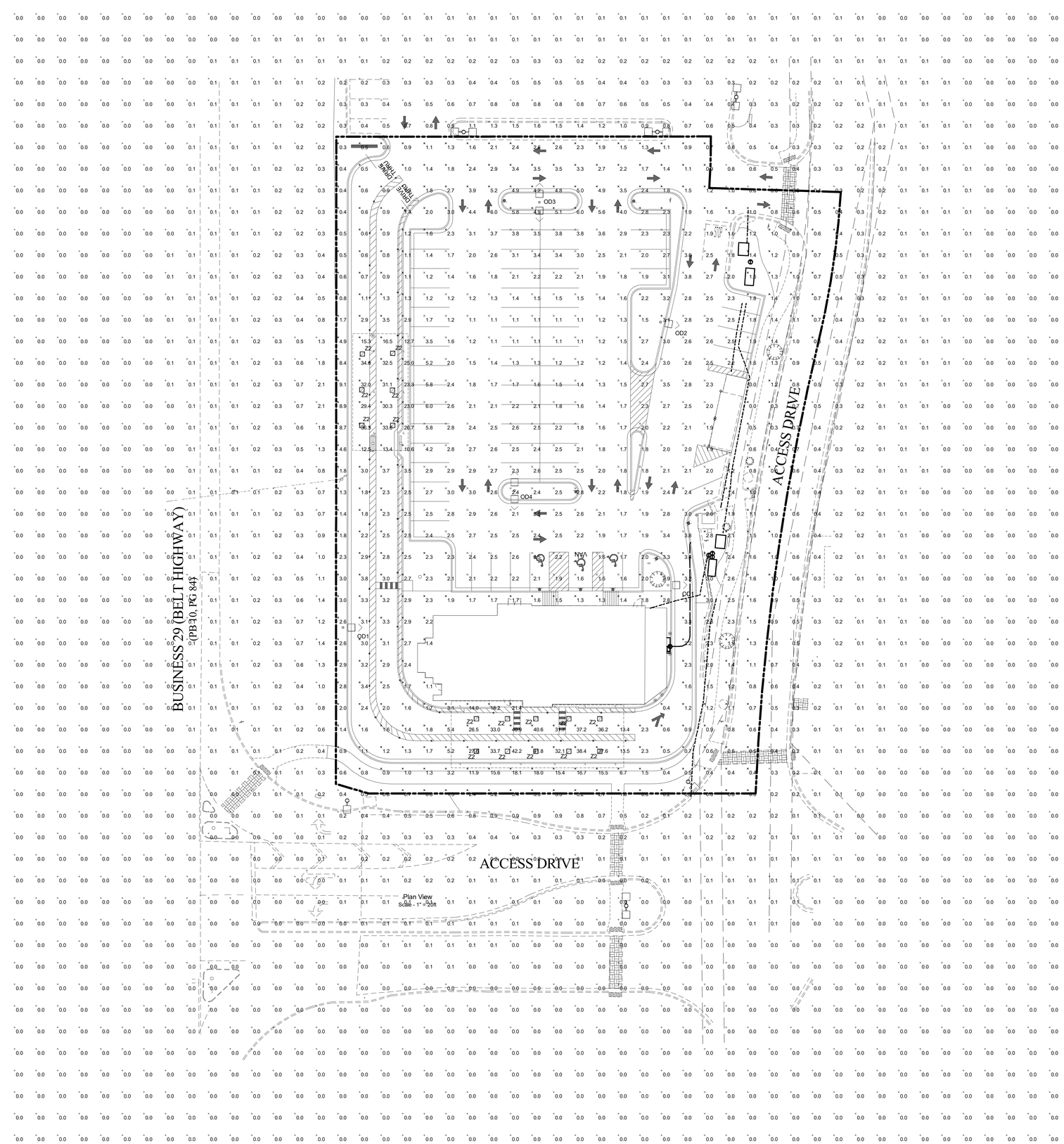


E4 AREA LIGHTING POLE DETAIL

N.T.S.

Schedule								
Symbol	Label	QTY	Manufacturer	Catalog Number	Number Lamps	Lumens per Lamp	LLF	Wattage
	OD1	2	EATON - LUMARK	PRV-C60-D-UNV-T3 -BZ	1	10029	0.90	153
	OD2	1	EATON - LUMARK	PRV-C60-D-UNV-T4 -BZ	1	9993	0.90	306
	OD3	1	EATON - LUMARK	PRV-C60-D-UNV-T3 -BZ	1	10029	0.90	306
	OD4	1	EATON - LUMARK	PRV-C60-D-UNV-T5 -BZ	1	10678	0.90	306
	CRUS	16	LSI INDUSTRIES INC.	CRUS-SC-LED-LW -30	1	9966	0.90	73.5
EXISTING METAL HALIDE FIXTURES TO BE REMOVED AND REPLACED BY OD LED FIXTURES. EXISTING POLES TO BE REUSED WITH NEW 2' POLE BASES.								

Statistics						
Description	Symbol	Avg	Max	Min	Max/Min	Avg/Min
Calc Zone #1	+	0.8 fc	42.2 fc	0.0 fc	N/A	N/A
Lot Summary	+	3.8 fc	42.2 fc	0.0 fc	N/A	N/A
Parking Lot Summary	+	2.3 fc	6.0 fc	1.1 fc	5.5:1	2.1:1



Plan View
Scale - 1" = 20ft

A1 PHOTOMETRIC PLAN

1" = 20'-0"

20' 10' 0' 20' 40'

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

Kurzynske & Associates
2705 Lebanon Pike - Suite One
Nashville, Tennessee 37214
Telephone: (615) 255-5203

STATE OF MISSOURI
MARK L. LIVESAY
E-2000153490
REGISTERED PROFESSIONAL ENGINEER

8/1/2023

CHICK-FIL-A
ST. JOSEPH FSU

5303 NORTH BELT HIGHWAY
SAINT JOSEPH, MO 64506

FSR#02309

BUILDING TYPE / SIZE: S08C-R
RELEASE: 22.05
PRINTED FOR
CONSTRUCTION

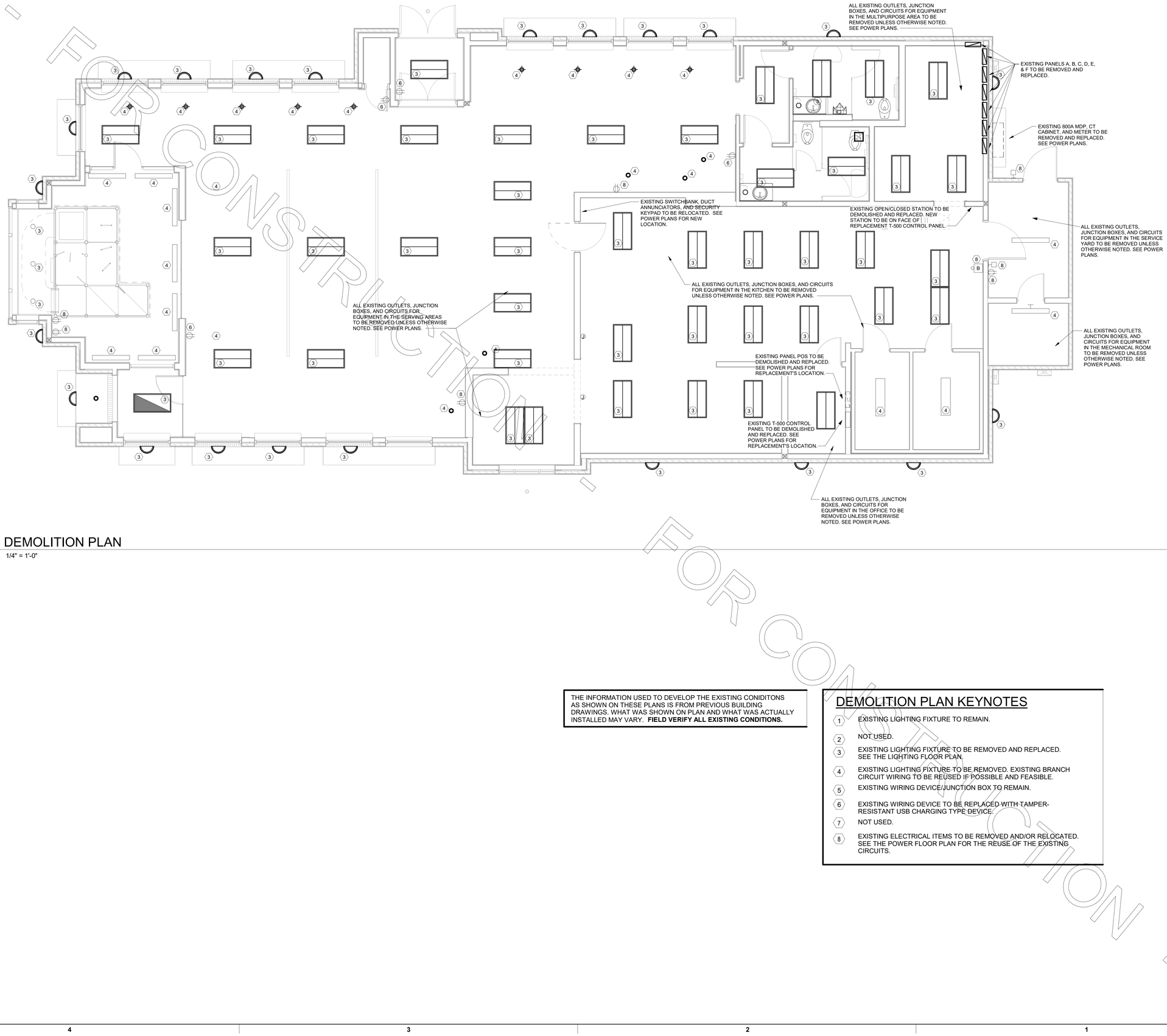
REVISION SCHEDULE

NO.	DATE	DESCRIPTION

CONSULTANT PROJECT # 22172.CD.R
DATE 01/12/2023
DRAWN BY ML

SHEET
SITE PHOTOMETRIC PLAN

SHEET NUMBER
E-105



C1 DEMOLITION PLAN
1/4" = 1'-0"

THE INFORMATION USED TO DEVELOP THE EXISTING CONIDITONS AS SHOWN ON THESE PLANS IS FROM PREVIOUS BUILDING DRAWINGS. WHAT WAS SHOWN ON PLAN AND WHAT WAS ACTUALLY INSTALLED MAY VARY. **FIELD VERIFY ALL EXISTING CONDITIONS.**

DEMOLITION PLAN KEYNOTES

1. EXISTING LIGHTING FIXTURE TO REMAIN.
2. NOT USED.
3. EXISTING LIGHTING FIXTURE TO BE REMOVED AND REPLACED. SEE THE LIGHTING FLOOR PLAN.
4. EXISTING LIGHTING FIXTURE TO BE REMOVED. EXISTING BRANCH CIRCUIT WIRING TO BE REUSED IF POSSIBLE AND FEASIBLE.
5. EXISTING WIRING DEVICE/JUNCTION BOX TO REMAIN.
6. EXISTING WIRING DEVICE TO BE REPLACED WITH TAMPER-RESISTANT USB CHARGING TYPE DEVICE.
7. NOT USED.
8. EXISTING ELECTRICAL ITEMS TO BE REMOVED AND/OR RELOCATED. SEE THE POWER FLOOR PLAN FOR THE REUSE OF THE EXISTING CIRCUITS.

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

Kurzynske & Associates
2705 Lebanon Pike - Suite One
Nashville, Tennessee 37214
Telephone: (615) 255-5203

STATE OF MISSOURI
MARK T. LISKEY
E-20001
REGISTERED PROFESSIONAL ENGINEER
8/1/2023

CHICK-FIL-A
ST. JOSEPH FSU

5303 N BELT HWY
SAINT JOSEPH, MO 64506

FSR#02309

BUILDING TYPE / SIZE: S08C-R ALL
RELEASE: v2.20.08
PRINTED FOR
CONSTRUCTION

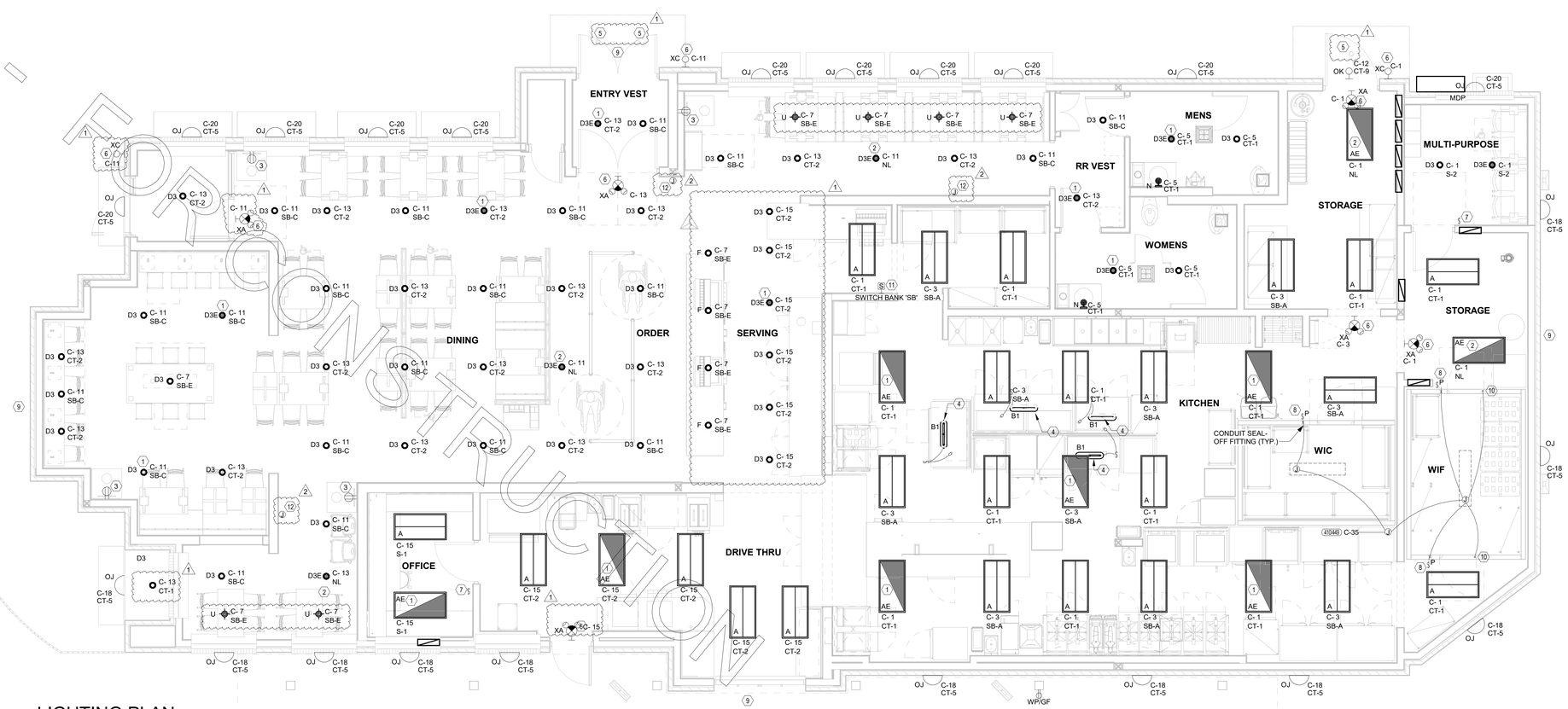
REVISION SCHEDULE

NO.	DATE	DESCRIPTION

CONSULTANT PROJECT # 22172.CD.R
DATE 01/12/2023
DRAWN BY ML

SHEET
ELECTRICAL DEMOLITION PLAN

SHEET NUMBER
E-200

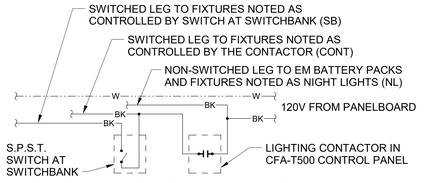


C1 LIGHTING PLAN

1/4" = 1'-0"

LIGHTING PLAN KEYNOTES

1. CONNECT FIXTURE SO THAT BATTERY PACK IS NOT SWITCHED WITH LIGHTS, BUT ALL LAMPS ARE SWITCHED.
2. CONNECT FIXTURE SO THAT LAMP AND EMERGENCY BATTERY PACK ARE NOT SWITCHED. 'NL' ADJACENT TO FIXTURE INDICATES THAT FIXTURE SHALL BE ON 24 HOURS.
3. PROVIDE TAMPER-RESISTANT DUPLEX RECEPTACLE AT STANDARD HEIGHT FOR FUTURE COMPACTING TRASH CAN ON A DEDICATED 20 AMP CIRCUIT. USE CIRCUITS B-68, B-70, & B-72.
4. PROVIDE A TYPE 'B1' LIGHT FIXTURE. MOUNT TO THE THE UNDERSIDE OF THE WIRE SHELVING. PROVIDE FLEX CONDUIT AND CONNECT TO A SWITCH IN AN FS BOX MOUNTED TO THE SHELF. FROM FS BOX, PROVIDE AN SO CORD WITH PLUG AND CONNECT TO THE GEN RECEPTACLE.
5. CONNECT THE INTEGRAL CANOPY FIXTURE TO C-12 VIA THE DUSK-TO-DAWN CIRCUIT IN THE CFA-T500.
6. CONNECT FIXTURE TO CIRCUIT AHEAD OF ALL SWITCHING AND CONTROLS. THIS FIXTURE SHALL NOT BE SWITCHED.
7. PROVIDE A WALL SWITCH LINE VOLTAGE OCCUPANCY SENSOR EQUIVALENT TO SENSOR SWITCH #WSD-WH
8. PILOT LIGHT SWITCH FOR CONTROL OF LED LIGHT FIXTURE INSIDE THE WIC OR WIF UNIT. PROVIDE CONDUIT SEAL-OFF FITINGS FOR ALL CONDUIT PENETRATIONS THRU THE FREEZER'S WALL. LED LIGHT FIXTURE FURNISHED WITH THE UNIT BY THE EQUIPMENT SUPPLIER.
9. COORDINATE CONNECTION OF REPLACEMENT SIGNAGE TO EXISTING CKT.
10. TO WALK-IN DOOR FRAME HEATER AND AIR RELIEF ASSEMBLY. J-BOX TO BE ABOVE THE UNIT AND EXTEND DOWN ALONG THE FRONT AT 9'-6" AFF TO HEATER, AIR RELIEF VALVE ASSEMBLY, AND LIGHT SWITCHES.
11. EXISTING SWITCHBANK TO BE RELOCATED TO THIS LOCATION.
12. PROVIDE SINGLE-GANG JUNCTION BOX FOR DIRECT CONNECTION OF FLY LIGHT #211C. FIELD VERIFY MOUNTING HEIGHT AND CONNECT TO CIRCUIT B-31.

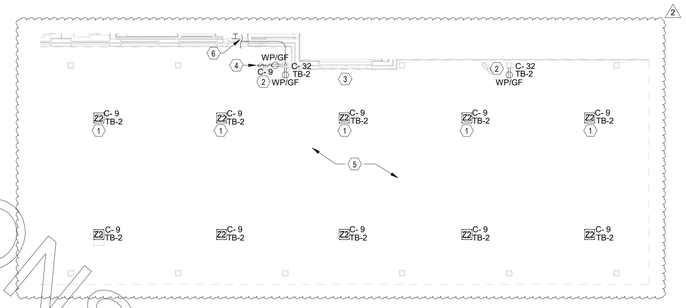


B3 LIGHTING CONTROL DIAGRAM

NO SCALE

OMD CANOPY KEYNOTES:

1. CEILING LIGHT FIXTURE PROVIDED BY THE CANOPY SUPPLIER AND INSTALLED BY ELECTRICAL CONTRACTOR.
2. AIR CIRCULATING FAN (WITH INTEGRAL ON-OFF SWITCH) PROVIDED AND INSTALLED BY MECHANICAL CONTRACTOR. PROVIDE A DUPLEX RECEPTACLE OUTLET (WITH IN-USE WP COVER PLATE) AT THE TOP OF THE COLUMN FLUSH MOUNTED IN THE CUT-OUTFOR THE FAN'S PLUG AND CORD CONNECTION.
3. SEE SHEET E-202 FOR INFORMATION RELATED TO WALL MTD ELECTRIC HEATER ABOVE DT DOOR.
4. PROVIDE ONE DUPLEX GFCI (WITH IN-USE WP COVER PLATE) AND TWO 120V SINGLE-POLE SWITCHES (EACH WITH HUBBELL #RW51550 WP COVER PLATE) MOUNTED IN THE COLUMN IN FLUSH MOUNTED METAL SINGLE-GANG BOXES FOR LOCAL ON-OFF CONTROL OF THE FANS AND CANOPY LIGHTS. SEE WIRING SCHEMATIC FOR FURTHER INFORMATION. ALL SURFACE (OR VISIBLE) ITEMS AND COVERPLATES TO BE FIELD PAINTED MATTE BLACK.
5. ALL CONDUIT AND BOXES SHALL BE CONCEALED FROM NORMAL VIEW; IN WALLS OR ABOVE THE CANOPY (ON THE ROOF). MC CABLE (GALVANIZED STEEL WITH PVC JACKET) MAY BE USED INSIDE THE WALL FOR THE DEVICES, BUT MUST CONVERT TO IMC ABOVE THE CANOPY ROOF. (PROVIDE A NEMA 3R JUNCTION BOX ON THE ROOF SIDE OF THE CANOPY TO TRANSITION FROM MC CABLES IN WALL TO IMC CONDUIT ON THE ROOF.) ALL EXPOSED BOXES AND FITTINGS TO BE CAST-METAL NEMA 3R. REFER TO THE MECHANICAL SHEETS FOR CONDUIT MOUNTING DETAILS ON THE ROOF.
6. AT EXISTING BUILDINGS STUB A 3" CHASE THRU THE EXTERIOR WALL FROM THE CEILING SPACE ABOVE THE CEILING SPACE ABOVE THE KITCHEN TO ABOVE THE CANOPY'S COLUMN FOR THE MC CABLE POWER CIRCUITS TO GO THRU THE COLUMN MOUNTED SWITCHES AND OUTLET.



B1 LIGHTING PLAN - CANOPY PLAN

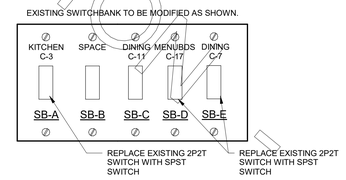
1/8" = 1'-0"

LIGHTING FIXTURE (LUMINAIRE) SCHEDULE - CHICK-FIL-A 01539

NOTE: NOT ALL FIXTURE TYPES ARE USED IN ALL OF THE P13 BUILDINGS. CONFIRM WITH THE LIGHTING VENDOR FOR ANY UPDATES TO THE CURRENT LIGHTING MANUFACTURER AND CATALOG NUMBER.

MARK	MANUFACTURER	CATALOG NUMBER	NO. LAMPS/TYPE	WATTS	VOLTS	MOUNTING	REMARKS
					120 V		
A	COOPER/METALUX	24FP644OC	INTEGRAL WITH FIXTURE	59 VA	120 V	RECESSED	2'X4' STATIC LED TROFFER RATED 7200 LUMENS, 4000K TEMP
AE	COOPER/METALUX	24FP644OC-EL14W	INTEGRAL WITH FIXTURE	59 VA	120 V	RECESSED	SAME AS 'A' WITH EMERGENCY BATTERY PACK. SEE PLAN NOTE ABOUT SWITCHING
B1	COOPER/METALUX	2VT3-LD5-4-G-120V-L840-CD1-SSL-U	INTEGRAL WITH FIXTURE	32 VA	<varies>	SURFACE	MOUNT LIGHT TO BTM OF OVERHEAD WIRE SHELVING WITH CORD & PLUG
D3	COOPER/HALO	HC620D010-HM612830-61NDC	INTEGRAL WITH FIXTURE	21 VA	120 V	RECESSED	LED DOWNLIGHT WITH CLEAR REFLECTOR & TRIM RATED 2000 LUMENS, 3000K COLOR TEMP.
D3E	COOPER/HALO	HC620D010IEM14-HM612830-61NDCIEM	INTEGRAL WITH FIXTURE	21 VA	120 V	RECESSED	SAME AS 'D3' EXCEPT WITH EMERGENCY BATTERY PACK/INTEGRAL TEST SWITCH
F	COOPER/HALO	SLDSL6069S1EMWR	INTEGRAL WITH FIXTURE	9 VA	120 V	RECESSED	SURFACE-MOUNTED LED DOWNLIGHT WITH CLEAR REFLECTOR & TRIM RATED 600 LUMENS, 3000K COLOR TEMP
G1	COOPER/METALUX	4SLSTP4040DD-UNV	INTEGRAL WITH FIXTURE	44 VA	120 V	WALL	4760 LUMEN 4 FOOT LENSED LED STRIPLIGHT, MTD ABOVE DOOR FRAME
N	MINKA	4531-267B	1-LED11A19/827/D	11 VA	120 V	COVE	MOUNT IN MENUBOARD COVE AND PROVIDE TUBE GUARDS ON LAMPS
OD1	COOPER/LUMARK	LUMINAIRE: PRV-A60D-UNV-**-SA-BZ (DISTRIBUTION TYPES TO BE DETERMINED BY THE REGIONAL TEAM SPECIFIC TO THE SITE.) POLE: SSP25-4.0-7-BRZ-DM10-BC (SINGLE LUMINAIRE)	INTEGRAL WITH FIXTURE	153 VA	120 V	POLE	COORDINATE WITH THE SPECIFIC SITE CONDITIONS FOR THE TYPE OF POLES REQUIRED, THE HEIGHT, AND THE CONFIGURATION. CONTACT VENDOR IF HIGHER THAN 100 MPH WIND LOADING REQUIRED.
OJ	PROGRESS LIGHTING	RWSC-72L-3K-UD-U-DB	2-(GE)LED12P30RW830255/ECO	24 VA	120 V	WALL	5" DIAMETER, 14" HEIGHT, WET LOCATION, UP/DOWN CYLINDER W/ 12 WATT PAR30 3K NFL LED LAMPS
OK	HUBBELL	LNC-5LU-3K-3-1	FURNISHED	13 VA	120 V	WALL	LED WALLPACK W/ CENTERLINE OF FIXTURE AT 810" ABV/0'0" (FINISH FLOOR LINE)
U	BESA LIGHTING	BES00298-060	FURNISHED	8 VA	120 V	PENDANT	RED FRIT GLASS, BRONZE CABLE & CANOPY, 6'-6" AFF
XA	COOPER/SURE-LITES	APCH7R	INTEGRAL WITH FIXTURE	4 VA	120 V	WALL	EXIT SIGN WITH BATTERY PACK AND TWO INTEGRAL ADJUSTABLE LAMPHEADS
XC	MULE LTG	MAKO-LED-ACEM-NK-IH	INTEGRAL WITH FIXTURE	13 VA	120 V	WALL	EXTERIOR WALL MOUNTED EMERGENCY LIGHTING UNIT, LOCATE NEAR EGRESS DOOR
XC	LSI	CRUS-SC-LED-LW30-UE-WHT	INTEGRAL WITH FIXTURE	74 VA	120 V	RECESSED	CANOPY LIGHT PROVIDED BY CANOPY SUPPLIER AND INSTALLED BY ELECTRICAL CONTRACTOR

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 THE ELECTRICAL SPECIFICATIONS SHEET, SECTION C16500 FOR VENDOR INFORMATION.
3. THE ASTERIK (*) BESIDE THE FIXTURE MARK IN THE ABOVE SCHEDULE INDICATES THE FIXTURE IS A NON-PROTOTYPICAL LIGHT FIXTURE PER THE CFA NATIONAL P13 PROTOTYPE.



A1 SWITCH BANK "SB" DETAIL

NO SCALE

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

Kurzynske & Associates
2705 Lebanon Pike - Suite One
Nashville, Tennessee 37214
Telephone: (615) 255-5203

STATE OF MISSOURI
MARK L. KURZYNSKE
NUMBER E-2000153901
REGISTERED PROFESSIONAL ENGINEER
8/1/2023

CHICK-FIL-A
ST. JOSEPH FSU

5303 N BELT HWY
SAINT JOSEPH, MO 64506

FSR#02309

BUILDING TYPE / SIZE: S08C-R LRG
RELEASE: v2.20.08
PRINTED FOR
CONSTRUCTION

REVISION SCHEDULE

NO.	DATE	DESCRIPTION
1	05.10.2023	City Comments
2	08.01.2023	Issue for Construction

CONSULTANT PROJECT # 22172.CD.R
DATE 01/12/2023
DRAWN BY ML

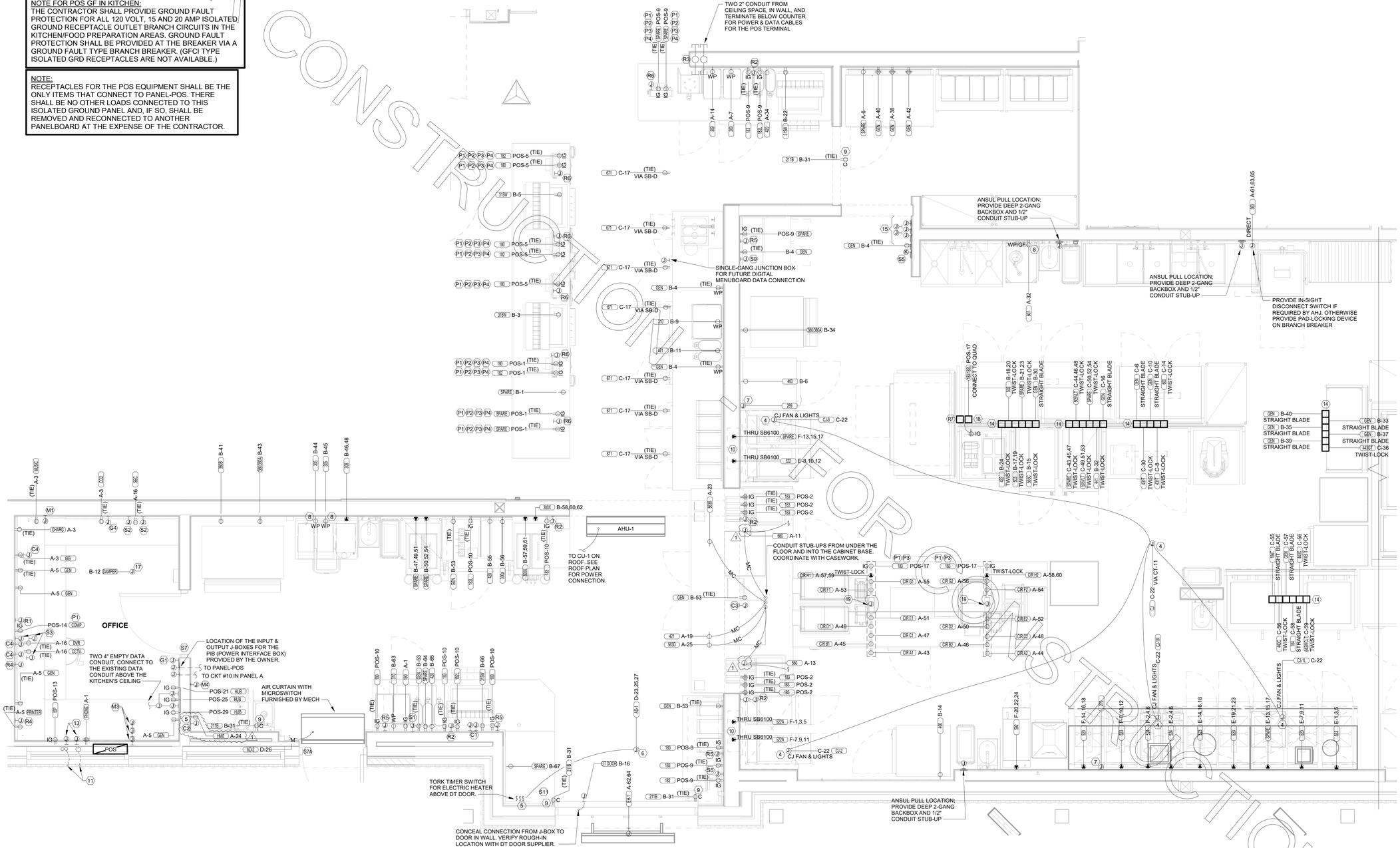
SHEET
LIGHTING PLAN

SHEET NUMBER
E-201

NOTE FOR GF TYPE RECEPTACLES IN KITCHEN/FOOD PREP AREAS:
THE CONTRACTOR SHALL PROVIDE GROUND FAULT CIRCUIT INTERUPTER PROTECTION FOR PERSONNEL FOR ALL 125V - 250V RECEPTACLES SUPPLIED BY 120V SINGLE-PHASE BRANCH CIRCUITS 50 AMPS OR LESS, 208V SINGLE-PHASE BRANCH CIRCUITS 50 AMPS OR LESS, AND 208V THREE-PHASE BRANCH CIRCUITS 100 AMPS OR LESS. SEE FLOOR PLANS FOR ADDITIONAL INFORMATION.

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

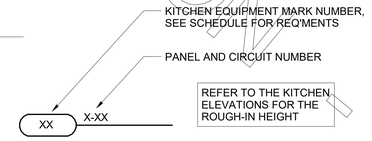
NOTE:
RECEPTACLES FOR THE POS EQUIPMENT SHALL BE THE ONLY ITEMS THAT CONNECT TO PANEL-POS. THERE SHALL BE NO OTHER LOADS CONNECTED TO THIS ISOLATED GROUND PANEL AND, IF SO, SHALL BE REMOVED AND RECONNECTED TO ANOTHER PANELBOARD AT THE EXPENSE OF THE CONTRACTOR.



B1 ENLARGED KITCHEN POWER PLAN

1/2" = 1'-0"

REFER TO SHEET E-203 FOR KEYNOTES.



A1 KITCHEN EQUIP NOMENCLATURE

NO SCALE

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

Kurzynske & Associates
2705 Lebanon Pike - Suite One
Nashville, Tennessee 37214
Telephone: (615) 255-5203

STATE OF MISSOURI
MARK L. LIGHTFOOT
NUMBER E-2000153901
REGISTERED PROFESSIONAL ENGINEER
8/1/2023

CHICK-FIL-A
ST. JOSEPH FSU

5303 N BELT HWY
SAINT JOSEPH, MO 64506

FSR#02309

BUILDING TYPE / SIZE: S08C-R ALL
RELEASE: v2.20.08
PRINTED FOR
CONSTRUCTION

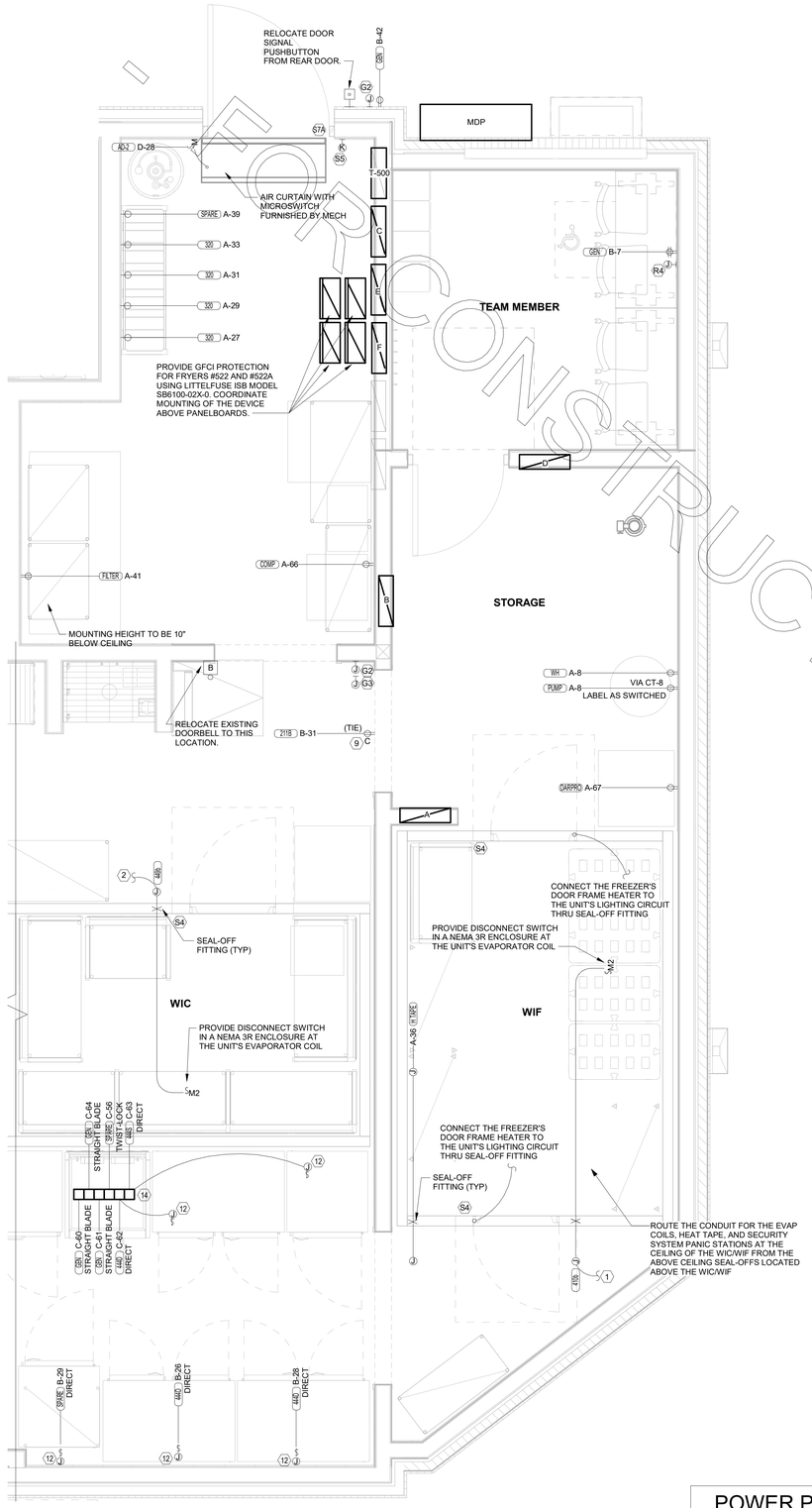
REVISION SCHEDULE

NO.	DATE	DESCRIPTION
1	05.10.2023	City Comments

CONSULTANT PROJECT # 22172.CD.R
DATE 01/12/2023
DRAWN BY ML

SHEET
ENLARGED KITCHEN POWER PLAN

SHEET NUMBER
E-202



A3 ENLARGED BOH POWER PLAN

1/2" = 1'-0"

POWER PLAN GENERAL NOTES

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

ENLARGED POWER PLAN KEYNOTES

1. CONNECT EVAPORATOR UNIT IN FREEZER TO FREEZER CONDENSING UNIT CONTROLS LOCATED ON ROOF. SEE ROOF POWER PLAN.
2. CONNECT EVAPORATOR UNIT IN COOLER TO COOLER CONDENSING UNIT CONTROLS LOCATED ON ROOF. SEE ROOF POWER PLAN.
3. NOT USED.
4. CONNECT AS REQUIRED TO CJ FAN VIA SPEED CONTROLLER. CONNECT HOMERUN VIA RELAY IN 'T-500' CONTROL PANEL.
5. PROVIDE DOUBLE GANG BOX AND DOUBLE GANG DECORA PLATE FOR SWITCHES.
6. PROVIDE A JUNCTION BOX ABOVE CEILING FOR THE AIR DOOR ABOVE THE DT SLIDING DOOR. COORDINATE WITH THE MECHANICAL DRAWINGS AND WITH THE UNIT'S SUPPLIER FOR THE ROUGH-IN REQUIREMENTS AND ANY CONTROL WIRING.
7. PROVIDE 3#12 IN 1/2" CONDUIT BETWEEN THE T-500 CONTROL PANEL AND THE ANSUL SYSTEM PANEL. SEE ANSUL SYSTEM WIRING DIAGRAM FOR ADDITIONAL INFORMATION.
8. PROVIDE GROUND-FAULT CIRCUIT INTERRUPTER (GFCI) TYPE RECEPTACLE IN COMPLIANCE WITH THE NEC REQUIREMENT FOR KITCHENS. IF NOT NOTED AS GFCI, THEN THE BREAKER IS TO BE GFCI TYPE.
9. PROVIDE DUPLEX RECEPTACLE (SEE ELEVATIONS FOR MTG HT) IN AN ARLINGTON #DVFR2W DOUBLE-GANG RECESSED BOX FOR THE FLY SYSTEM ITEMS. DO NOT CUT THE CORDSET FURNISHED WITH THE UNIT, BUT COIL THE CORD ON THE BACK OF THE UNIT AND TUCK INTO THE BACKBOX.
10. THE OUTLETS FOR THE OPEN FRYERS (ITEM #522) ARE FURNISHED BY HALTON AND INSTALLED BY THE CONTRACTOR.
11. NOT USED.
12. LOCKABLE SINGLE POLE SWITCH SHALL SERVE AS THE LOCAL "IN-SIGHT" MEANS OF DISCONNECT FOR EQUIPMENT ITEM AS NOTED. THE SWITCH SHALL BE COOPER #S2983 AND INSTALLED PER THE DETAILS ON SHEET E-204.
13. NOT USED.
14. OVERHEAD EQUIPMENT POWER (OEP) DROP CORD RECEPTACLES FROM A FLUSH MOUNTED CEILING OEP BOX (MAXIMUM OF SIX PER ASSEMBLY.) PROVIDE A-C-S OEP ASSEMBLY #12360-1000. ASSEMBLY WILL CONSIST OF A FLUSH CEILING OUTLET BOX, TWIST-LOCK PENDANT RECEPTACLES, STRAIGHT BLADE PENDANT RECEPTACLES, CORDS, STRAIN RELIEF, AND TWISTLOCK PLUGS AS NOTED ON PLAN. CONTACT BRIDGID DEFRAMCESHI EMAIL: BRIDGID1985@GMAIL.COM (800-639-7584) TO PURCHASE OEP BOX AND DROP CORD/RECEPTACLES. PROVIDE LIQUID-TIGHT CONDUIT WITH CONDUCTORS FOR DIRECT CONNECTED EQUIPMENT. CONDUIT SHALL NOT TOUCH THE FLOOR WHEN EQUIPMENT IS IN PLACE. USE SUPPORT GRIPS W/ SUPPORT HOOK ATTACHED TO SHELVING ABOVE AS NEEDED. PASS & SEYMOUR MODEL #FS075-U-GH5 OR EQUIVALENT.
15. PROVIDE FIVE 2-GANG DEEP BOXES (2" MIN.) FOR INSTALLATION OF DUCT DETECTOR REMOTE ANNUNCIATORS BY MECHANICAL. THE DUCT SMOKE REMOTE ANNUNCIATORS ARE PROVIDED TO THE ELECTRICIAN WITH THE SUNCOAST ELECTRONICS PACKAGE OF GEAR AND CONTROLS. EXTEND 1/2" CONDUIT FROM EACH BOX AND STUB ABOVE CEILING.
16. RELOCATE EXISTING POWER AND CABLE CONNECTIONS FOR THE WIRELESS COMM (HME) SYSTEM TO THIS LOCATION (FIELD VERIFY). SEE HME UNIT'S DETAIL ON SHEET E-101.
17. PROVIDE A 120V CONNECTION TO THE 50VA MOTORIZED DAMPER IN THE DUCTWORK SERVING THE SERVICE AREA. COORDINATE WITH MECHANICAL CONTRACTOR.
18. PROVIDE A DOUBLE-GANG BOX FLUSH MOUNTED IN THE CEILING WITH A BLANK PLATE WITH HOLE FOR A DROP CORD. PROVIDE THE #12 DROP CORD (WITH STRAIN RELIEF AT THE OUTLET BACK BOX) AND CONNECT THE CORD TO AN OUTLET BOX CONTAINING TWO 15 AMP IG (ORANGE) RECEPTACLE OUTLETS. OUTLET BOX TO BE MOUNTED TO THE OVERHEAD SHELVING AT THE PRINTER AND MONITOR MOUNTING BRACKET.
19. PRE-WIRED CEILING J-BOX FLUSH IN THE CEILING WITH FLEX CONDUITS FROM BOX TO THE UTILITY CHASE FURNISHED WITH THE ML TABLE. COORDINATE WITH THE EQUIP SUPPLIER FOR ROUGH-IN AND FINAL LOCATIONS. (TYPICAL OF TWO)

COMMUNICATIONS KEYNOTES

- C1 PROVIDE TWO RETROFIT STYLE DOUBLE-GANG RINGS (CARLON #SC200RR) WITH STAINLESS STEEL COVER PLATE AND HOLE IN PLATE FOR AUDIO, DETECTOR LOOP, AND DIGITAL MENUBOARD CABLES. EACH WITH A 2" CONDUIT UNDERGROUND TO THE DT DUAL-LANE (MLOP) ORDERING AREA AND A 2" CONDUIT STUBBED UP INTO THE CEILING SPACE.
- C2 PROVIDE JUNCTION BOX, LESS COVER PLATE, AND EXTEND 3/4" E.C. UP IN WALL TO ABOVE CEILING FOR INSTALLATION OF WIRELESS COMMUNICATION CONTROL UNIT.
- C3 PROVIDE SINGLE-GANG JUNCTION BOX ABOVE THE PASS THRU OPENING WITH A 1" EMPTY CONDUIT STUBBED UP INTO THE ACCESSIBLE CEILING SPACE FOR OWNER'S TV CABLES.
- C4 PROVIDE SINGLE-GANG JUNCTION BOX WITH A 1" EMPTY CONDUIT STUBBED UP INTO THE ACCESSIBLE CEILING SPACE FOR OWNER'S VOIP PHONE JACK AND CABLES.

POS POWER KEYNOTES

- 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 ISOLATED GROUND. EACH 15 AMP 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.

SECURITY KEYNOTES

- S1 PROVIDE SINGLE-GANG JUNCTION BOX AND STAINLESS STEEL COVER PLATE WITH 7/8" COVER PLATE WITH 7/8" HOLE IN CENTER. EXTEND 1" E.C. UP IN WALL TO ABOVE ACCESSIBLE CEILING.
- S2 PROVIDE 4"W X 4"H X 3"D FLUSH JUNCTION BOX WITHOUT COVERPLATE. EXTEND 2" RIGID CONDUIT UP TO ABOVE ACCESSIBLE OFFICE CEILING AREA AND PROVIDE BUSHING ON CONDUIT END.
- S3 PROVIDE A 4"W X 4"H X 3"D FLUSH JUNCTION BOX WITHOUT COVERPLATE AND EXTEND A 2" CONDUIT DOWN AND BELOW GRADE TO EACH OF THE SITE'S POLE MOUNTED CAMERA LOCATIONS (SEE ELECTRICAL SIT EPLAN FOR CONTINUATION) AND A 2" CONDUIT UP INTO THE ACCESSIBLE CEILING SPACE WITH A BUSHING ON THE CONDUIT END. PROVIDE A SINGLE-GANG JUNCTION BOX ADJACENT TO THE DOUBLE-GANG BOX WITH A 1.5" CONDUIT DOWN TO A SECOND SINGLE-GANG JUNCTION BOX AT THE CCTV MONITOR LOCATION.
- S4 PROVIDE TWO GANG WEATHERPROOF JUNCTION BOX AND STAINLESS STEEL PLATE WITH 7/8" HOLE IN CENTER FOR PANIC BUTTON. MOUNT AT 48" AFF. EXTEND 1/2" RIGID CONDUIT UP TO ABOVE ACCESSIBLE CEILING WITH CONDUIT SEAL FITTING. SEAL CONDUIT PENETRATION AT WIC/WIF CEILING.
- S5 PROVIDE SINGLE GANG BOX WITHOUT COVER PLATE. EXTEND 1/2" CONDUIT UP IN WALL TO ABOVE ACCESSIBLE CEILING AND TURN TOWARD SERVING AREA SIDE OF WALL.
- S6 PROVIDE SINGLE GANG BOX ON INSIDE FACE OF PARAPET WALL APPROX. 12" BELOW TOP OF PARAPET WALL. EXTEND 1/2" CONDUIT DOWN TO ABOVE ACCESSIBLE OFFICE CEILING.
- S7 EXTEND 1/2" RIGID CONDUIT FROM TOP OF STRIKE-SIDE DOOR FRAME CHANNEL TO ABOVE ACCESSIBLE CEILING.
- S7A EXTEND 1/2" RIGID CONDUIT FROM TOP OF STRIKE-SIDE DOOR FRAME CHANNEL TO ABOVE ACCESSIBLE CEILING.
- S8 EXTEND 1/2" RIGID CONDUIT FROM A POINT 3" WITHIN EITHER HINGE-SIDE DOOR VERTICAL FRAME MULLION TO ABOVE ACCESSIBLE CEILING.
- S9 PROVIDE SINGLE GANG BOX WITHOUT COVER PLATE. EXTEND 1/2" CONDUIT UP IN WALL TO ABOVE ACCESSIBLE CEILING AND TURN TOWARD SERVING AREA SIDE OF WALL.
- S10 PROVIDE SINGLE GANG, WEATHER PROOF JUNCTION BOX WITH STAINLESS STEEL COVER PLATE MOUNTED 18" FROM THE CORNER OF THE SERVICE YARD AND JUST BELOW ROOF DECK MOUNTING BRACKERS. ROUTE 1" EMT CONDUIT FROM THE BOX SURFACE MOUNTED JUST BELOW THE ROOF DECK MOUNTING BRACKETS AND TERMINATE THE CONDUIT AT S12 .
- S11 EXTEND 1/2" RIGID CONDUIT FROM A POINT 3" WITHIN STRIKE-SIDE WINDOW FRAME MULLION TO ABOVE ACCESSIBLE CEILING.
- S12 PROVIDE SINGLE GANG, WEATHER-PROOF JUNCTION BOX WITH STAINLESS STEEL COVER PLATE MOUNTED JUST ABOVE THE STRIKE SIDE OF OUTSIDE DOOR ON INSIDE OF SERVICE YARD. ROUTE 1" EMT CONDUIT SURFACE MOUNTED FROM BOX JUST BELOW THE ROOF DECK MOUNTING BRACKETS. TERMINATE CONDUIT IN THE ACCESSIBLE CEILING SPACE INSIDE THE BUILDING.

MUSIC KEYNOTES

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

POS DATA KEYNOTES

- R1 PROVIDE A 'RETROFIT' DOUBLE-GANG RING (CARLON #SC200RR) FOR OWNER'S DEVICE PLATE WITH A 3" EMPTY CONDUIT AT THE OPENING STUBBED UP INTO THE CEILING SPACE FOR OWNER'S DATA CABLES.
- R2 PROVIDE JUNCTION BOX FOR TERMINATION OF 1" CONDUIT. PROVIDE 1" CONDUIT EXTENDING FROM CEILING AND TERMINATED AT JUNCTION BOX ON THE SERVING AREA SIDE OF THE WALL. COVER PLATE PROVIDED BY OWNER'S POS SYSTEM VENDOR.
- R3 PROVIDE A 2" CONDUIT FROM FACE OF WALL AND EXTEND CONDUIT TO JUNCTION BOX IN CEILING SPACE ABOVE SERVING AREA. CONDUIT SHALL TERMINATE FLUSH WITH FACE OF WALL BELOW COUNTER. CUSTOM STAINLESS STEEL COVER PLATE IN WALL WITH GROMMET ON 2" DIAMETER HOLE AT CONDUIT TERMINATION IN WALL.
- R4 PROVIDE A 'RETROFIT' SINGLE GANG RING (CARLON #SC100RR) FOR OWNER'S DEVICE PLATE WITH A 2" EMPTY CONDUIT AT THE OPENING STUBBED UP INTO THE CEILING SPACE FOR OWNER'S DATA CABLES.
- R5 PROVIDE JUNCTION BOX FOR TERMINATION OF 1" CONDUIT. PROVIDE 1" CONDUIT EXTENDING FROM CEILING AND TERMINATED AT JUNCTION BOX ON THE SERVING AREA SIDE OF THE WALL. POS SYSTEM SUPPLIER WILL PROVIDE COVER PLATE ON BOX.
- 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 180. DO NOT MOUNT BOX BETWEEN EQUIPMENT AND EQUIPMENT 182 RECEPTACLES.
- R7 PROVIDE A SINGLE-GANG BOX FLUSH MOUNTED IN THE CEILING FOR THE POS DATA PLATE. (BY OTHERS) FOR THE SALAD PREP AREA POS MONITOR AND PRINTER.

CO2 DETECTOR KEYNOTES

- G1 CO2 CENTRAL CONTROL UNIT - PROVIDE SINGLE-GANG BACKBOX AT 60" AFF WITH 3/4" CONDUIT STUBBED ABOVE ACCESSIBLE CEILING SPACE.
- G2 CO2 ANNUNCIATOR UNIT - PROVIDE SINGLE-GANG BACKBOX AT 60" AFF WITH 3/4" CONDUIT STUBBED ABOVE ACCESSIBLE CEILING SPACE.
- G3 CO2 SENSOR UNIT - PROVIDE SINGLE-GANG BACKBOX AT 12" AFF WITH 3/4" CONDUIT STUBBED ABOVE ACCESSIBLE CEILING SPACE.
- G4 CO2 POWER SUPPLY - PROVIDE SINGLE-GANG BACKBOX AT 18" BELOW CEILING WITH 3/4" CONDUIT STUBBED ABOVE ACCESSIBLE CEILING SPACE. PROVIDE A DUPLEX OUTLET, AND CONNECT TO A LOCAL GENERAL OUTLET CIRCUIT. FIELD VERIFY EXACT LOCATION WITH STRONG SYSTEMS 800-500-5566.

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

Kurzynske & Associates
2705 Lebanon Pike - Suite One
Nashville, Tennessee 37214
Telephone: (615) 255-5203

STATE OF MISSOURI
MARK L. LIGHTFOOT
NUMBER E-2000153901
REGISTERED PROFESSIONAL ENGINEER

8/1/2023

CHICK-FIL-A
ST. JOSEPH FSU

5303 N BELT HWY
SAINT JOSEPH, MO 64506

FSR#02309

BUILDING TYPE / SIZE: S08C-R ALL
RELEASE: v2.20.08
PRINTED FOR **CONSTRUCTION**

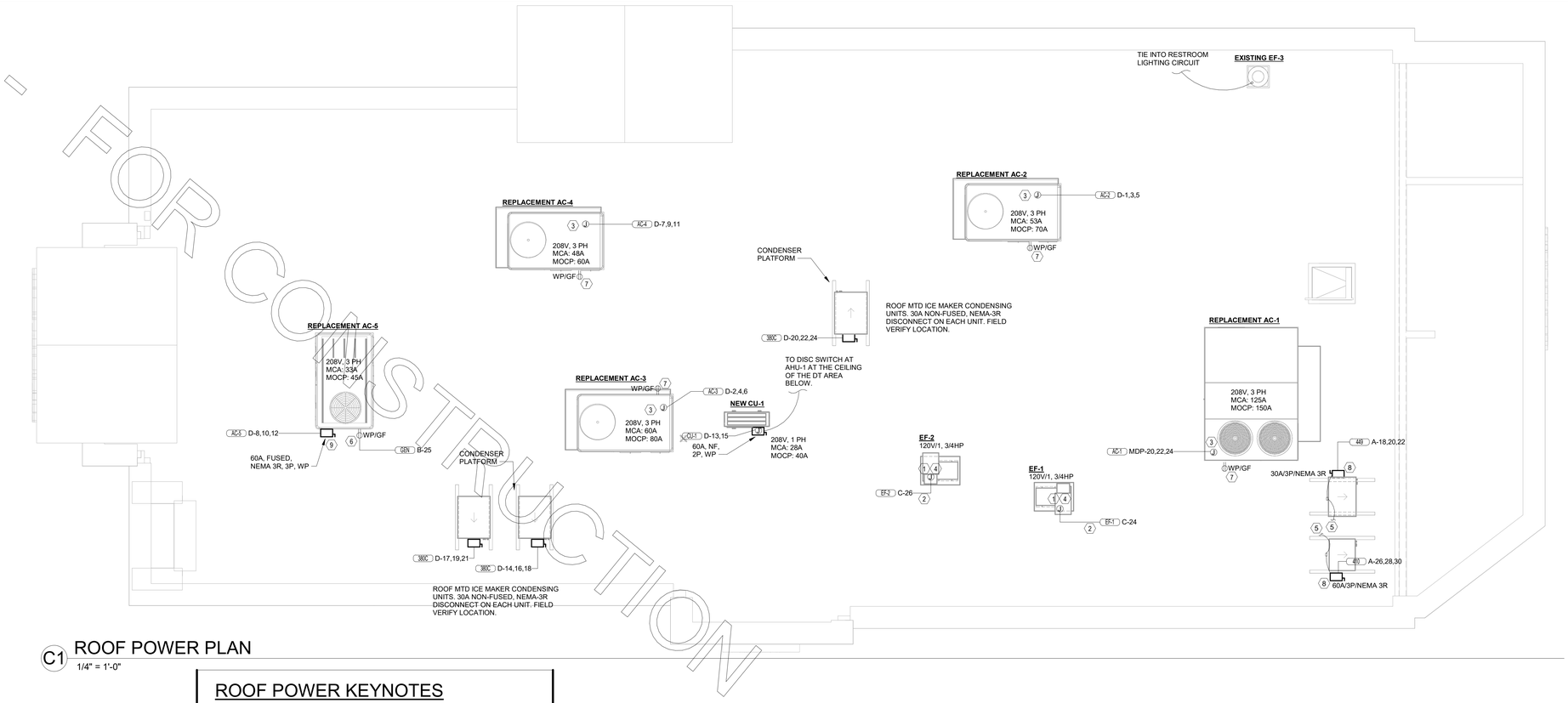
REVISION SCHEDULE

NO.	DATE	DESCRIPTION

CONSULTANT PROJECT #	22172.CD.R
DATE	01/12/2023
DRAWN BY	ML

SHEET
ENLARGED BOH POWER PLAN

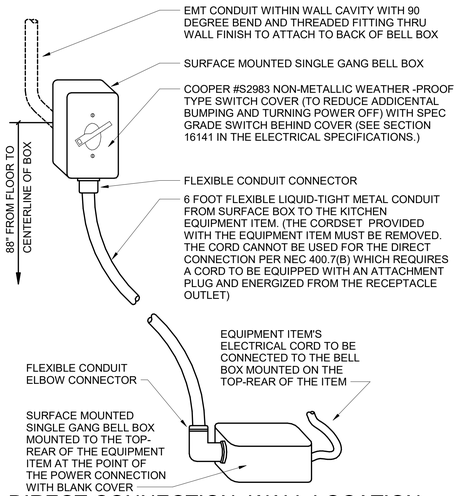
SHEET NUMBER
E-203



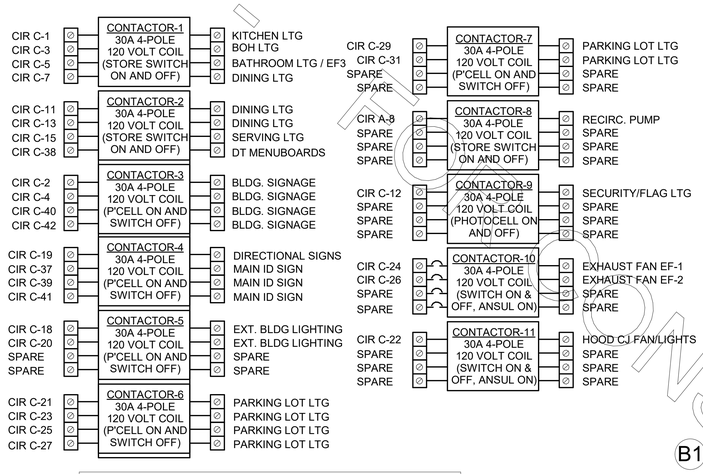
C1 ROOF POWER PLAN
1/4" = 1'-0"

ROOF POWER KEYNOTES

1. CONNECT EF#1 AND EF#2 THRU THE CFA-T500 CONTROL PANEL.
2. COORDINATE EXACT LOCATION OF CONDUIT AND DISCONNECT AT EXHAUST FAN. CONDUIT SHALL BE INSTALLED THROUGH ROOF ON OUTSIDE OF FAN CURB. CONDUIT SHALL BE LOCATED AT FAN HINGE SUCH THAT THE FAN HOOD CAN BE FULLY HINGED OPEN AND NOT TOUCH THE CONDUIT. PROVIDE 14" DIAMETER LOOP IN THE FLEXIBLE CONDUIT BETWEEN THE ROOF AND THE FAN ELECTRICAL CONNECTION.
3. A/C UNIT DISCONNECT IS FURNISHED WITH A/C UNIT AND SHALL BE CONNECTED BY THE CONTRACTOR.
4. EXHAUST FAN DISCONNECT IS FURNISHED WITH THE FAN AND SHALL BE CONNECTED BY THE CONTRACTOR.
5. CONNECT POWER FROM EACH CONDENSING UNIT'S COMPRESSOR CONTACTOR TO THE EVAPORATOR COIL UNIT'S JUNCTION BOX BELOW. REFER TO E-202 & E-203 FOR LOCATION.
6. CONVENIENCE OUTLET SUPPLIED WITH UNIT. PROVIDE POWER AS SHOWN.
7. CONVENIENCE OUTLET SUPPLIED WITH UNIT AND UNIT POWERED.
8. MOUNT DISCONNECT SWITCHES FOR WIC AND WIF CONDENSERS ON UNISTRUT WITH CONDUIT DOWN INTO CEILING SPACE BELOW THRU ROOF PENETRATION DEVICE (NOT THRU ROOF). PROVIDE FUSE SIZE PER MANUFACTURER REQUIREMENTS).
9. CONTRACTOR TO PROVIDE AND INSTALL A/C UNIT FUSED DISCONNECT WITH CLASS 'J' DUAL-ELEMENT, CURRENT-LIMITING, TIME-DELAY FUSES.

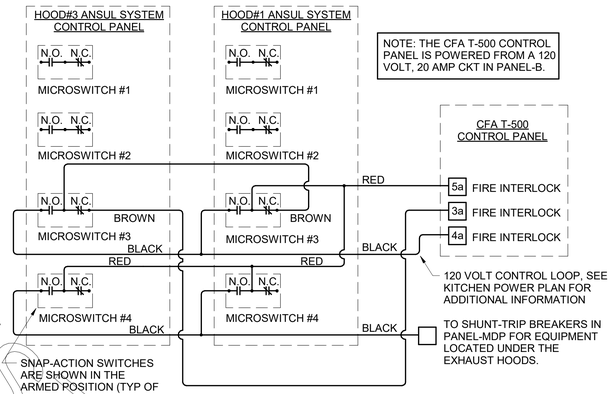


A4 DIRECT CONNECTION -WALL LOCATION
NO SCALE

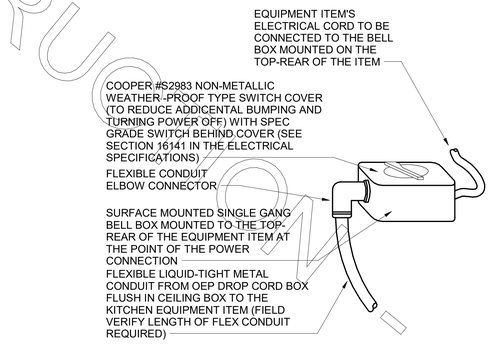


NOTES:
1) VERIFY WITH SUNCOAST ENVIRONMENTAL CONTROLS' SHOP DRAWINGS.
2) ONLY THE 'HOT' CONDUCTOR OF EACH CIRCUIT SHALL BE RUN THRU THE CONTACTOR.
3) ANY TAPS OR WIRING CONNECTIONS OTHER THAN TO THE TERMINALS SHALL BE DONE IN A JUNCTION BOX OUTSIDE OF THIS CABINET.
4) VERIFY WITH THE LOCAL CODE IF CONTACTORS #10 AND #11 WILL BE ON OR OFF WHEN THE ANSUL SYSTEM IS INITIATED.

A2 CFA-T500 CONTROL PANEL DIAGRAM
NO SCALE



B1 ANSUL SYSTEM PANEL WIRING DIAGRAM
NO SCALE



A1 DIRECT CONNECTION - ISLAND LOCATION
NO SCALE

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

Kurzynske & Associates
2705 Lebanon Pike - Suite One
Nashville, Tennessee 37214
Telephone: (615) 255-5203

STATE OF MISSOURI
MARK L. LEWIS
NUMBER E-2000153901
REGISTERED PROFESSIONAL ENGINEER
8/1/2023

CHICK-FIL-A
ST. JOSEPH FSU
5303 N BELT HWY
SAINT JOSEPH, MO 64506

FSR#02309

BUILDING TYPE / SIZE: S08C-R LRG
RELEASE: v2.20.08
PRINTED FOR
CONSTRUCTION

REVISION SCHEDULE

NO.	DATE	DESCRIPTION

CONSULTANT PROJECT # 22172.CD.R
DATE 01/12/2023
DRAWN BY ML

SHEET
ROOF POWER PLAN

SHEET NUMBER
E-204

COM*check* Software Version 4.1.5.1

Interior Lighting Compliance Certificate

Project Information

Energy Code:	2018 IECC
Project Title:	Chick-fil-A #2309
Project Type:	Addition

Construction Site:
5303 N Belt Hwy
Saint Joseph, MO 64506

Owner/Agent:
Chick-fil-A
5200 Buffington Road
Atlanta, GA 30349

Designer/Contractor:
Kurzynske & Associates
2705 Lebanon Pike - Suite One
Nashville, TN 37214
615-255-5203

Allowed Interior Lighting Power

A Area Category	B Floor Area (ft2)	C Allowed Watts / ft2	D Allowed Watts (B X C)
1-Kitchen (Common Space Types:Food Preparation)	1822	1.06	1931
2-Office (Common Space Types:Office - Enclosed)	104	0.93	97
3-Storage (Common Space Types:Storage)	286	0.63	180
4-Restrooms (Common Space Types:Restrooms)	220	0.85	187
5-Dining (Common Space Types:Dining Area - Family Restaurant)	1663	0.71	1181
6-Common Space Types:Conference/Meeting/Multipurpose	105	1.07	112
		Total Allowed Watts =	3688

Proposed Interior Lighting Power

A Fixture ID : Description / Lamp / Wattage Per Lamp / Ballast	B Lamps/ Fixture	C # of Fixtures	D Fixture Watt.	E (C X D)
1-Kitchen (Common Space Types:Food Preparation)				
LED: A/AE: 2x4 Troffer: Other:	1	25	59	1485
LED: B1: Task Light: Other:	1	4	35	140
LED: F: LED Egg Light: Other:	1	4	12	48
LED: D3/D3E: LED Downlight: Other:	1	13	21	274
2-Office (Common Space Types:Office - Enclosed)				
LED: A/AE: 2x4 Troffer: Other:	1	2	59	119
3-Storage (Common Space Types:Storage)				
LED: A/AE: 2x4 Troffer: Other:	1	5	59	297
4-Restrooms (Common Space Types:Restrooms)				
LED: D3/D3E: LED Downlight: Other:	1	4	21	84
LED: N: Vanity: Other:	1	2	11	22
5-Dining (Common Space Types:Dining Area - Family Restaurant)				
LED: D3/D3E: LED Downlight: Other:	1	41	21	865
6-Common Space Types:Conference/Meeting/Multipurpose				
LED: D3/D3E: LED Downlight: Other:	1	2	21	42
			Total Proposed Watts =	3377

Interior Lighting PASSES: Design 8% better than code

Interior Lighting Compliance Statement

Compliance Statement: The proposed interior lighting design represented in this document is consistent with the building plans, specifications, and other calculations submitted with this permit application. The proposed interior lighting systems have been designed to meet the 2018 IECC requirements in COM*check* Version 4.1.5.1 and to comply with any applicable mandatory requirements listed in the Inspection Checklist.

Mark Kurzynske - PE
Name - Title

Signature

Date

COM*check* Software Version 4.1.5.1

Exterior Lighting Compliance Certificate

Project Information

Energy Code:	2018 IECC
Project Title:	Chick-fil-A #2309
Project Type:	Addition
Exterior Lighting Zone	2 (Neighborhood business district)

Construction Site:
5303 N Belt Hwy
Saint Joseph, MO 64506

Owner/Agent:
Chick-fil-A
5200 Buffington Road
Atlanta, GA 30349

Designer/Contractor:
Kurzynske & Associates
2705 Lebanon Pike - Suite One
Nashville, TN 37214
615-255-5203

Allowed Exterior Lighting Power

A Area/Surface Category	B Quantity	C Allowed Watts / Unit	D Tradable Wattage	E Allowed Watts (B X C)
Illuminated area of facade wall or surface	3300 ft2	0.07	No	248
Pedestrian and vehicular entrances and exits	4 ft of door	14	Yes	56
Parking area	25059 ft2	0.04	Yes	1002
			Total Tradable Watts (a) =	1058
			Total Allowed Watts =	1306
			Total Allowed Supplemental Watts (b) =	400

(a) Wattage tradeoffs are only allowed between tradable areas/surfaces.
(b) A supplemental allowance equal to 400 watts may be applied toward compliance of both non-tradable and tradable areas/surfaces.

Proposed Exterior Lighting Power

A Fixture ID : Description / Lamp / Wattage Per Lamp / Ballast	B Lamps/ Fixture	C # of Fixtures	D Fixture Watt.	E (C X D)
Illuminated area of facade wall or surface (3300 ft2): Non-tradable Wattage				
LED: OJ: Wall Sconce: Other:	1	22	25	550
Pedestrian and vehicular entrances and exits (4 ft of door width): Tradable Wattage				
LED: OK: Wall Pack: Other:	1	1	13	13
Parking area (25059 ft2): Tradable Wattage				
LED: OD: LED Site Light: Other:	2	7	153	1071
			Total Tradable Proposed Watts =	1084

Exterior Lighting PASSES: Design 6% better than code

Exterior Lighting Compliance Statement

Compliance Statement: The proposed exterior lighting design represented in this document is consistent with the building plans, specifications, and other calculations submitted with this permit application. The proposed exterior lighting systems have been designed to meet the 2018 IECC requirements in COM*check* Version 4.1.5.1 and to comply with any applicable mandatory requirements listed in the Inspection Checklist.

Mark Kurzynske - PE
Name - Title

Signature

Date

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

Kurzynske
& Associates
2705 Lebanon Pike - Suite One
Nashville, Tennessee 37214
Telephone: (615) 255-5203

STATE OF MISSOURI
MARK T. KURZYNSKE
E-2000153901
REGISTERED PROFESSIONAL ENGINEER
8/1/2023

CHICK-FIL-A
ST. JOSEPH FSU

5303 N BELT HWY
SAINT JOSEPH, MO 64506

FSR#02309

BUILDING TYPE / SIZE: S08C-R ALL
RELEASE: v2.20.08
PRINTED FOR
CONSTRUCTION

REVISION SCHEDULE

NO.	DATE	DESCRIPTION

CONSULTANT PROJECT # 22172.CD.R
DATE 01/12/2023
DRAWN BY ML

SHEET
LIGHTING COMCHECK

SHEET NUMBER
E-501

Branch Panel: A

LOCATION:
SUPPLY FROM: MDP
MOUNTING: FLUSH
ENCLOSURE: NEMA 1

VOLTS: 120/208 Wye
PHASES: 3
WIRES: 4

A.I.C. SERIES RATING: 65K/10K
MAINS TYPE: MLO
MAINS RATING: 250 A
MCB RATING:

NT	CKT	LOAD DESCRIPTION	TRIP	POLE	A		B		C		POLE	TRIP	LOAD DESCRIPTION	CKT	NT
	1	TELEPHONE DT VIDEO (190)	20 A	1	0.240	0.000					1	20 A	SPARE	2	
	3	OFFICE OUTLETS	20 A	1			0.720	0.000			1	20 A	SPARE	4	
	5	OFFICE OUTLETS	20 A	1					0.790	0.564	1	20 A	SPARE WORKTOP REFRIG (432)	6	A
A	7	SINGLE JUICE DISPENSER (309)	20 A	1	0.432	0.724					1	20 A	WATER HEATER/PUMP	8	
	9	SPARE	20 A	1			0.000	2.116			1	20 A	PANEL-POS THRU PIB	10	
A	11	FRY HOLDING STATION (560)	20 A	1					1.840	0.180	1	20 A	PLAY AREA OUTLET	12	
A	13	FRY HOLDING STATION (560)	20 A	1	1.840	0.432					1	20 A	SINGLE JUICE DISPENSER (309)	14	A
	15	SPARE	20 A	1			0.000	0.540			1	20 A	SECURITY SYSTEM	16	LO
	17	SPARE	20 A	1					0.000	0.749	3	15 A	COOLER CONDENSER / EVAP COIL (449)	18	LO
A	19	U.C. REFRIG (421)	20 A	1	0.756	0.749					--	--	--	20	
LO	21	FIRE ALARM PANEL	20 A	1			0.500	0.690			--	--	--	22	
A	23	SINGLE SANDWICH SLIDE (563S)	20 A	1					0.548	0.180	1	20 A	HME OUTLET	24	A
A	25	DOUBLE SANDWICH SLIDE (563D)	20 A	1	1.090	1.752					3	30 A	FREEZER CONDENSER / EVAP COIL (410)	26	LO
	27	CARBONATOR (320)	20 A	1			0.744	1.908			--	--	--	28	
	29	CARBONATOR (320)	20 A	1					0.744	1.908	--	--	--	30	
	31	CARBONATOR (320)	20 A	1	0.744	0.180					1	20 A	LEMON JUICER (607)	32	
	33	CARBONATOR (320)	20 A	1			0.744	0.564			1	20 A	U.C. REFRIG (420)	34	A
	35	BOOSTER PUMP	20 A	2					1.440	0.500	1	20 A	FREEZER HEAT TAPE	36	B
	37	--	--	--	1.440	0.180					1	20 A	GEN OUTLET	38	A
	39	SPARE CARBONATOR (320)	20 A	1			0.744	0.180			1	20 A	GEN OUTLET	40	A
	41	WATER FILTER	20 A	1					0.180	0.180	1	20 A	GEN OUTLET	42	A
A	43	CIRCUIT A - ML TABLE	20 A	1	1.920	1.800					1	20 A	CIRCUIT A - ML TABLE	44	A
A	45	CIRCUIT B - ML TABLE	20 A	1			1.800	0.660			1	20 A	CIRCUIT B - ML TABLE	46	A
A	47	CIRCUIT C - ML TABLE	20 A	1					0.180	0.180	1	20 A	CIRCUIT C - ML TABLE	48	A
A	49	CIRCUIT D - ML TABLE	20 A	1	0.180	1.920					1	20 A	CIRCUIT D - ML TABLE	50	A
A	51	CIRCUIT E - ML TABLE	20 A	1			0.564	0.564			1	20 A	CIRCUIT E - ML TABLE	52	A
A	53	CIRCUIT F - ML TABLE	20 A	1					0.180	0.660	1	20 A	CIRCUIT F - ML TABLE	54	A
A	55	CIRCUIT G - ML TABLE	20 A	1	0.660	0.800					1	20 A	CIRCUIT G - ML TABLE	56	A
A	57	CIRCUIT H - ML TABLE	30 A	2			2.496	2.496			2	30 A	CIRCUIT H - ML TABLE	58	A
	59	--	--	--					2.496	2.496	--	--	--	60	
D	61	DISHWASHER (363)	60 A	3	5.880	3.000					2	40 A	OMD CANOPY ELECTRIC HTR (EH-1)	62	
	63	--	--	--			5.880	3.000			--	--	--	64	
	65	--	--	--					5.880	1.920	1	20 A	AIR COMPRESSOR	66	
	67	DARPRO OUTLET	20 A	1	0.180	0.000					1	20 A	SPARE	68	
	69	SPARE	20 A	1			0.000	0.000			1	20 A	SPARE	70	
	71	SPARE	20 A	1					0.000	0.000	1	20 A	SPARE	72	
			Total Load:		26.90 kVA		26.91 kVA		23.80 kVA						
			Total Amps:		228.1 A		228.2 A		198.3 A						

Load Classification	Connected Load	Demand Factor	Estimated Demand	Panel Totals
HEAT	500 VA	100.00%	500 VA	
HVAC	6000 VA	100.00%	6000 VA	**Total Conn. Load:** 77.6 kVA
KITCHEN EQUIPMENT	48646 VA	65.00%	31620 VA	**Total Est. Demand:** 57.5 kVA
KITCHEN REFRIG EQUIPMENT	10768 VA	65.00%	6999 VA	**Total Conn.:** 215.4 A
MISCELLANEOUS	2866 VA	100.00%	2866 VA	**Total Est. Demand:** 159.7 A
Motor	5524 VA	113.03%	6244 VA	
RECEPTACLES	3300 VA	100.00%	3300 VA	

Branch Panel: B

LOCATION:
SUPPLY FROM: MDP
MOUNTING: FLUSH
ENCLOSURE: NEMA 1

VOLTS: 120/208 Wye
PHASES: 3
WIRES: 4

A.I.C. SERIES RATING: 65K/10K
MAINS TYPE: MLO
MAINS RATING: 250 A
MCB RATING:

NT	CKT	LOAD DESCRIPTION	TRIP	POLE	A		B		C		POLE	TRIP	LOAD DESCRIPTION	CKT	NT
A	1	SPARE FOR LEMONADE BUBBLER (310)	20 A	1	0.943	0.230					1	30 A	REFUSE ENCLOSURE	2	
	3	DRINK TOWER (315W)	20 A	1			1.200	0.720			1	20 A	GEN OUTLETS	4	A
	5	DRINK TOWER (315W)	20 A	1					1.200	1.128	1	20 A	SINGLE REACH-IN FREEZER (400)	6	A
	7	TRAINING OUTLET	20 A	1	0.180	0.000					1	20 A	SPARE	8	
A	9	DOUBLE LEMONADE BUBBLER (310)	20 A	1			0.943	0.000			1	20 A	SPARE	10	
A	11	U.C. REFRIGERATOR (420)	20 A	1					0.564	0.050	1	20 A	DAMPER XFMR	12	LO
	13	SPARE	20 A	1	0.000	1.128					1	20 A	SINGLE REACH-IN FREEZER (400)	14	A
A	15	FOOD WARMER (565C)	20 A	1			1.200	0.500			1	20 A	DT DOOR	16	
A	17	EGG STATION (503)	20 A	2					1.300	1.300	2	20 A	SPARE/FUTURE EGG STATION (503)	18	A
	19	--	--	--	1.300	1.300					--	--	--	20	
A	21	EGG STATION (503)	20 A	2			1.300	1.200			1	20 A	DRINK TOWER (315W)	22	
	23	--	--	--					1.300	0.804	1	15 A	SINGLE REFRIG (422)	24	A
	25	ROOF RECEPTACLES	20 A	1	0.180	1.960					1	20 A	THAWING CABINET (444)	26	
	27	DINING OUTLETS	20 A	1			0.720	1.960			1	20 A	THAWING CABINET (444)	28	
	29	THAWING CABINET (444)	20 A	1					1.920	0.180	1	20 A	DROP CORD OUTLET	30	A
A	31	FLY LIGHT SYSTEM (211B,C)	20 A	1	0.240	1.080					1	15 A	SALAD PREP TABLE (441)	32	A
A	33	DROP CORD OUTLET	20 A	1			0.180	0.610			1	15 A	INTERIOR ICE MAKER (380,380A)	34	A
A	35	DROP CORD OUTLET	20 A	1					0.180	0.360	1	20 A	T-500/SHUNT TRIP (269,270)	36	
A	37	DROP CORD OUTLET	20 A	1	0.180	0.032					1	20 A	DROP CORD OUTLET	38	A
A	39	DROP CORD OUTLET	20 A	1			0.180	0.180			1	20 A	DROP CORD OUTLET	40	A
A	41	INTERIOR ICE MAKER (380)	15 A	1					0.600	0.900	1	20 A	GENERAL OUTLETS/DOORBELL	42	
A	43	INTERIOR ICE MAKER (380,380A)	15 A	1	0.610	1.650					1	20 A	TEA BREWER (305)	44	
	45	TEA BREWER (305)	20 A	1			1.650	2.000			2	30 A	COFFEE MAKER (308)	46	A
A	47	SPARE FOR ICE DREAM (300X)	20 A	3					1.800	2.000	--	--	--	48	
	49	--	--	--	1.800	2.280					3	30 A	SPARE FOR ICE DREAM (300X)	50	A
	51	--	--	--			1.800	2.280			--	--	--	52	
A	53	GENERAL OUTLETS	20 A	1					0.720	2.280	--	--	--	54	
A	55	U.C. REFRIGERATOR (420)	20 A	1	0.564	0.120					1	20 A	MILKSHAKE DISPENSER (300a)	56	A
A	57	ICE CREAM MACHINE (300X)	20 A	3			1.800	2.280			3	30 A	ICE CREAM MACHINE (300X)	58	A
	59	--	--	--					1.800	2.280	--	--	--	60	
	61	--	--	--	1.800	2.280					--	--	--	62	
A	63	DOUBLE LEMONADE BUBBLER (310)	20 A	1			1.020	1.200			1	20 A	SPARE FOR DRINK TOWER (315W)	64	A
A	65	U.C. REFRIGERATOR (420)	20 A	1					0.564	1.200	1	20 A	DRINK TOWER (315W)	66	A
A	67	SPARE FOR U.C. REFRIG (420)	20 A	1	0.564	1.920					1	20 A	FUTURE TRASH COMPACTOR	68	
	69	SPARE	20 A	1			0.000	1.920			1	20 A	FUTURE TRASH COMPACTOR	70	
	71	SPARE	20 A	1					0.000	1.920	1	20 A	FUTURE TRASH COMPACTOR	72	
			Total Load:		22.34 kVA		26.84 kVA		26.35 kVA						
			Total Amps:		186.2 A		228.8 A		224.7 A						

Load Classification	Connected Load	Demand Factor	Estimated Demand	Panel Totals
KITCHEN EQUIPMENT	52062 VA	65.00%	33840 VA	
KITCHEN REFRIG EQUIPMENT	11799 VA	65.00%	7669 VA	**Total Conn. Load:** 75.2 kVA
LIGHTING	322 VA	125.00%	403 VA	**Total Est. Demand:** 53.4 kVA
MISCELLANEOUS	50 VA	100.00%	50 VA	**Total Conn.:** 208.7 A
Motor	6260 VA	107.67%	6740 VA	**Total Est. Demand:** 148.2 A
RECEPTACLES	4680 VA	100.00%	4680 VA	

Branch Panel: C

LOCATION:
SUPPLY FROM: MDP
MOUNTING: FLUSH
ENCLOSURE: NEMA 1

VOLTS: 120/208 Wye
PHASES: 3
WIRES: 4

A.I.C. SERIES RATING: 65K/10K
MAINS TYPE: MLO
MAINS RATING: 250 A
MCB RATING:

NT	CKT	LOAD DESCRIPTION	TRIP	POLE	A		B		C		POLE	TRIP	LOAD DESCRIPTION	CKT	NT
	1	KITCHEN LTG	20 A	1	0.939	1.620					1	20 A	BUILDING SIGNAGE	2	
	3	BOH LIGHTING	20 A	1			0.598	1.620			1	20 A	BUILDING SIGNAGE	4	
	5	RESTROOM LTG & EF-3	20 A	1					0.106	0.180	1	20 A	DROP CORD OUTLET	6	A
	7	DINING AREA LTG	20 A	1	0.101	0.564					1	20 A	WORKTOP REFRIG (432)	8	A
	9	MLOP & OMD CANOPY LTG	20 A	1			1.692	0.180			1	20 A	DROP CORD OUTLET	10	A
	11	DINING AREA LTG	20 A	1					0.468	1.620	1	20 A	SECURITY/FLAGPOLE LTG	12	
	13	DINING AREA LTG	20 A	1	0.426	1.176					1	20 A	MIXER (600)	14	A
	15	SERVING AREA LTG	20 A	1			0.542	0.180			1	20 A	DROP CORD OUTLET	16	A
	17	MENUBOARDS (671)	20 A	1					1.500	0.350	1	20 A	BLDG EXTERIOR LTG	18	
	19	DIRECTIONAL SIGNS	20 A	1	0.500	0.200					1	20 A	BLDG EXTERIOR LTG	20	
	21	PARKING LOT LIGHTING	30 A	1			0.306	0.563			1	20 A	HOOD CJ FANS	22	
	23	PARKING LOT LIGHTING	30 A	1					0.153	1.656	1	25 A	EF-1	24	
	25	PARKING LOT LIGHTING	30 A	1	0.306	1.656					1	25 A	EF-2	26	
	27	PARKING LOT LIGHTING	30 A	1			0.153	0.000			1	20 A	SPARE	28	
	29	PARKING LOT LIGHTING	30 A	1					0.153	0.564	1	20 A	WORKTOP REFRIG (432)	30	A
	31	PARKING LOT LIGHTING	30 A	1	0.153	0.528					1	20 A	OMD CANOPY FANS	32	A
	33							1.584			1	20 A	MLOP CANOPY FANS	34	A
	35	FRZR/COOLER LTG (410/449)	20 A	1					0.500	0.960	1	15 A	UPRIGHT REFRIGERATOR (443GT)	36	A
	37	MAIN ID SIGN	20 A	1	1.620	0.780					1	20 A	DT MENUBOARDS	38	
	39	MAIN ID SIGN	20 A	1			1.620	1.620			1	20 A	BUILDING SIGNAGE	40	
	41	MAIN ID SIGN	20 A	1					1.620	1.620	1	20 A	BUILDING SIGNAGE	42	
A	43	VECTOR OVEN (505VLT)	30 A	3	2.633	2.633					3	30 A	VECTOR OVEN (505VLT)	44	A
	45	--	--	--			2.633	2.633			--	--	--	46	
	47	--	--	--					2.633	2.633	--	--	--	48	
A	49	VECTOR OVEN (505VLT)	30 A	3	2.633	2.633					3	30 A	SPARE/FUTURE VECTOR OVEN (505VLT)	50	A
	51	--	--	--			2.633	2.633			--	--	--	52	
	53	--	--	--					2.633	2.633	--	--	--	54	
A	55	DROP CORD OUTLET (184)	20 A	1	0.180	0.360					1	15 A	BREADING TABLES (440CT)	56	A
A	57	DROP CORD OUTLET	20 A	1			0.180	0.180			1	20 A	DROP CORD OUTLET (184)	58	A
A	59	REFRIG EQUIP. STAND (442W)	15 A	1					0.840	0.180	1	20 A	DROP CORD OUTLET	60	A
A	61	DROP CORD OUTLET	20 A	1	0.180	1.920					1	20 A	THAWING CABINET (444)	62	
	63	SPARE THAWING CABINET (444)	20 A	1			1.920	0.180			1	20 A	DROP CORD OUTLET	64	A
	65	SPARE	20 A	1					0.000	0.000	1	20 A	SPARE	66	
	67	SPARE	20 A	1	0.000	0.000					1	20 A	SPARE	68	
	69	SPARE	20 A	1			0.000	0.000			1	20 A	SPARE	70	
	71	SPARE	20 A	1					0.000	0.000	1	20 A	SPARE	72	
			Total Load:		23.70 kVA		23.61 kVA		23.00 kVA						
			Total Amps:		198.3 A		197.5 A		191.7 A						

Load Classification	Connected Load	Demand Factor	Estimated Demand	Panel Totals
KITCHEN EQUIPMENT	33904 VA	65.00%	22038 VA	
KITCHEN REFRIG EQUIPMENT	6000 VA	65.00%	3900 VA	**Total Conn. Load:** 70.3 kVA
LIGHTING	22531 VA	125.00%	28164 VA	**Total Est. Demand:** 62.4 kVA
Motor	5902 VA	107.01%	6316 VA	**Total Conn.:** 195.2 A
RECEPTACLES	1980 VA	100.00%	1980 VA	**Total Est. Demand:** 173.2 A

Branch Panel: POS

LOCATION:
SUPPLY FROM: A
MOUNTING: FLUSH
ENCLOSURE: NEMA 1

VOLTS: 120/120 Single
PHASES: 1
WIRES: 3
2+G+IG

A.I.C. SERIES RATING: 10K
MAINS TYPE:
MAINS RATING: 100 A
MCB RATING:

NT	CKT	LOAD DESCRIPTION	TRIP	POLE	B		C		POLE	TRIP	LOAD DESCRIPTION	CKT	NT
	1	COUNTER POS TERMINALS	15 A	1	0.104	0.600			1	15 A	PASS-THRU MONITORS	2	A
	3	SPACE	--	1			--	--	1	--	SPACE	4	
	5	COUNTER POS TERMINALS	15 A	1	0.198	0.000			1	15 A	SPARE	6	
	7	SPACE	--	1			--	--	1	--	SPACE	8	
A	9	POS TERMINALS	15 A	1	0.398	0.203			1	15 A	MLOP STATION	10	
	11	SPACE	--	1			--	--	1	--	SPACE	12	
	13	ISP MODEM	15 A	1	0.050	0.070			1	15 A	OFFICE RECEPTACLE	14	
	15	SPACE	--	1			--	--	1	--	SPACE	16	
A	17	TABLE MONITORS	15 A	1	0.193	0.000			1	15 A	SPARE	18	
	19	SPACE	--	1			--	--	1	--	SPACE	20	
	21	HUB SYSTEM	15 A	1	0.100	0.000			1	15 A	SPARE	22	
	23	SPACE	--	1			--	--	1	--	SPACE	24	
	25	HUB SYSTEM	15 A	1	0.100	0.000			1	15 A	SPARE	26	
	27	SPACE	--	1			--	--	1	--	SPACE	28	
	29	HUB SYSTEM	15 A	1	0.100	0.000			1	20 A	BACKFED MAIN BREAKER	30	
			Total Load:		2.12 kVA		0.00 kVA						
			Total Amps:		17.6 A		0.0 A						

Load Classification	Connected Load	Demand Factor	Estimated Demand	Panel Totals
MISCELLANEOUS	1936 VA	100.00%	1936 VA	
RECEPTACLES	180 VA	100.00%	180 VA	**Total Conn. Load:** 2.1 kVA
				Total Est. Demand: 2.1 kVA
				Total Conn.: 17.6 A
				Total Est. Demand: 17.6 A

THE INFORMATION USED TO DEVELOP THE EXISTING CONDITIONS AS SHOWN ON THESE PLANS IS FROM PREVIOUS BUILDING DRAWINGS. WHAT WAS SHOWN ON PLAN AND WHAT WAS ACTUALLY INSTALLED MAY VARY. **FIELD VERIFY ALL EXISTING CONDITIONS.**

REFER TO SHEET E-302 FOR THE PANELBOARD NOTES.

Branch Panel: D

LOCATION:
SUPPLY FROM: MDP
MOUNTING: FLUSH
ENCLOSURE: NEMA 1

VOLTS: 120/208 Wye
PHASES: 3
WIRES: 4

A.I.C. SERIES RATING: 65K/10K
MAINS TYPE: MLO
MAINS RATING: 400 A
MCB RATING:

NT	CKT	LOAD DESCRIPTION	TRIP	POLE	A		B		C		POLE	TRIP	LOAD DESCRIPTION	CKT	NT
	1	ROOFTOP UNIT (AC-2)	70 A	3	6.360	7.200					3	80 A	ROOFTOP UNIT (AC-3)	2	
	3	--	--	--			6.360	7.200			--	--	--	4	
	5	--	--	--					6.360	7.200	--	--	--	6	
	7	ROOFTOP UNIT (AC-4)	60 A	3	5.760	3.960					3	45 A	ROOFTOP UNIT (AC-5)	8	
	9	--	--	--			5.760	3.960			--	--	--	10	
	11	--	--	--					5.760	3.960	--	--	--	12	
	13	MINI-SPLIT AHU-1 & CU-1	40 A	2	2.912	1.704					3	25 A	ROOF MOUNTED ICE MAKER	14	
	15	--	--	--			2.912	1.704			--	--	--	16	
	17	ROOF MOUNTED ICE MAKER	25 A	3					1.704	1.704	--	--	--	18	
	19	--	--	--	1.704	1.704					3	25 A	ROOF MOUNTED ICE MAKER	20	
	21	--	--	--			1.704	1.704			--	--	--	22	
	23	HEATED AIR DOOR (AD-1)	45 A	3					4.068	1.704	--	--	--	24	
	25	--	--	--	4.068	0.960					1	20 A	UNHEATED AIR DOOR	26	
	27	--	--	--			4.068	0.960			1	20 A	UNHEATED AIR DOOR	28	
	29	SPARE	20 A	1					0.000	0.000	1	20 A	SPARE	30	
			Total Load:		36.33 kVA		36.33 kVA		32.46 kVA						
			Total Amps:		307.7 A		307.7 A		270.5 A						

Load Classification	Connected Load	Demand Factor	Estimated Demand	Panel Totals
HEAT	12204 VA	100.00%	12204 VA	
HVAC	75664 VA	100.00%	75664 VA	**Total Conn. Load:** 105.1 kVA
KITCHEN REFRIG EQUIPMENT	15336 VA	90.00%	13802 VA	**Total Est. Demand:** 103.8 kVA
Motor	1920 VA	112.50%	2160 VA	**Total Conn.:** 291.8 A
				Total Est. Demand: 288.2 A

Branch Panel: E

LOCATION:
SUPPLY FROM: MDP
MOUNTING: FLUSH
ENCLOSURE: NEMA 1

VOLTS: 120/208 Wye
PHASES: 3
WIRES: 4

A.I.C. SERIES RATING: 65K/10K
MAINS TYPE: MLO
MAINS RATING: 250 A
MCB RATING:

NT	CKT	LOAD DESCRIPTION	TRIP	POLE	A		B		C		POLE	TRIP	LOAD DESCRIPTION	CKT	NT
A	1	PRESSURE FRYER (523)	50 A	3	4.560	2.892					3	50 A	CHARGRILL COOKER (524)	2	A
	3	--	--	--			4.560	3.840			--	--	--	4	
	5	--	--	--					4.560	2.772	--	--	--	6	
A	7	PRESSURE FRYER (523)	50 A	3	4.560	7.320					3	80 A	OPEN FRYER (522)	8	SB
	9	--	--	--			4.560	7.320			--	--	--	10	
	11	--	--	--					4.560	7.320	--	--	--	12	
A	13	PRESSURE FRYER (523)	50 A	3	4.560	4.560					3	50 A	PRESSURE FRYER (523)	14	A
	15	--	--	--			4.560	4.560			--	--	--	16	
	17	--	--	--					4.560	4.560	--	--	--	18	
A	19	SPARE FOR FUTURE FRYER (523)	50 A	3	4.560	--					1	--	SPACE (3 POLE)	20	
	21	--	--	--			4.560	--			1	--		22	
	23	--	--	--					4.560	--	1	--	--	24	
	25	SPACE (3 POLE)	--	1	--	--					1	--	SPACE (3 POLE)	26	
	27	--	--	1			--	--			1	--	--	28	
	29	--	--	1					--	--	1	--	--	30	
			Total Load:		33.01 kVA		33.96 kVA		32.89 kVA						
			Total Amps:		275.3 A		283.2 A		274.1 A						

Load Classification	Connected Load	Demand Factor	Estimated Demand	Panel Totals
KITCHEN EQUIPMENT	99864 VA	65.00%	64912 VA	
				Total Conn. Load: 99.9 kVA
				Total Est. Demand: 64.9 kVA
				Total Conn.: 277.2 A
				Total Est. Demand: 180.2 A

Branch Panel: F

LOCATION:
SUPPLY FROM: MDP
MOUNTING: FLUSH
ENCLOSURE: NEMA 1

VOLTS: 120/208 Wye
PHASES: 3
WIRES: 4

A.I.C. SERIES RATING: 65K/10K
MAINS TYPE: MLO
MAINS RATING: 250 A
MCB RATING:

NT	CKT	LOAD DESCRIPTION	TRIP	POLE	A		B		C		POLE	TRIP	LOAD DESCRIPTION	CKT	NT
SB	1	OPEN FRYER (522A)	80 A	3	7.320	2.892					3	50 A	CHARGRILL COOKER (524)	2	A
	3	--	--	--			7.320	3.840			--	--	--	4	
	5	--	--	--					7.320	2.772	--	--	--	6	
SB	7	OPEN FRYER (522A)	80 A	3	7.320	4.560					3	50 A	PRESSURE FRYER (523)	8	A
	9	--	--	--			7.320	4.560			--	--	--	10	
	11	--	--	--					7.320	4.560	--	--	--	12	
SB	13	OPEN FRYER (522)	80 A	3	7.320	4.560					3	50 A	PRESSURE FRYER (523)	14	A
	15	--	--	--			7.320	4.560			--	--	--	16	
	17	--	--	--					7.320	4.560	--	--	--	18	
	19	SPACE (3 POLE)	--	1	--	2.640					3	30 A	RETHERMALIZER (592)	20	A
	21	--	--	1			--	2.640			--	--	--	22	
	23	--	--	1					--	2.640	--	--	--	24	
	25	SPACE (3 POLE)	--	1	--	--					1	--	SPACE (3 POLE)	26	
	27	--	--	1			--	--			1	--	--	28	
	29	--	--	1					--	--	1	--	--	30	
			Total Load:		36.61 kVA		37.56 kVA		36.49 kVA						
			Total Amps:		305.3 A		313.2 A		304.1 A						

Load Classification	Connected Load	Demand Factor	Estimated Demand	Panel Totals
KITCHEN EQUIPMENT	110664 VA	65.00%	71932 VA	
				Total Conn. Load: 110.7 kVA
				Total Est. Demand: 71.9 kVA
				Total Conn.: 307.2 A
				Total Est. Demand: 199.7 A

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

Kurzynske & Associates
2705 Lebanon Pike - Suite One
Nashville, Tennessee 37214
Telephone: (615) 255-5203

STATE OF MISSOURI
MARK T. LEMASTER
E-2000153901
REGISTERED PROFESSIONAL ENGINEER
8/1/2023

CHICK-FIL-A
ST. JOSEPH FSU

5303 N BELT HWY
SAINT JOSEPH, MO 64506

FSR#02309

BUILDING TYPE / SIZE: S08C-R LRG
RELEASE: v2.20.08
PRINTED FOR
CONSTRUCTION

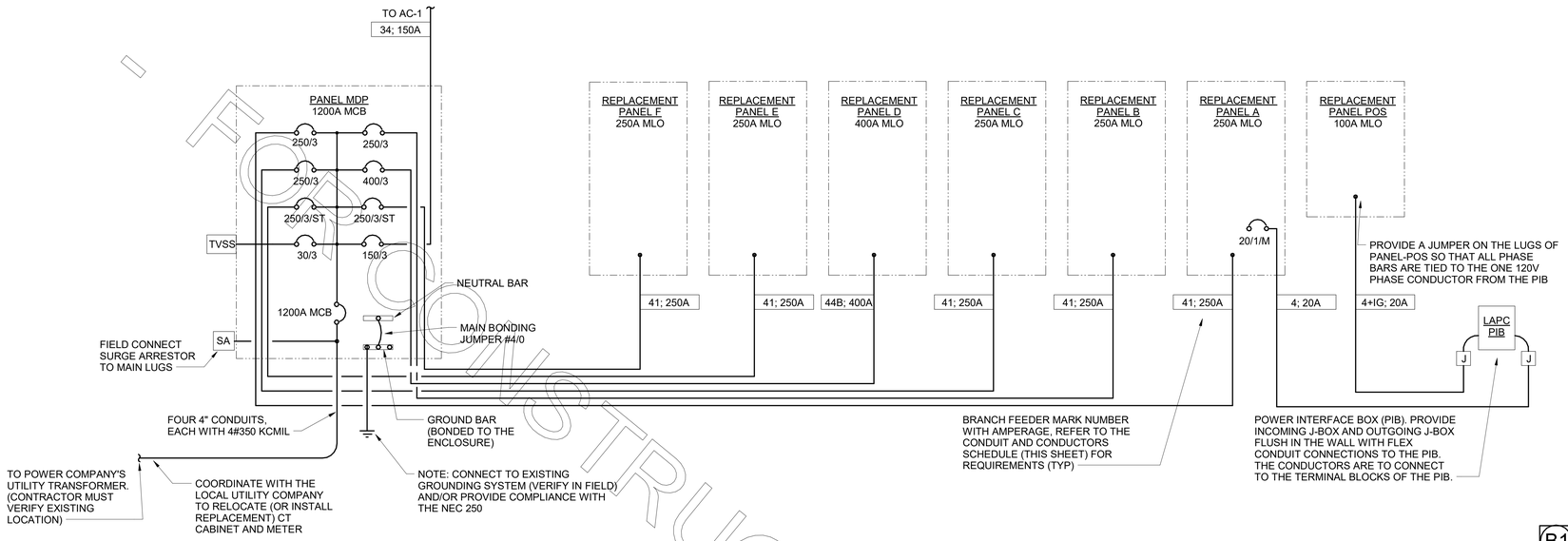
REVISION SCHEDULE

NO.	DATE	DESCRIPTION

CONSULTANT PROJECT #	22172.CD.R
DATE	01/12/2023
DRAWN BY	ML

SHEET
PANEL SCHEDULES

SHEET NUMBER
E-301



C2 SINGLE LINE DIAGRAM

NO SCALE

Distribution Panel: MDP

LOCATION:
SUPPLY FROM:
MOUNTING: SURFACE
ENCLOSURE: NEMA 3R

VOLTS: 120/208 Wye
PHASE... 3
WIRES: 4

A.I.C. SERIES RATING: 65K
MAINS TYPE: MCB
MAINS RATING: 1200 A
MCB RATING: 1200 A

NT	CKT	LOAD DESCRIPTION	TRIP	POLE	A	B	C	POLE	TRIP	LOAD DESCRIPTION	CKT	NT
	1	PANEL-A (SUB-FEEDS PANEL-POS)	250 A	3	26.90	22.34		3	250 A	PANEL B	2	
	3	--	--	--		26.91	26.84	--	--	--	4	
	5	--	--	--			23.80 26.35	--	--	--	6	
	7	PANEL-C	250 A	3	23.70	36.33		3	400 A	PANEL-D	8	
	9	--	--	--		23.61	36.33	--	--	--	10	
	11	--	--	--			23.00 32.46	--	--	--	12	
	13	PANEL-E	250 A	3	33.01	36.61		3	250 A	PANEL-F	14	
	15	--	--	--		33.96	37.56	--	--	--	16	
	17	--	--	--			32.89 36.49	--	--	--	18	
	19	SPACE (3 POLE)	--	1	-- 15.00			3	150 A	ROOFTOP UNIT (AC-1)	20	
	21	--	--	1		--	15.00	--	--	--	22	
	23	--	--	1			-- 15.00	--	--	--	24	
	25	TVSS	30 A	3	0.00	--		1	--	SPACE (3 POLE)	26	
	27	--	--	--		0.00	--	1	--	--	28	
	29	--	--	--			0.00 --	1	--	--	30	
			Total Load:		193.9 kVA	200.2 kVA	190.0 kVA					
			Total Amps:		1620.8 A	1673.4 A	1583.3 A					

Load Classification	Connected Load	Demand Factor	Estimated Demand	Panel Totals	
HEAT	12704 VA	100.00%	12704 VA		
HVAC	126664 VA	100.00%	126664 VA	**Total Conn. Load:**	583.7 kVA
KITCHEN EQUIPMENT	345140 VA	65.00%	224341 VA	**Total Est. Demand:**	454.0 kVA
KITCHEN REFRIG EQUIPMENT	43903 VA	65.00%	28537 VA	**Total Conn.:**	1620.3 A
LIGHTING	22853 VA	125.00%	28567 VA	**Total Est. Demand:**	1260.2 A
MISCELLANEOUS	2916 VA	100.00%	2916 VA		
Motor	19606 VA	103.67%	20326 VA		
RECEPTACLES	9960 VA	100.00%	9960 VA		

LOAD SUMMARY

TOTAL CONNECTED KVA	IF TOTAL LOAD IS 0_200 KVA	IF TOTAL LOAD IS 201_325 KVA	IF TOTAL LOAD IS 326-800 KVA	IF TOTAL LOAD IS OVER 800 KVA	DIVERSIFIED AMPS AT 208 VOLT
583.74 kVA	0	0	378.93	0	1052.59
0.00 kVA	0	0	0.00	0	0.00

CALCULATION PER NEC 220.88

PANELBOARD NOTES

- (A) PROVIDE PERSONNEL PROTECTION (5-6MA) GROUND-FAULT CIRCUIT INTERRUPTER TYPE CIRCUIT BREAKER.
- (B) GFCI TYPE BREAKER TO BE 30MA TYPE BREAKER.
- (C) REPLACE EXISTING BRANCH BREAKER WITH INDICATED BREAKER IN SCHEDULE.
- (D) PROVIDE BREAKER PADLOCKING DEVICE TO LOCK BREAKER IN THE OFF POSITION FOR MAINTENANCE. (SQ-D: #QOIPL, SIEMENS: #ECPDL3)
- (E) REPLACE EXISTING TANDEM TYPE BRANCH BREAKER WITH INDICATED BRAEKER IN SCHEDULE.
- (LO) LOCK-ON BREAKERS.
- (SB) PROVIDE GFCI PROTECTION FOR FRYERS #522 AND #522A USING LITTELFUSE ISB MODEL WALL-MOUNTED SB6100-02X-0. COORDINATE MOUNTING OF THE DEVICE ABOVE THE PANELBOARDS.

(B1) CONDUIT AND CONDUCTORS SCHEDULE

Mark No.	OCP Device (Amp/Poles)	Conductors Total Amps 60d C	75d C	Conductors Phase & Neutral Qty	Size	Type	Min Eq Grd Qty/Set	Size	Raceway Size (Nominal Inches) No. Sets	Phase, Neutral & Equip Grd EMT	IMC	RIGID	PVC	With IG EMT	IMC	PVC
1	20/1	20	-	2	12	THHN	1	12	One	0.75	0.75	0.75	0.75	0.75	0.75	0.75
2	20/2	20	-	3	12	THHN	1	12	One	0.75	0.75	0.75	0.75	0.75	0.75	0.75
3	20/3	20	-	4	12	THHN	1	12	One	0.75	0.75	0.75	0.75	0.75	0.75	0.75
4	25/1	30	-	2	10	THHN	1	10	One	0.75	0.75	0.75	0.75	0.75	0.75	0.75
5	25/2	30	-	3	10	THHN	1	10	One	0.75	0.75	0.75	0.75	0.75	0.75	0.75
6	25/3	30	-	4	10	THHN	1	10	One	0.75	0.75	0.75	0.75	0.75	0.75	0.75
7	30/1	30	-	2	10	THHN	1	10	One	0.75	0.75	0.75	0.75	0.75	0.75	0.75
8	30/2	30	-	3	10	THHN	1	10	One	0.75	0.75	0.75	0.75	0.75	0.75	0.75
9	30/3	30	-	4	10	THHN	1	10	One	0.75	0.75	0.75	0.75	0.75	0.75	0.75
10	40/1	40	-	2	8	THHN	1	10	One	0.75	0.75	0.75	0.75	0.75	0.75	0.75
11	40/2	40	-	3	8	THHN	1	10	One	0.75	0.75	0.75	0.75	0.75	0.75	0.75
12	40/3	40	-	4	8	THHN	1	10	One	0.75	0.75	0.75	0.75	0.75	0.75	1.00
13	45/3	55	-	4	6	THHN	1	10	One	1.00	1.00	1.00	1.00	1.00	1.00	1.00
14	50/1	55	-	2	6	THHN	1	10	One	0.75	0.75	0.75	0.75	0.75	0.75	0.75
15	50/2	55	-	3	6	THHN	1	10	One	0.75	0.75	0.75	0.75	1.00	1.00	1.00
16	50/3	55	-	4	6	THHN	1	10	One	1.00	1.00	1.00	1.00	1.00	1.00	1.00
17	60/1	70	-	2	4	THW	1	8	One	1.00	1.00	1.00	1.00	1.25	1.00	1.25
18	60/2	70	-	3	4	THW	1	8	One	1.00	1.00	1.00	1.00	1.25	1.00	1.25
19	60/3	70	-	4	4	THW	1	8	One	1.25	1.00	1.25	1.25	1.25	1.25	1.25
20	70/1	70	-	2	4	THW	1	8	One	1.00	1.00	1.00	1.00	1.25	1.00	1.25
21	70/2	70	-	3	4	THW	1	8	One	1.25	1.00	1.25	1.25	1.25	1.25	1.25
22	70/3	70	-	4	4	THW	1	8	One	1.25	1.25	1.25	1.25	1.25	1.25	1.25
23	80/2	85	-	3	3	THW	1	8	One	1.25	1.25	1.25	1.25	1.25	1.25	1.25
24	80/3	85	-	4	3	THW	1	8	One	1.25	1.25	1.25	1.25	1.50	1.25	1.50
25	90/2	95	-	3	2	THW	1	8	One	1.25	1.25	1.25	1.25	1.50	1.25	1.50
26	90/3	95	-	4	2	THW	1	8	One	1.50	1.25	1.50	1.50	1.50	1.50	1.50
27	100/2	110	-	3	1	THW	1	6	One	1.50	1.50	1.50	1.50	2.00	2.00	2.00
28	100/3	110	-	4	1	THW	1	6	One	2.00	2.00	2.00	2.00	2.00	2.00	2.00
29	110/2	-	150	3	1/0	THW	1	6	One	1.25	1.25	1.25	1.25	1.50	1.25	1.50
30	110/3	-	150	4	1/0	THW	1	6	One	1.50	1.25	1.50	1.50	1.50	1.50	1.50
31	125/2	-	150	3	1/0	THW	1	6	One	1.50	1.50	1.50	1.50	2.00	2.00	2.00
32	125/3	-	150	4	1/0	THW	1	6	One	2.00	2.00	2.00	2.00	2.00	2.00	2.00
33	150/2	-	150	3	1/0	THW	1	6	One	2.00	1.50	2.00	2.00	2.00	2.00	2.00
34	150/3	-	150	4	1/0	THW	1	6	One	2.00	2.00	2.00	2.00	2.00	2.00	2.00
35	175/2	-	175	3	2/0	THW	1	6	One	2.00	2.00	2.00	2.00	2.00	2.00	2.00
36	175/3	-	175	4	2/0	THW	1	6	One	2.00	2.00	2.00	2.00	2.50	2.50	2.50
37	200/2	-	200	3	3/0	THW	1	6	One	2.00	2.00	2.00	2.00	2.50	2.50	2.50
38	200/3	-	200	4	3/0	THW	1	6	One	2.50	2.50	2.50	2.50	2.50	2.50	2.50
39	225/2	-	230	3	4/0	THW	1	4	One	2.50	2.00	2.50	2.50	2.50	2.50	2.50
40	225/3	-	230	4	4/0	THW	1	4	One	2.50	2.50	2.50	2.50	2.50	3.00	3.00
41	250/3	-	255	4	250	THW	1	4	One	2.50	3.00	3.00	3.00	3.00	3.00	3.00
42A	300/3	-	285	4	300	THW	1	4	One	3.00	3.00	3.00	3.00	3.00	3.00	3.00
42B	300/3	-	310	4	350	THW	1	4	One	3.00	3.00	3.00	3.00	3.00	3.00	3.00
43A	350/3	-	335	4	400	THW	1	4	One	3.00	3.50	3.50	3.50	3.50	3.50	3.50
43B	350/3	-	380	4	500	THW	1	4	One	3.50	3.50	3.50	3.50	3.50	3.50	3.50
44A	400/3	-	380	4	500	THW	1	3	One	3.50	3.50	3.50	3.50	3.50	3.50	3.50
44B	400/3	-	400	4	3/0	THW	1	3	Two	2.50	2.50	2.50	2.50	2.50	2.50	2.50
45A	600/3	-	570	4	300	THW	1	1	Two	3.00	3.00	3.00	3.00	3.00	3.00	3.00
45B	600/3	-	620	4	350	THW	1	1	Two	3.00	3.00	3.00	3.00	3.00	3.00	3.50
46A	800/3	-	760	4	500	THW	1	1/0	Two	3.50	3.50	3.50	3.50	3.50	3.50	3.50
46B	800/3	-	820	4	600	THW	1	1/0	Two	4.00	4.00	4.00	4.00	4.00	4.00	4.00
47	1000/3	-	1005	4	400	THW	1	2/0	Three	3.50	3.50	3.50	3.50	3.50	3.50	3.50
48	1200/3	-	1240	4	350	THW	1	3/0	Four	3.50	3.50	3.50	3.50	3.50	3.50	4.00
49	1600/3	-	1675	4	400	THW	1	4/0	Five	4.00	4.00	4.00	4.00	4.00	4.00	4.00

Notes:
Conductors are rated at 600 volt or below and are to be copper.

NEC Table 310.15(B)(16) - formerly Table 310.16 - 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 single-phase 2 pole loads and 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.

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

Kurzynske & Associates
2705 Lebanon Pike - Suite One
Nashville, Tennessee 37214
Telephone: (615) 255-5203

STATE OF MISSOURI
MARK L. KURZYNSKE
E-2000153490
REGISTERED PROFESSIONAL ENGINEER
8/1/2023

CHICK-FIL-A
ST. JOSEPH FSU
5303 N BELT HWY
SAINT JOSEPH, MO 64506

FSR#02309

BUILDING TYPE / SIZE: S08C-R ALL
RELEASE: v2.20.08
PRINTED FOR
CONSTRUCTION

REVISION SCHEDULE

NO.	DATE	DESCRIPTION

CONSULTANT PROJECT # 22172.CD.R
DATE 01/12/2023
DRAWN BY ML

SHEET
SINGLE LINE DIAGRAM AND NOTES

SHEET NUMBER
E-302

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

B. Devices: (Cooper/Arrow Hart catalog numbers are listed unless notedotherwise):
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)

3. Three-way toggle switches: 20 AMP device - #AH1223-GY (Kitchen) or #AH1223-B (Dining)

1.02 RECEPTACLES
A. Devices: (Cooper/Arrow Hart catalog numbers are listed unless otherwise noted):
1. Specification grade devices to be 20 amp, 125 volts, a.c. receptacles:
a. Single (simplex) device: #1877-GY (Kit) or #1877-B (Dining)
b. Duplex device: #CR20-GY (Kitchen) of #CR20-B (Dining)
c. Tamper resistant duplex device: #TRCR20-B or #TR7756-B (with USB charging)
d. GF (ground-fault circuit interrupter) duplex device: #VGF20-GY (Kitchen) or #VGF20-B (Dining)
e. IG (isolated ground) duplex device: #IG5362-RN (orange face)

B. Color:
1. Devices mounted in the FRP or tile shall be gray.
2. Devices mounted in wood finish shall be brown.
3. Isolated ground receptacles shall be orange.

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

B. 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.

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

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

E. Color:
1. Wall plates mounted in FRP or tile shall be smooth satin stainless steel 302-ss series.
2. Wall plates mounted in wood finish shall be brown nylon plastic.
3. Isolated ground wall plates shall be orange nylon plastic with a circuit number printed in 3/16 inch black lettering on clear adhesive label adhered to plate.

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. Square-D (West, Midwest, Northeast, and Southwest Regions): from Villa Lighting, Dave Christanell (800)325-0963

B. Square-D (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.

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. MDP main breaker,1200 Amps or higher, shall be equipped with Arc Flash Maintenance Setting switch for use as a temporary arc-flash incident energy reduction device during maintenance activities.

J. 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. GE / ABB
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 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 - Northeast region, 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, GE / ABB, 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. Furnish 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

Kurzynske & Associates
2705 Lebanon Pike - Suite One
Nashville, Tennessee 37214
Telephone: (615) 255-5203

STATE OF MISSOURI
MARK L. LEMASTER
NUMBER E-2000153901
REGISTERED PROFESSIONAL ENGINEER
8/1/2023

CHICK-FIL-A
ST. JOSEPH FSU
5303 N BELT HWY
SAINT JOSEPH, MO 64506

FSR#02309
BUILDING TYPE / SIZE: S08C-R ALL
RELEASE: v2.20.08
PRINTED FOR
CONSTRUCTION

REVISION SCHEDULE

NO.	DATE	DESCRIPTION

CONSULTANT PROJECT # 22172.CD.R
DATE 01/12/2023
DRAWN BY ML

SHEET
ELECTRICAL SPECIFICATIONS

SHEET NUMBER
E-402

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 be 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 an additional isolated ground (green + yellow stripe) conductor for isolated ground circuits (POS system). Fittings used for connecting MC cable to boxes, cabinets, or other equipment shall be listed and identified for such use.

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 or set-screw 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.
4. Installed for panelboard feeders above slab.

1.03 INTERMEDIATE METAL CONDUIT (IMC)
A. Use Intermediate Metal Conduit (IMC) where drawings call for conduit to be:
1. Installed for panelboard feeders ran below ground.
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 shall be UL listed per standard 1569, color coded copper conductors (type THHN), the sheathing shall be constructed of interlocking galvanized steel, and shall conform to the requirements of Article 330 of the National Electrical Code.

B. MC Cable with an isolated grounding conductor shall be used, concealed above ceiling and in walls, for the connection of the Point Of Sales (POS) system equipment from the isolated ground receptacles to the panelboard serving the POS loads when allowed by local codes and Article 330 of the National Electrical Code.

C. MC Cable may be used when allowed by local codes and Article 330 of the National Electrical Code for branch circuits (except the main homerun to the panelboard which shall be conduit with conductors) for the following:
1. Lighting
2. Dining area receptacles
3. Fly Lights
4. Building mounted signage
5. Office area receptacles

D. MC Cable shall not be used for branch circuits serving Kitchen Equipment Items and similar circuits in the Kitchen, the Drive- Thru area, and the Serving area's back counter.

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.

2.05 MC CABLE
A. MC Cable may be used for branch circuits as noted in Part 1 above and where the local code allows use of MC Cable. The installation shall conform to Article 330 of the National Electrical Code and shall be concealed in walls and above ceilings. (Exposed MC Cable will not be acceptable.)

B. MC Cables shall be secured and supported by the building structure per the National Electrical Code and any local code requirements. MC Cable shall not lay on ceilings.

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 inter system bonding termination 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.

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

Kurzynske & Associates
2705 Lebanon Pike - Suite One
Nashville, Tennessee 37214
Telephone: (615) 255-5203

STATE OF MISSOURI
MARK L. KURZYNSKE
NUMBER E-2000132901
REGISTERED PROFESSIONAL ENGINEER
8/1/2023

CHICK-FIL-A
ST. JOSEPH FSU
5303 N BELT HWY
SAINT JOSEPH, MO 64506

FSR#02309
BUILDING TYPE / SIZE: S08C-R ALL
RELEASE: v2.20.08
PRINTED FOR
CONSTRUCTION

REVISION SCHEDULE
NO. DATE DESCRIPTION

CONSULTANT PROJECT # 22172.CD.R
DATE 01/12/2023
DRAWN BY ML

SHEET
ELECTRICAL SPECIFICATIONS

SHEET NUMBER
E-401

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

B. Devices: (Cooper/Arrow Hart catalog numbers are listed unless notedotherwise):
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)

3. Three-way toggle switches: 20 AMP device - #AH1223-GY (Kitchen) or #AH1223-B (Dining)

1.02 RECEPTACLES
A. Devices: (Cooper/Arrow Hart catalog numbers are listed unless otherwise noted):
1. Specification grade devices to be 20 amp, 125 volts, a.c. receptacles:
a. Single (simplex) device: #1877-GY (Kit) or #1877-B (Dining)
b. Duplex device: #CR20-GY (Kitchen) of #CR20-B (Dining)
c. Tamper resistant duplex device: #TRCR20-B or #TR7756-B (with USB charging)
d. GF (ground-fault circuit interrupter) duplex device: #VGF20-GY (Kitchen) or #VGF20-B (Dining)
e. IG (isolated ground) duplex device: #IG5362-RN (orange face)

B. Color:
1. Devices mounted in the FRP or tile shall be gray.
2. Devices mounted in wood finish shall be brown.
3. Isolated ground receptacles shall be orange.

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

B. 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.

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

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

E. Color:
1. Wall plates mounted in FRP or tile shall be smooth satin stainless steel 302-ss series.
2. Wall plates mounted in wood finish shall be brown nylon plastic.
3. Isolated ground wall plates shall be orange nylon plastic with a circuit number printed in 3/16 inch black lettering on clear adhesive label adhered to plate.

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. Square-D (West, Midwest, Northeast, and Southwest Regions): from Villa Lighting, Dave Christanell (800)325-0963

B. Square-D (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.

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. MDP main breaker,1200 Amps or higher, shall be equipped with Arc Flash Maintenance Setting switch for use as a temporary arc-flash incident energy reduction device during maintenance activities.

J. 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. GE / ABB
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 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 - Northeast region, 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, GE / ABB, 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. Furnish 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

Kurzynske & Associates
2705 Lebanon Pike - Suite One
Nashville, Tennessee 37214
Telephone: (615) 255-5203

STATE OF MISSOURI
MARK L. LEMASTER
NUMBER E-2000153901
REGISTERED PROFESSIONAL ENGINEER
8/1/2023

CHICK-FIL-A
ST. JOSEPH FSU
5303 N BELT HWY
SAINT JOSEPH, MO 64506

FSR#02309
BUILDING TYPE / SIZE: S08C-R ALL
RELEASE: v2.20.08
PRINTED FOR
CONSTRUCTION

REVISION SCHEDULE

NO.	DATE	DESCRIPTION

CONSULTANT PROJECT # 22172.CD.R
DATE 01/12/2023
DRAWN BY ML

SHEET
ELECTRICAL SPECIFICATIONS

SHEET NUMBER
E-402